

# Atlantic BEACH

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## CAMA LAND USE PLAN UPDATE

Adopted: July 26, 2021

Certified: September 24, 2021



# ACKNOWLEDGEMENTS



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Both& Planning

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# RESOLUTION OF ADOPTION



Resolution 21-07-02

## RESOLUTION OF THE TOWN OF ATLANTIC BEACH TOWN COUNCIL ADOPTING THE ATLANTIC BEACH CAMA LAND USE PLAN

**WHEREAS**, from 2019 through 2021, the Town of Atlantic Beach drafted a Coastal Area Management Act (CAMA) Land Use Plan with the assistance of its consultant, CodeWright Planners, and conducted a series of public workshops and meetings as part of a comprehensive public participation program; and

**WHEREAS**, on July 1, 2021, the Planning Board unanimously recommended approval of the adoption of the draft Plan; and

**WHEREAS**, the Town of Atlantic Beach conducted a duly advertised public hearing on the draft Plan at the Regular Meeting of the Town Council on July 26, 2021; and

**WHEREAS**, at the Regular Meeting on July 26, 2021, the Atlantic Beach Town Council found the policies and Future Land Use Map in the draft Plan to be consistent with the Atlantic Beach desired vision for the future and unanimously approved to adopt the draft Plan; and

**WHEREAS**, the adopted Plan will be submitted as required by state law to the District Planner for the Division of Coastal Management under the North Carolina Department of Environmental Quality and forwarded to the Executive Secretary; and

**WHEREAS**, a review of the adopted Plan by the Coastal Resources Commission will be scheduled; and the CRC will then decide on certification of the locally adopted Plan;

**WHEREAS**, a certified copy of the Atlantic Beach CAMA Land Use Plan will be forwarded to the Office for Coastal Management for federal approval.

**NOW, THEREFORE, BE IT RESOLVED THAT** the Town Council of the Town of Atlantic Beach, North Carolina has adopted the draft Plan; and

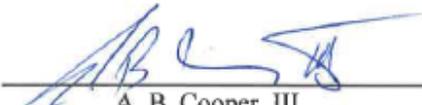
**BE IT FURTHER RESOLVED** that the Town Manager of the Town of Atlantic Beach is hereby authorized to submit the adopted Plan to the State for certification as described above.

Approved this 26<sup>th</sup> day of July, 2021.

ATTEST:

  
Katrina Tyer  
Town Clerk



  
A. B. Cooper, III  
Mayor



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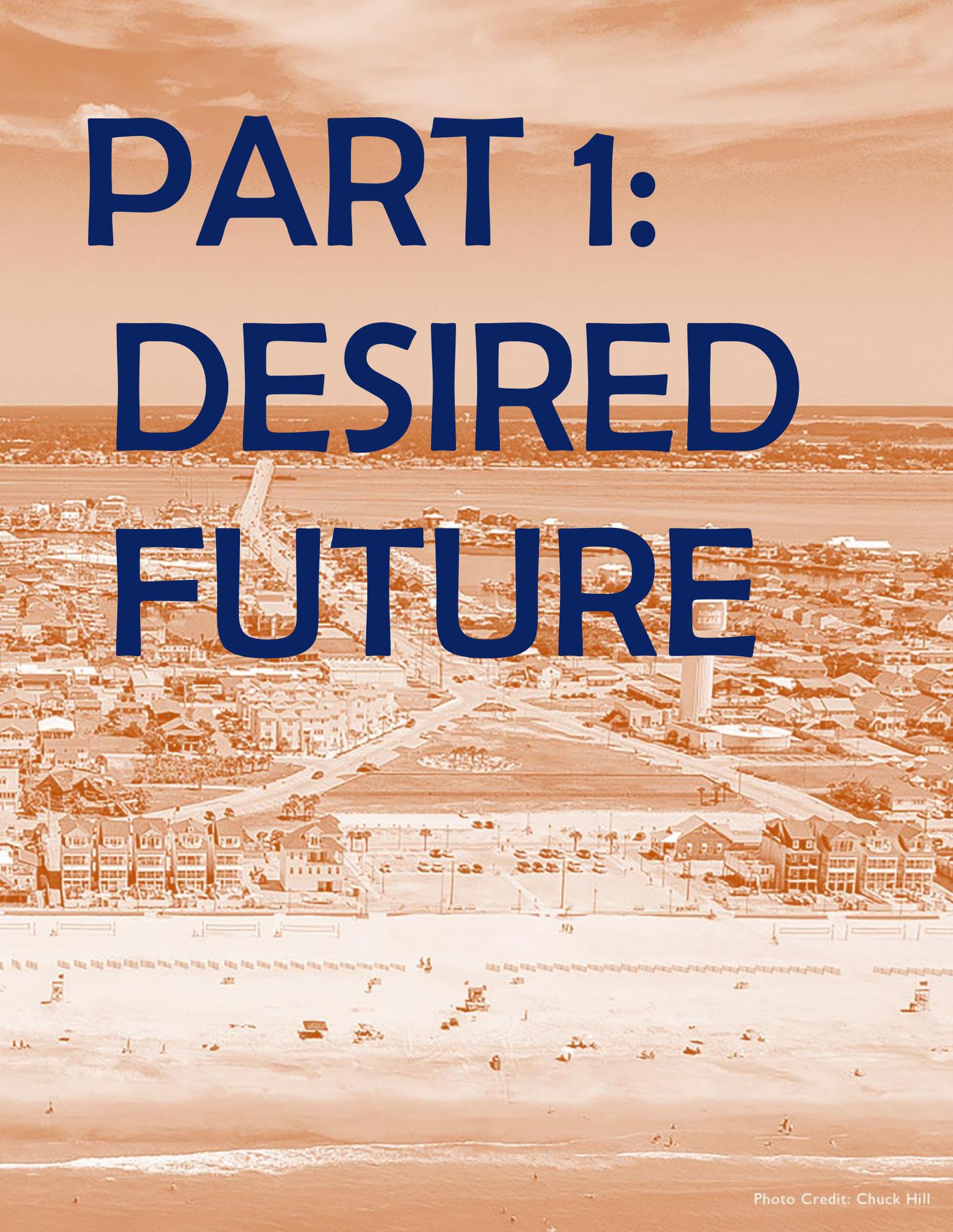
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# PART 1: DESIRED FUTURE



# 1.1: PROJECT INTRODUCTION

## 1.1.1: OVERVIEW OF THE CAMA ACT

This Plan updates the 2008 Town of Atlantic Beach Core Land Use Plan, initially certified on July 24, 2008, and amended four times: on March 25, 2010; October 26, 2018; April 4, 2019, and January 27, 2021. This Plan update is prepared, in part, to comply with the Coastal Area Management Act of 1974 (the CAMA Act).

The CAMA Act requires each of the 20 coastal counties in North Carolina to prepare a local land use plan that outlines current conditions and identifies planned future actions in sensitive coastal areas in accordance with guidelines established by the North Carolina Coastal Resources Commission (CRC). The CRC's guidelines provide a common format and a set of issues that must be considered during the community's planning process. A local land use plan may include policies specific to the locality that address growth management, protection of productive resources (i.e., farmland, forest resources, fisheries) and natural resources, economic development, reduction of storm hazards, and policies that address local issues of concern.

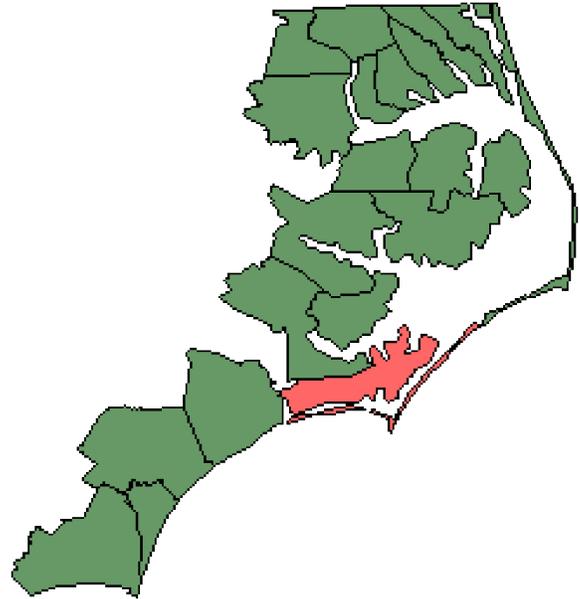
After certification of a local land use plan by the CRC, it becomes part of the North Carolina Coastal Management Plan for the protection, preservation, orderly development, and management of the coastal areas of the State. The North Carolina Division of Coastal Management (DCM), which serves as staff to the CRC, uses local land use plans to review proposed projects and activities to ensure consistency with rules and policies, as well as to make federal consistency determinations.

Carteret County is one of the 20 counties subject to the CAMA Act. Municipalities within each CAMA county may choose to develop their own land use plans or may work jointly with their counties to prepare joint land use plans. The Town of Atlantic Beach has elected to develop its own land use plan to address the unique opportunities and challenges it faces as a small beachside community.

In 2016, the Coastal Resources Commission revised the CAMA guidelines to provide more local flexibility in the land use planning process. These revisions reduced the number of components that are required in a local land use plan and added more flexibility to customize the structure and sequence of required plan components. In preparing this Plan update, the Town of Atlantic Beach has used this flexibility to create a land use plan that is more implementation-oriented, user-friendly, and focused on issues of local concern.

For these reasons, this Plan's structure places the *Desired Future* section (Part 1) before the *Existing Conditions* section (Part 2). In addition, in preparing this Plan, the Town has been judicious in including only those goals and actions which are realistically implementable over the five-year life of this Plan.

It is our desire that this Plan serve as an easy-to-use guide for staff, elected officials, and residents when considering individual projects, public investments, resource management, regulatory ordinances, and broader policy issues. With this Plan, we affirm our Town's commitment to public involvement in the planning process and maintaining opportunities for residents and business owners to help shape their community by providing policies, recommendations, and support for a resilient future.



CAMA Counties (Carteret County in orange)

# 1.1.2: INTRODUCTION TO ATLANTIC BEACH'S LAND USE PLAN

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This document is the Town of Atlantic Beach's Land Use Plan. It is prepared by Town officials with input from Town residents and business owners, and communicates our shared vision and goals for its future development. As a coastal community, we are required to prepare a land use plan by the State of North Carolina. Having a land use plan helps to guide our land use and development decisions as well as decisions by the State on CAMA-related development permits.

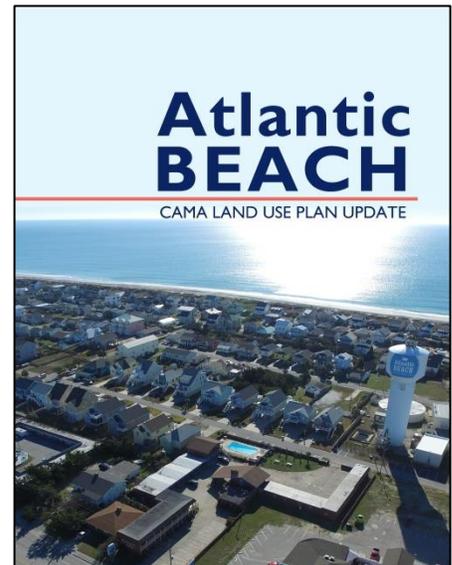
Having a land use plan is an important part of our efforts to maintain and promote the Town's unique identity. This plan serves as a blueprint or road map to guide public and private investment in accordance with our desire for the future. It is vital for the protection of community character and natural resources. It clarifies the interconnectedness between land uses, transportation facilities, economic development, and the natural environment. It articulates existing conditions, characterizes our desired future conditions, and describes the actions necessary for us to achieve our desired future. The land use plan helps guide the Town Council in the consideration of changes to the zoning map. It also helps direct capital investment, helps us prioritize our work programs, and helps us compete for grants and aid from the State and other funding sources.

Typically, land use plans have a horizon of 20-to-30 years, but it is important to review and update them on a regular basis to ensure consistency with changing conditions and priorities. This document is an update to the Town's prior land use plan, which was initially adopted in 2008. Our 2008 land use plan has been amended four times since its adoption, most recently in 2021, but this document goes farther than prior updates. This update includes much more recent demographic and economic data for the Town. This document has a new, streamlined structure that places greater emphasis on issues of local concern (as permitted by recent changes in State law). This document consolidates our land use policy guidance into a more manageable set of seven goals. This document is our updated plan for the future.

Development of this plan update was guided through extensive public outreach and comment, including several meetings with Town leaders, three public forums at key milestones in the process, an on-line survey of residents and business owners, and the required public hearing process. The seven goals, policies, and actions in this plan are derived directly from public input, and additional information on the input we collected is available in Part 3, Appendices.

Our updated land use plan does not exist in a vacuum—it is typically part of a web of policy guidance. Atlantic Beach has a wealth of adopted policy guidance that informs this land use plan update, including the recently adopted Causeway Master Plan (2019), a Comprehensive Bicycle Plan (2012), the Atlantic Beach Commons Master Plan (for the new Town Park), a master plan associated with the Grove (Circle) area, a Stormwater Resiliency Plan (in progress), and the work of the Town's Appearance Committee (2018). Details on these plans and how they inform the policies in this land use plan are discussed in Part 2, Existing Conditions.

The following pages describe how to use this Plan, a vision statement that articulates our shared vision for the future, and a set of goals, policies, and actions for us to use in realizing our vision.



## 1.1.3: USING THIS PLAN

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This Land Use Plan, as adopted and amended by the Town Council of Atlantic Beach, serves as the primary guide upon which to make land use policy decisions. Every land use policy decision, such as consideration of a rezoning request or a special use permit, will be measured for consistency with the goals and recommended actions in this Plan.

Our elected and appointed officials and staff will utilize this Plan as a basic policy guide in the administration of the zoning, subdivision, and other regulatory tools in our Unified Development Ordinance. The Future Land Use Map contained in this Plan is a part of the policy intended to guide our land use decisions.

In addition to aiding decision-making on land development applications, the goal statements, policies, actions, implementation strategy, and Future Land Use Map in this Plan are developed to assist Town officials in making long-range decisions regarding such matters as managing population growth, the provision of public infrastructure, transportation planning, stormwater management, implementation of economic development strategies, protection of the environment, and preparation of capital and operating budgets.

Landowners and development applicants should utilize this Plan and its Future Land Use Map (along with the other elements of our adopted policy guidance) to help inform their decisions regarding land use and development.

It should be noted that land use policy decisions that are inconsistent with this Plan or its Future Land Use Map are not necessarily a violation of State law or CAMA planning requirements. The Town Council may, after careful deliberation and in accordance with all applicable laws, decide to adopt an ordinance or approve a development application that is inconsistent with this Plan or its Future Land Use Map. In these cases, that decision can be considered as a proposed amendment to this Plan that becomes effective if the amendment is certified by the Coastal Resources Commission (or the “CRC”), the State agency that works with local governments in the preparation and implementation of their CAMA plans.

## 1.1.4: PLAN STRUCTURE

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This CAMA Land Use Plan is made up of three main parts:

- Part 1: Desired Future;
- Part 2: Existing Conditions; and
- Part 3: Appendices.

**Part 1: Desired Future**, is intended to be the most frequently-used portion of the Plan, and describes our vision statement, primary goals for the future, the recommended actions the we will undertake to achieve our goals, a section on anticipated future land uses, and an implementation section that provides sequencing details for recommended actions. Part I also provides some general information on the how we will use this Plan and the CAMA planning process in general.

**Part 2: Existing Conditions**, includes the data, analyses, and information that informs the policy guidance found in Part I of this Plan, as well as detailed environmental information that informs the CAMA permitting process. This section is intended for use as a reference and resource for decision-making on technical issues not covered explicitly in Part I.

**Part 3: Appendices**, contains larger-scale versions of several of the maps found in Parts I and II. It also includes information on the public participation process used to prepare this Plan and serves as a location for other technical data and supporting information as may be added by the Town over time.

# 1.2: LAND USE VISION STATEMENT

The Plan’s land use vision statement is an aspirational description of what Atlantic Beach would like to achieve or accomplish in the mid-term or long-term future. It expresses our shared desires for the future and guides the goals and actions in our land use plan. The following is our Land Use Vision Statement.

The Town of Atlantic Beach is a small, family-friendly beach community. Our Town is safe, clean, well-maintained, and served by a responsive and careful local government. We pride ourselves on our welcoming attitude toward visitors and partial-year residents. We strive to fairly meet the needs of both visitors and residents in our budgeting, development, and public spending decisions.

In addition to abundant and well-maintained public beach accesses, residents and visitors to our Town also have access to waterfront areas, quality parks, trails, and sidewalks in support of family-oriented recreation and leisure activities. We actively support the establishment and operation of locally-owned businesses that meet people’s everyday needs.

In all actions, our Town gives the highest consideration to environmental preservation, recognizing that our coastal environment, including the water, air, and plant and animal life, are our greatest resources and must be protected.

Future development will complete, rather than compete with, the historically small-scale development of our Town. Development will be of a high quality that can withstand natural disasters while adding beauty to our picturesque community.



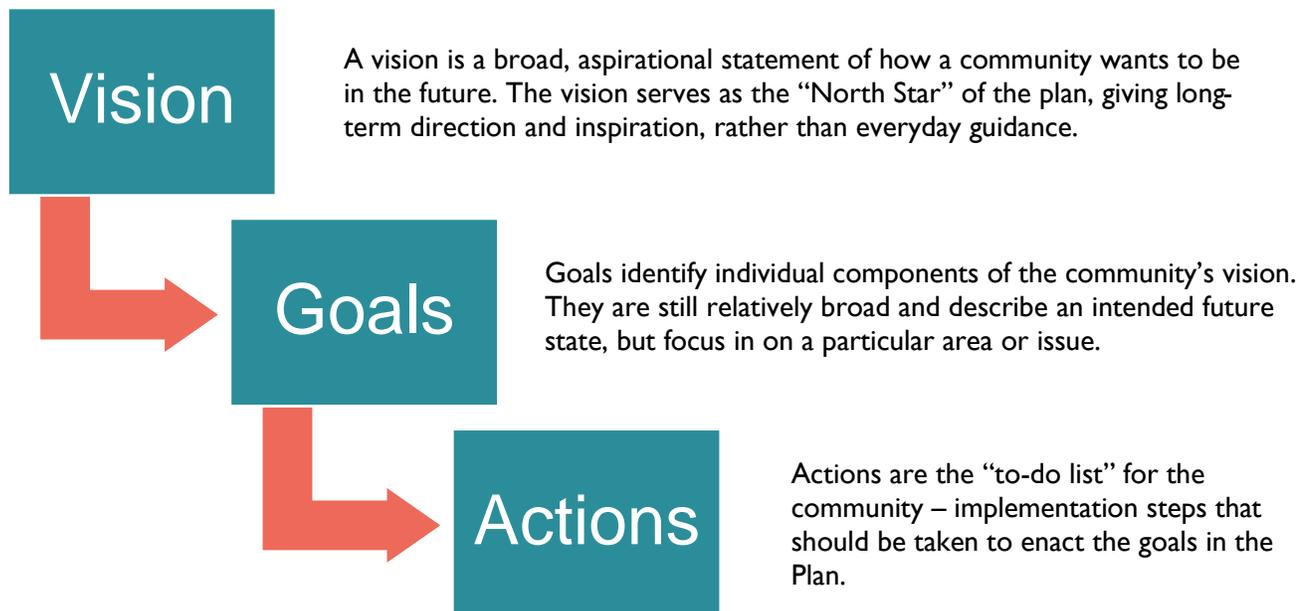
# 1.3: GOALS AND ACTIONS

## 1.3.1: OVERVIEW

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This section of the Plan outlines Atlantic Beach’s seven land use-related goals for the future, along with recommended actions associated with each goal. Goals typically address key components or constituent parts of the vision, and begin to outline how to arrive at the desired future state. The goals in this Plan were identified through a process involving staff, stakeholder, elected official, and resident input. Town officials, residents, and business owners were asked to identify the most important issues for the future and to provide their thoughts on how to address those issues. Additional details on the results of the process are included in Part 3, Appendices.

The diagram below explains the relationships between the vision statement, goals, and actions.



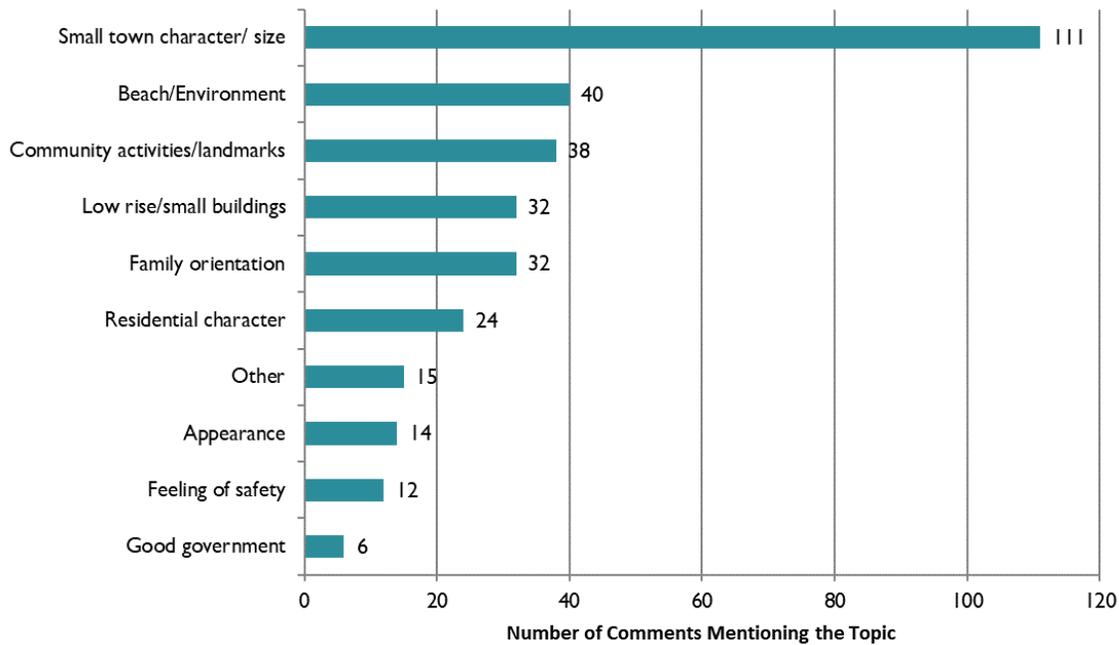
The seven goals included in this section were selected by weighing the relative priority and urgency of the various desires expressed by our residents, business owners, and officials. The goals and recommended actions are those with highest potential for creating meaningful progress towards our shared land use vision. These goals are also the ones that can be reasonably expected to be implemented over the five-year horizon of this document. The seven goal areas in this Plan are listed below, and each goal has its own section on the following pages.

1. Protect Community Character;
2. Causeway Redevelopment;
3. Improve the Circle Area;
4. Flooding & Water Quality;
5. Enhance Mobility;
6. Appearance & Property Maintenance; and
7. Address CRC Management Topics.

## 1.3.2: GOAL 1 - PROTECT COMMUNITY CHARACTER

One of the most clear and consistent responses to the Community Survey conducted at the start of the planning process was that residents want Atlantic Beach to protect and nurture our Town’s identity as a small, family-oriented beach community. The chart below summarizes responses from residents and business owners to an open-ended survey question about the desired future of the community. The chart results demonstrate how important maintaining community character is to respondents.

Answers to “What do you hope to see in Atlantic Beach in 20 years?”



Source: Community Survey responses

As the above chart shows, small town character and size were by far the most often mentioned items. However, it can be difficult to know what is meant by “small town character.” It could refer to building mass and scale, the public realm (streets and sidewalks, etc.), the kinds of land uses, or even more intangible things like sense of place or community behavior. More likely, it is a blend of these and other aspects. Regardless of its component parts, “small town character” likely means something very different in Atlantic Beach than it does in a suburb of the Triangle, or in a small town in the mountains, or even another coastal community. Consider the images below – are these developments consistent with small town character in a coastal community?



Manteo, North Carolina – pop: 1,500 permanent residents



Cape Charles, Virginia – pop: 1,100 permanent residents

In order to take steps to protect elements of the small town character that is special to Atlantic Beach and to ensure that future development preserves these features, the first step is to determine exactly what “small town character” means to us in Atlantic Beach. Then, the next step is to revise the Town’s regulatory tools, specifically the design standards in Article 18-5 of the Unified Development Ordinance (UDO), to ensure that future development occurs in ways that protect and maintain the desired community character.

### **ACTION 1.3.2.A: COMMUNITY CHARACTER ASSESSMENT**

Undertake a community character assessment to learn what residents mean when they say that Atlantic Beach should remain a “small, family-oriented beach community.” This assessment should focus on the built environment that the Town can control through its regulatory tools, including design controls in the UDO. It should seek to answer the questions: Which building and site characteristics are consistent with the community’s vision, and which are not? How tall can new buildings be? How large can new buildings be? Are there design features that should be required in new commercial and mixed-use developments? What amenities (such as pedestrian and bike infrastructure, landscaping, public art, and recreational resources) should new developments provide or contribute to the community? Are there incentives the Town could offer to encourage even higher-quality development?

### **ACTION 1.3.2.B: AMEND THE UDO**

Amend the UDO to make any regulatory changes necessary based on the findings of the community character assessment conducted in Action 1.3.2.A. Changes should include revisions to standards and development review procedures (such as a minimum threshold for design quality and incentives for exceeding the minimum threshold). Standards should address site configuration, building scale, and building appearance for multi-family, commercial, and mixed-use development.

Site configuration standards should address building placement along the street, the clustering of buildings, provision of public gathering space between buildings, signage placement, and parking location.

Building scale should address building height, building width, roof pitch, pedestrian orientation and shading, and standards for portions of a building below base flood.

Building appearance should address exterior materials (including roofs), colors, and glazing.

In addition to the built environment, the character of a town is often defined by its businesses: are they locally-owned, giving a unique flavor to the town, or are the streets dominated by large chains that make the town look like “Anywhere, USA”? In the Community Survey completed as part of this planning effort, about 70% of respondents said that encouraging commercial development in Atlantic Beach is an important goal. In comments and open-ended responses, many people mentioned that this development should focus on local or “mom and pop” businesses to avoid becoming an “over-commercialized” beach area. This will be a long-term endeavor. An important first step is forming an organization to represent local business interests. While Atlantic Beach is currently part of the Carteret County Chamber of Commerce, it would be advantageous to also have a local group dedicated to advancing the goals particular to Atlantic Beach’s businesses.

### **ACTION 1.3.2.C: ESTABLISH A LOCAL BUSINESS LEAGUE**

Establish a new organization to represent Atlantic Beach’s small business community. This should be a membership organization that brings small business owners together, provides resources, secures funding, and takes action to work toward the goals of the small business community. Options include a Business Improvement District (BID), a Town-specific Chamber of Commerce, or a Local Business League. Once formed, this organization can represent the interests of existing small businesses and provide resources to new entrepreneurs who want to add to the local business scene in the future.

Another important contribution such a local business support group could make is the pursuit of data and information on the impact of tourism on our economy. Town residents and business owners understand, on an intuitive level, the importance of tourism to the economy, but hard data and information on the contribution of tourism is almost impossible to find. One data point that is easily accessible is occupancy tax receipts. According to the Carteret County tax office, tourism-related occupancy tax collections in Atlantic Beach are rising. Occupancy tax data will continue to be a solid source of data regarding overnight lodging, but it does not capture details for day visitors, weekend residents, overnight visitors staying with friends, or how visitor spending affects other sectors of our economy like commercial and personal services. Without this data, it remains unclear how much of the local economic activity is derived by or results from tourism. One area of focus for the local business league could be the establishment and on-going operation of data collection efforts focused on tracking the impact of tourism.

### **ACTION 1.3.2.D: TRACK TOURISM IMPACTS**

Delegate tourism data collection efforts to the local business league. The league should explore methods of collecting and tracking daily visitation numbers at various points throughout the year; expenditures made by day visitors; economic impact of the various festivals and special events the Town hosts; and estimations of the service delivery charges that the Town incurs from enforcement, fire and police service, and waste management related to tourism. Biannual or annual updates to the resident and visitor survey last conducted in 2018 should also be scheduled and undertaken by the business community.

## 1.3.3: GOAL 2 - CAUSEWAY REDEVELOPMENT



*Looking north along the Causeway towards the mainland*

The Causeway Corridor is the gateway into Atlantic Beach. When visitors first arrive in the Town after coming over the Morehead City Bridge, they do so at the northern end of the causeway, which continues for almost a mile southward to the intersection with East Fort Macon Road. This area is our main commercial corridor.

The Atlantic Beach causeway itself is a 200-foot-wide right-of-way owned and maintained by NCDOT. For most of its length, it is five lanes wide – two travel lanes in each direction plus a middle turn lane. The road widens to six lanes as it approaches the intersection with East Fort Macon Road.

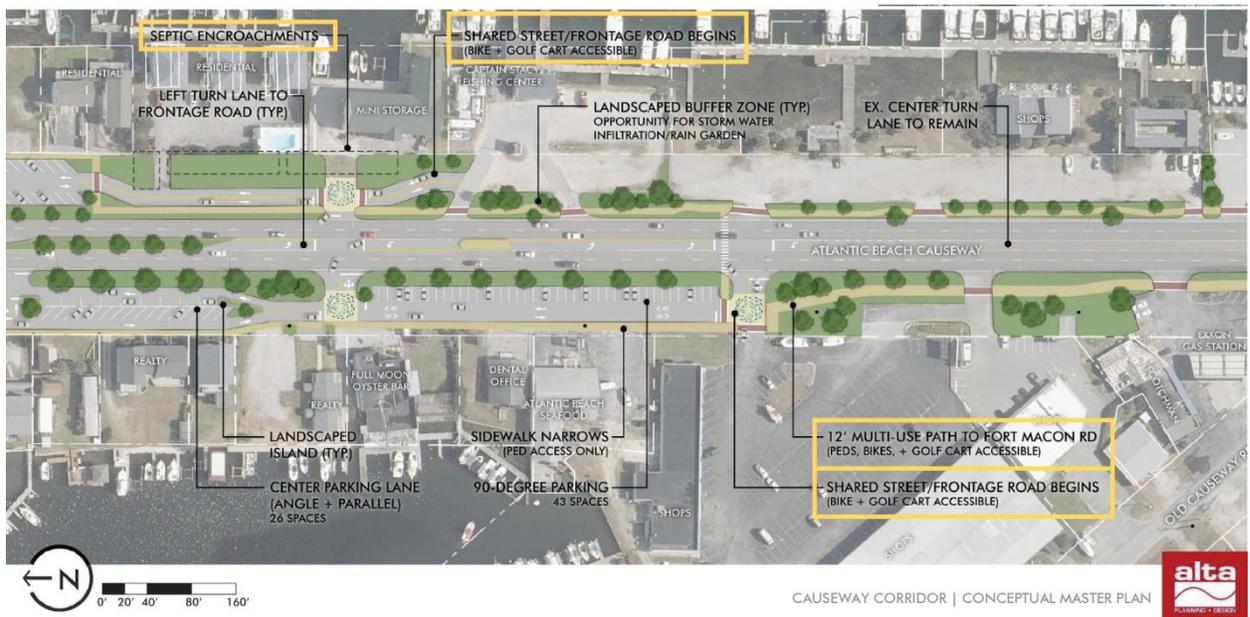
The causeway is the main entryway into the community and serves a vital role as our connection to the mainland. Significant amounts of traffic use the causeway on a daily basis (36,000 average daily trips, according to NCDOT traffic counts). It is, in fact, a highway for Town residents and visitors. At the same time, the causeway is also the primary commercial corridor for residents, visitors, and local businesses. There are a wide variety of retail, personal service, maritime, and entertainment use types along the corridor. This means the causeway must simultaneously serve as both a highway and a main street- two very different tasks that are difficult to address simultaneously. The corridor's function as a highway corridor calls for the movement of significant numbers of vehicles at fairly high speeds. This can often be in direct opposition to its role as a main street (slow traffic, numerous turning movements, pedestrians, and non-motorized activity).

The corridor's function as a primary vehicular travel way exerts considerable influence on the character of land uses. Buildings and signage are setback from the travel lanes, while land adjacent to roadway is used for parking and vehicular storage. The right-of-way also serves as the primary location for electrical transmission lines, which dominate views along the corridor.

In its capacity as a local street, much of the corridor is served by curb, gutter, and four-foot-wide sidewalks (along both sides of the street), but the sidewalks are relatively close to the travel lanes and there is insufficient room for the placement of landscaping to help establish physical or visual separation between pedestrians and passing vehicles. Also there are numerous curb cuts and vehicular access points along the roadway as different uses have come and gone over time.

We are well aware of these challenges, and have already commenced with a planning effort to begin to address them. In June 2019, the Town Council adopted the Causeway Corridor Conceptual Master Plan. This plan envisions significant changes to lands within the 200-foot-wide causeway right-of-way, including:

- Consolidating and connecting parking lots along the causeway;
- Creating a slow-speed frontage accessway with on-street parking in some locations;
- Improving the sidewalks and adding a 12-foot-wide multi-use paths along the roadway;
- Increasing landscaping, with a focus on shade trees;
- Adding crosswalks and median refuge islands to assist people in crossing the causeway; and
- Adding wayfinding signs along the route to help visitors better navigate the area.



*Causeway master plan concept drawing for central portion of the corridor*

The roadway-related recommendations in the causeway master plan have been submitted for inclusion on the regional transportation plan for consideration by the NCDOT. More detail on the findings and recommendations in the Causeway Corridor Conceptual Master Plan is available in Part 2 of this Plan. The changes anticipated in the Conceptual Master Plan will have profound impacts on the causeway and our Town, but the document stops short of land use planning recommendations for the private lands lining causeway. Planning for this area will be an important part of achieving our desired future.

The Community Survey conducted as part of the public outreach for this Plan identifies several patterns or themes of relevance for the causeway area. Most notably, the survey identified:

- A strong desire for more commercial opportunities and services, in addition to more options for entertainment and recreational activities; and
- A strong amount of concern regarding the appearance of the community, particularly at the main entrance along the causeway; and
- A strong desire to maintain and enhance our current small-town, family-friendly atmosphere as new development and redevelopment takes place.

The community input regarding our desired future is especially significant given the current land use utilization rate in Town. As shown in the existing conditions part of the Plan (Part 2), about five percent of our land area is vacant and buildable. Further, the land area along the causeway has the highest daily trip counts for passing traffic in the community, thus it has some of the highest potential capturing the new development and redevelopment that could come to Atlantic Beach. In addition, the causeway also has an urban waterfront designation from CAMA that may allow for reduced shoreline setbacks in some cases. These factors make the causeway one of the areas most likely to be redeveloped in the near term. Given the sentiments expressed by the community regarding the desire for more commercial and recreational services, redevelopment of the causeway is something to be encouraged.

One impediment to significant redevelopment along the causeway is the lack of central wastewater treatment. All the land along the causeway relies on small-scale, on-site wastewater treatment systems. Further, the majority of the lots along the causeway are too small to support significant increases in on-site wastewater capacity beyond what currently exists. The net result is that new development or redevelopment along the causeway will be limited to the types and sizes of existing development or to new single-family detached dwellings without some form of centralized wastewater treatment.

This situation is an issue for further community discussion. On the one hand, land along the causeway is some of the most “ripe” for redevelopment given its location at the gateway to the community, amount of traffic, and somewhat more flexible CAMA provisions. On the other, accommodating that desired redevelopment requires the Town to consider upgrading wastewater treatment capacity along the corridor. There is an expressed desire among community members for more commercial goods and services on the island- but there is also a strong desire to maintain Atlantic Beach’s small-town, family-oriented atmosphere.

One possible approach to this problem is a very measured and controlled strategy for targeted redevelopment of lots lining the causeway. Such a strategy could include the provision of a measured amount of off-site wastewater capacity to encourage desired forms of redevelopment subject to a negotiated development agreement between the Town and each landowner seeking redevelopment along the corridor. Such an agreement could address aspects like types of allowable uses, limitations on the design and configuration of the site, and increased support for local business enterprise. In return for executing a development agreement with the Town, the landowner has highly desirable land that can accommodate higher-value development.

In anticipation of additional community consideration of a strategy to support redevelopment along the causeway, Town leadership is exploring the possibility of funding the installation of a central sewer line to lots along the causeway. Landowners along the causeway could then utilize a portion of the wastewater treatment capacity to support redevelopment, subject to a development agreement executed with the Town. This approach could work to support careful and targeted redevelopment along the causeway, but will also require a series of initial actions, which are highlighted below.

This situation is an issue for further community discussion. On the one hand, land along the causeway is some of the most “ripe” for redevelopment but accommodating it may require sewer. The community wants more commercial goods and services on the island - but there is also a strong desire to maintain Atlantic Beach’s small-town, family-oriented atmosphere. Is there a way to provide more goods and services while protecting community character?



### ACTION 1.3.3.A: CREATE A NEW FUTURE LAND USE CATEGORY

Revise the Future Land Use Map to establish a new future land use classification for the causeway area that includes the shopping center and the lots around the intersection of the causeway with Fort Macon Road. The new designation serves as the basis for development regulations in the area that may differ from other parts of Town.

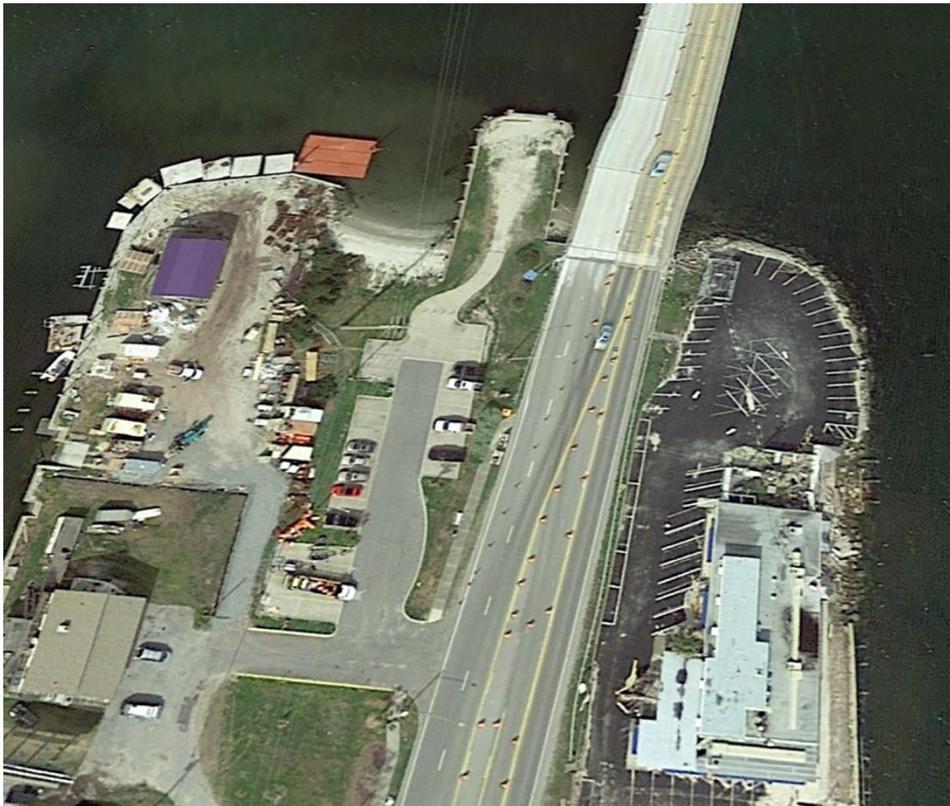
### ACTION 1.3.3.B: PREPARE A SMALL AREA PLAN

Undertake a planning process to produce a small area plan that addresses the parcels on either side of the Atlantic Beach Causeway. This plan should include information on the types of uses desired in this gateway corridor and give guidance on what future development should look like, how it should be configured, and how it should relate to the improvements suggested in the Causeway Corridor Conceptual Master Plan.

### ACTION 1.3.3.C: ESTABLISH WASTEWATER POLICIES

If extension of wastewater service to the causeway area is considered, the Town should clarify the available capacity, including ultimate treatment potential with system upgrades. In addition, the Town must establish a clear and equitable policy for connection to the system, apportionment of allowable capacity, and how capacity may be re-allocated over time.

One opportunity issue to consider is the availability of land for redevelopment at the northernmost end of the Atlantic Beach Causeway. This area is labelled in the Causeway Corridor Conceptual Master Plan as “future redevelopment” and could potentially host a public use such as a park or other gathering space. Such a use would welcome visitors at the gateway and provide a destination for bike, pedestrian, and golf cart traffic, drawing visitors all the way along the commercial corridor and offering residents an additional civic space to gather, celebrate, and exercise.



*The northern terminus of the causeway already includes a small beach, public access to the water, and a parking area. Further development of this area with recreational resources or other visitor-oriented features could help draw visitors down the causeway from the Circle area and increase foot traffic for business lining the causeway.*

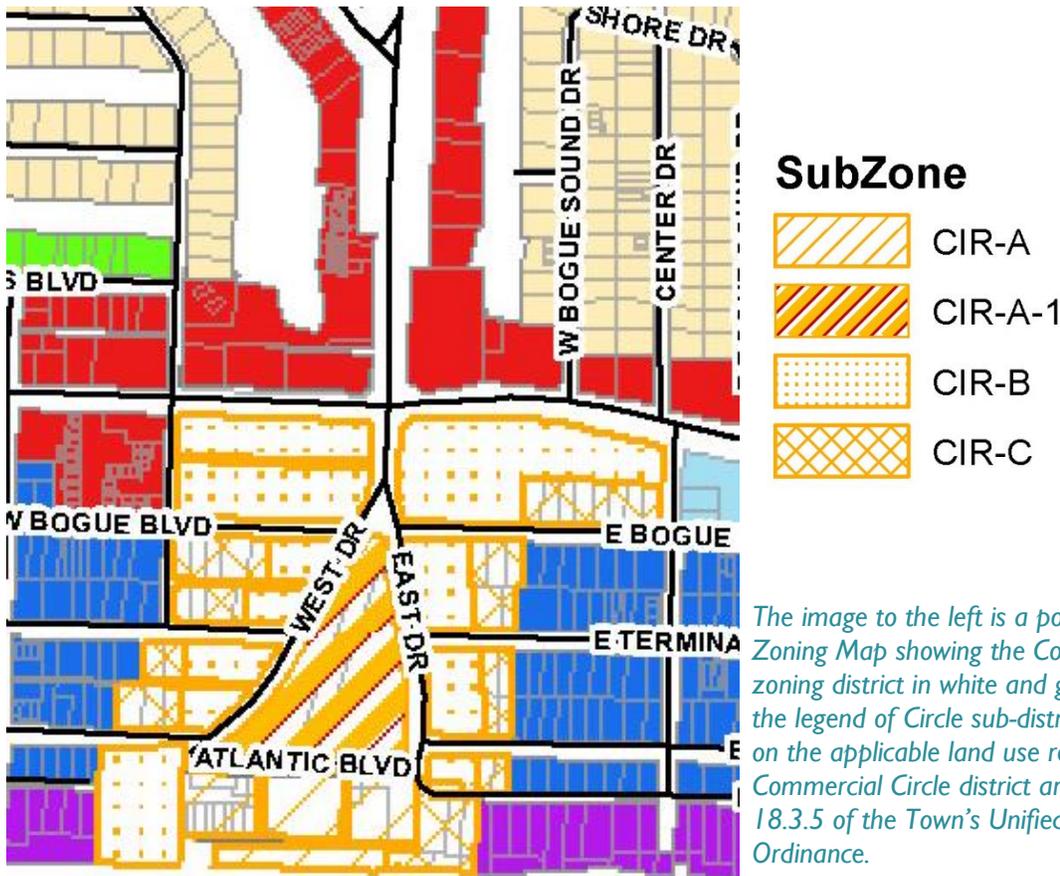
This planning effort could also open up discussion about relocating parts of the sidewalk or multi-use path to the waterfront on either or both sides of the causeway. At present, the Causeway Corridor Conceptual Master Plan shows the pathways and sidewalks directly adjacent to the roadway, perhaps because the study area for the Master Plan was limited to the right-of-way. Other communities have found success moving their walkways to the waterfront to encourage more use of active transportation in a scenic location (versus adjacent to a busy roadway) and have incorporated space for restaurants to offer outdoor dining or gathering areas off the walkway to draw in visitors. Such an approach may be possible here in Atlantic Beach as part of redevelopment of land along the Causeway.

*The Wilmington Riverwalk runs along the Cape Fear River. It connects key tourist destinations and provides access to waterfront dining and shopping opportunities. It was originally built in the 1980s in the heart of downtown, and in 2017 was completed at a length of 1.75 miles including connections to a newly-redeveloping area.*



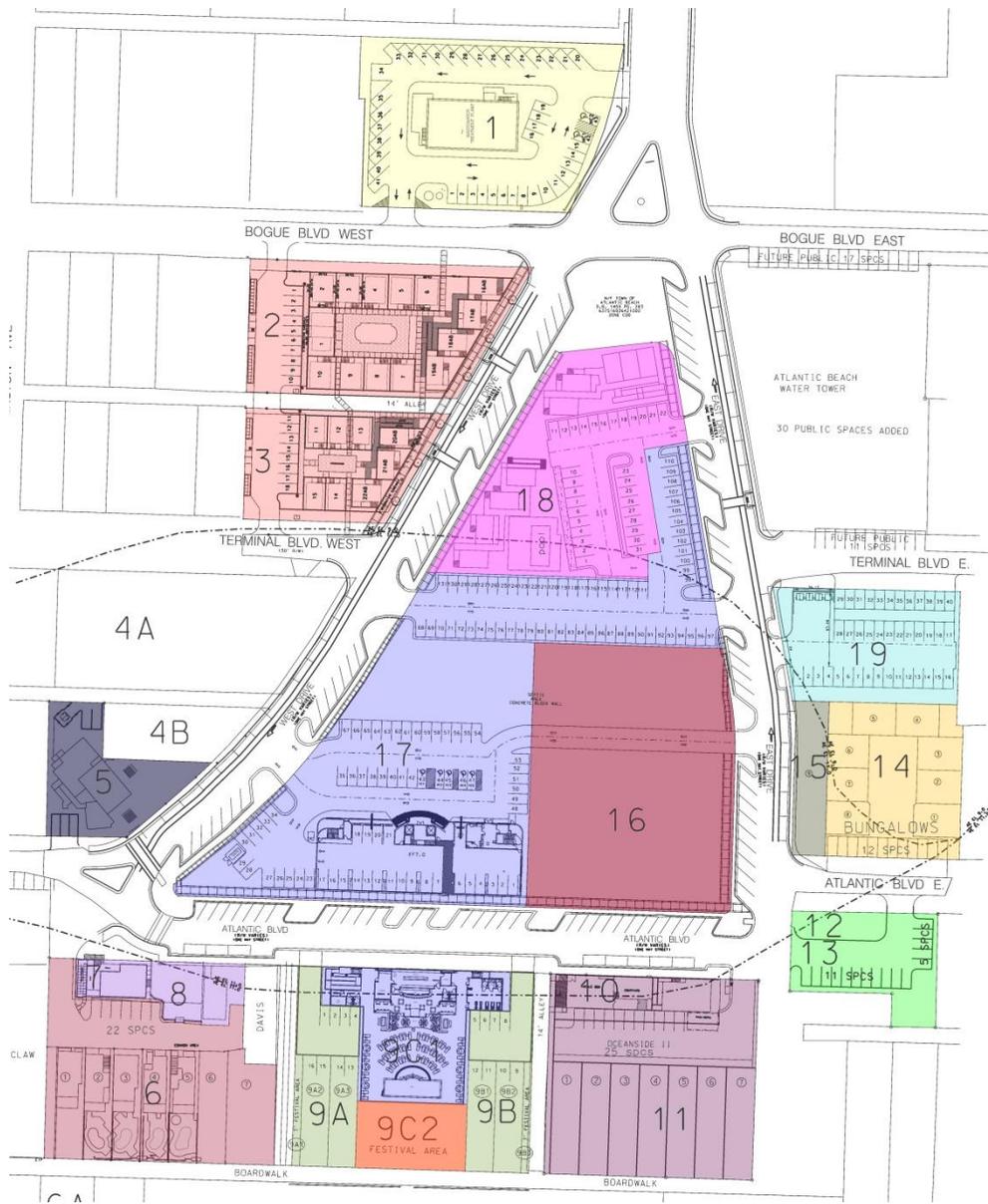
## 1.3.4: GOAL 3- IMPROVE THE CIRCLE AREA

The “Circle” Area is a vital part of our community at the southern end of the causeway. It has long served as the Town’s “living room” and been a place for visitors and residents alike to access and enjoy the beach. Interestingly, the area typically thought of as the “Circle” is actually more in the shape of a triangle. The map below is a copy of the Official Zoning Map, which highlights the Commercial Circle (CIR) zoning district (which is actually comprised of four sub-districts) shown in white and gold.



Aside from the causeway, the Circle is the main area for development potential in Atlantic Beach. The Circle area is comprised of several important land uses and developments, including the Town Hall and Fire Station, the Town’s water treatment plant, the 4 Corners Diner, several motels, single-family homes, and the Grove master planned development at the core of the Circle area. Because of its location, size, and anticipated level of development at build out, the Grove is one of the most important development sites in Town.

In 2018, the most recent version of the conceptual master plan for the Grove was submitted and approved by the Town Council. It forms the basis of the Commercial Circle zoning district standards. The master plan was fairly specific in terms of the uses that are planned for the site, and also provides information on the size and approximate configuration of planned buildings and parking areas. The map associated with that plan, which breaks the development up into 19 sub-areas, has been reproduced below. The table below the image describes the anticipated type and size of proposed development color-coded by sub-area, including square footage, number of dwelling units, amount of open space provided, and the anticipated number of parking spaces.



THE GROVE PARKING AND OPEN SPACE SUMMARY

Comm #	Project Name	Proposed Uses	Commercial SqFt	Residential Units	Parking Spaces		Parking Provided		Tract Area	Open Required	Open Provided	Notes
					Required	Furnished	Private/On Site	Public/Off Site				
1	Operations Plant	Operations Plant, Parking	0	0	0	43	0	3	32942	4941	3742	
2 & 3	Lookouts in the Grove	Commercial/Residential & Residential	2,821	22	43	18	18	25	42661	6401	7655	614 SF POOL
4A	Palm Garden	Open Space	0	0	0	0	0	0	0	0	0	LEASE
4B	Palm Garden	Open Space	0	0	0	0	0	0	0	0	0	LEASE
5	Pescara	Restaurant	2,700	0	9	5	5	0	10289	1543	4108	
6	The Grove Oceanside	Parking/Residential	0	7	11	22	22	0	28295	4244	0	
6A	Transferred to Town	Open Space	0	0	0	0	0	0	5498	825	5498	
7	The Grove Oceanside I	Bakery/Cafe	1,138	0	4	0	0	4	4256	638	2215	
8	Idle Hour Biergarten	Restaurant	800	0	3	0	0	3	3688	553	2071	
9A/B	The Grove Oceanside III	Parking/Residential	0	4	6	16	16	0	18070	2711	400	
9C1	Hotel Pool & Amenities	Hotel Amenities	0	0	0	0	0	0	14335	2150	504	1007 SF POOL
9C2	Festival Area	Open Space	0	0	0	0	0	0	5940	891	5940	
10	The Grove Oceanside II	Parking/Commercial	2,397	0	8	0	0	8	6041	906	1085	
11	The Grove Oceanside II	Parking/Residential	0	7	11	25	25	0	27585	4138	0	
12/13	Commercial Residential	Commercial/Residential	1,200	1	6	16	6	10	10694	1604	2683	
14	The Bungalows	Residential	0	8	12	12	12	0	20851	3128	3179	366 SF POOL
15	Commercial	Commercial	2,000	0	7	0	0	0	4161	624	950	
16	Commercial/Residential	Parking, Commercial/ Residential	0	80	120	120	120	0	43232	6485	12451	
17	Hotel	Parking/Commercial/Hotel	3,000	120	180	131	131	0	72968	10945	13638	
18	Commercial/Residential	Commercial/Residential	3,627	9	27	31	31	0	31510	4727	0	
19	Parking	Parking	0	0	0	40	0	40	16084	2413	4036	
Totals			19,683	258	447	479	386	93	399100	59867	70155	

The Grove, if built as described in the approved conceptual master plan, is expected to contain nearly 20,000 square feet of commercial area, 258 residential units, 386 private or on-site parking spaces and 90 off-site parking spaces that are open for public use, and over 70,000 square feet of open space (though some of the open space is designated for use as infiltration field associated with the developments centralized wastewater treatment facility).



*Looking south toward the Atlantic Ocean over the Grove development in 2020*

Much of the residential and commercial development is planned as part of mixed-use developments, including vertical mixed-use, in which residential units are located above ground-floor non-residential space (such as that found in the Lookouts in the Grove located between Bogue Boulevard and Terminal Boulevard on the right side of the image). This configuration balances demand for walkable retail and restaurant space and the demand for additional housing near the beach. Parts of the development have been completed, such as three stand-alone buildings containing restaurants and bars. Other sub-areas are partially built, such as the residential homes closest to the beach. Still other areas, most notably the hotel development proposed at the center of the circle, are currently on hold while the developer seeks partnership with a new hotel developer after the original partner exited the agreement.

Though the conceptual master plan has been approved, detailed plans on the ultimate design and configuration of the buildings within each sub-area must be submitted to the Town for review and approval. One condition of the agreement with the Town is that the developer provides an annual update on the progress of the development and may amend the conceptual master plan as part of an annual update.

There are some necessary revisions to the conceptual master plan which should be addressed as part of the next annual update, including minor boundary discrepancies and outdated phasing information. This is typical given the size of the development area and the high costs of development in coastal areas. In these situations, partners enter and exit the project, market conditions change, and permits and approvals for anticipated development can expire. The conceptual master plan should be updated to reflect the current state of the development, including any abandoned or changed uses, designs, or configurations. In addition to these internal changes, the desires of the community have also evolved. An update to the conceptual master plan offers an opportunity to include additional elements to improve the public's experience with the Grove.

### ACTION 1.3.4.A: UPDATE THE GROVE CONCEPTUAL PLAN

Update the Grove Master Plan to reflect errors in lot lines, phasing details, and amend the plans that reflect expired approvals or development proposals unlikely to take place. In addition, consider incorporating the following elements into the amended plan to improve the public realm within the area:

1. Install parking lot landscaping on the southern and eastern lot lines of the parcel that houses the development's wastewater operations plant (Lot #1);
2. Add small on-site signage clarifying that the open space on Lots 4A and 4B (the ones with planted palm trees) are open to the public; and
3. Explore possibilities for one or more improved pedestrian crossings on East Drive in the southeast corner of the development.

One more substantial change that the Town should consider including in negotiations of the conceptual master plan update process is the public area comprised of sub-areas 9A, 9B, and 9C2 immediately adjacent to the beach (where the beach musical festival currently takes place). The developer has granted a use easement to the Town for the portion of the Grove identified as 9C2 (the area in orange shown on the conceptual master plan marked "festival area"). This area is a very valuable resource for our community. It helps ensure public access to the beach and provides a space for civic activities in the traditional heart of Atlantic Beach. However, the current conceptual plan calls for the placement of four residential dwellings immediately adjacent to the festival area on 9C2 (two on Parcel 9A, and two on Parcel 9B). While there are also easements (marked 9A1 and 9B3) on either side of these four homes, there is no direct pedestrian or vehicular access to the festival area on 9C2. This is a source of concern from a public safety standpoint as well as a potential nuisance for the homes anticipated on the 9A and 9B sites.

The Town should renegotiate with the owner of the Grove and ask that the map be amended to make the land area in sub-areas 9A and 9B ocean-ward of the CAMA Static Vegetation Line buffer part of the 9C2 "Festival Area." This would provide the Atlantic Beach with a continuous oceanfront block of land in which to foster our "living room" to host events, as well as to provide more direct vehicular and pedestrian access to the beach.



Left, close-up of the Grove conceptual master plan as currently approved. 9C1, in purple, is the pool and other amenities for the hotel; 9A and 9B are planned to be residential lots; and 9C2 is deeded to the Town as a public open space called the "Festival Area."



Right, close-up of a potentially revised Grove conceptual master plan showing a recommended renegotiation of the oceanfront lots in sub-areas 9A, 9B, and 9C2, showing additional land area provided to the Town for inclusion in the "Festival Area" public open space.

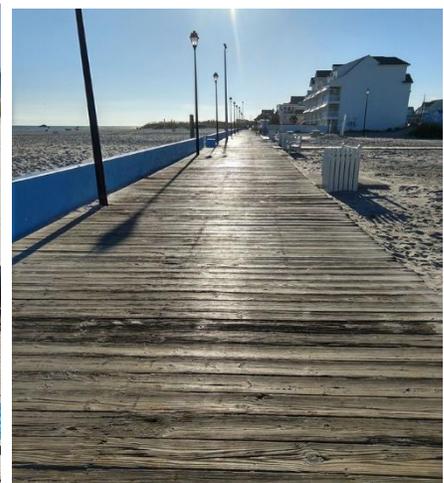
### **ACTION 1.3.4.B: RENEGOTIATE THE PUBLIC SPACE IN THE GROVE**

Renegotiate the Grove conceptual master plan to allocate all of the land area ocean-ward of the CAMA Static Vegetation Line in sub-area 9 to the Town’s “festival area” to provide a full block of oceanfront land for the Town to create its community “living room.” This could take the form of a use easement, a dedication to the Town, or some form of public-private partnership.

One of the most important elements in the Grove area is the Atlantic Beach Boardwalk. The boardwalk stretches for almost four blocks along the beach strand immediately adjacent to the Grove. Originally installed in the 1930s, the boardwalk has provided residents and guests with a walking and gathering area adjacent to the beachfront for almost 100 years. The boardwalk includes benches, picnic areas, play structures, volleyball nets, exterior lights, and low walls that define the area. While the boardwalk has been restored and refreshed many times over the last 100 years, many residents and business owners believe the time has come for another renovation. The Town should consider upgrading this important feature and if possible, extending the boardwalk to the east and west to join it with the closest public beach accessways on either side.

### **ACTION 1.3.4.C: RENOVATE THE BOARDWALK**

Continue to improve the boardwalk area with additional seating, board replacement with a more durable material, unified directional and informational signage, updated exterior lighting that can accommodate banners or beach safety signage, upgraded bicycle parking, the inclusion of one or more permanent shade structures, and increased facilities for disabled access.



*The boardwalk offers seating and recreational activities, but could benefit from further enhancement.*

In addition to upgrading the boardwalk, many residents would also like to see increased performance amenities in the boardwalk area so that other events similar to the Beach Music Festival may also take place in Atlantic Beach. Question 9 of the 2018 community survey asked respondents what kinds of features should be added to the Town Park or other areas, and a bandshell or amphitheater for outdoor performances was identified as one of the top two desired features. The central location, proximity to retail and entertainment, available parking, and easy access make the Grove area in general and the festival area in particular a good candidate for some form of temporary bandshell, stage, or performance space.

#### ACTION 1.3.4.D: ESTABLISH A PERFORMANCE SPACE

Consider establishing a temporary or semi-permanent performance space near the boardwalk or within the festival area of the Grove.



Another topic for consideration in the Circle area is the potential for more public art as a means of highlighting the area as an important public space. Possible options include murals, sculpture, or other art installations at key locations in the area. For example, the retaining wall enclosing the wastewater infiltration field in the center of the Grove could be a location for rotating temporary murals depicting beach life or important parts of the Atlantic Beach experience. Another option could be decorative crosswalks, sidewalks, or pedestrian pathways as a means of promoting wayfinding in the area. There are also several locations within the existing street rights-of-way that could accommodate statuary or other art installations on a permanent or rotating basis. Inclusion of public art could be a way to promote more interaction between the Grove and our residents while also promoting a festival atmosphere in this important tourism area.

#### ACTION 1.3.4.E: INCORPORATE PUBLIC ART IN THE CIRCLE

Incorporate murals or other forms of public art on the Atlantic Beach water tower site and in areas throughout the Grove development. Partner with the landowner and a newly-formed Appearance Commission to develop a program to execute this recommendation.

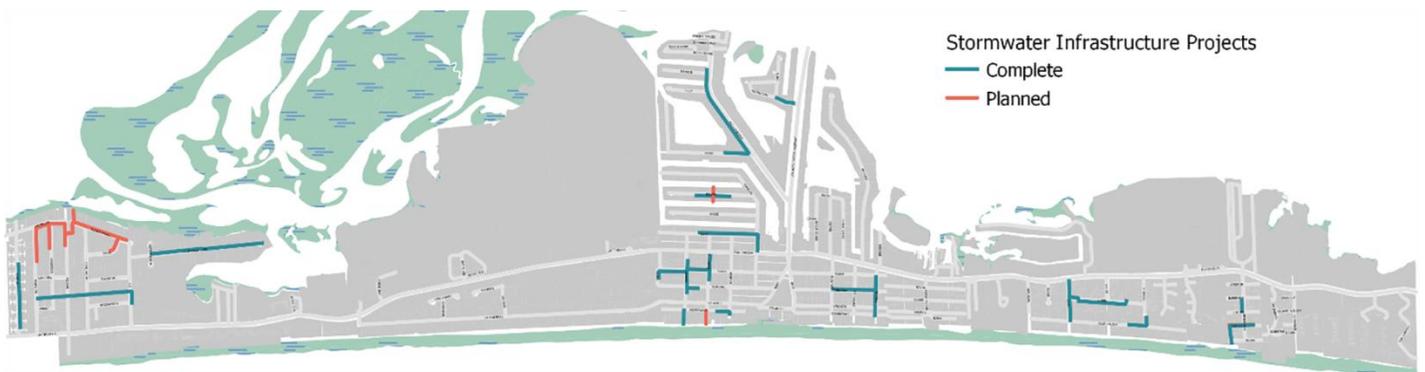


Above left: Building wall mural from Rivera Beach, Florida. Below left: Building wall mural from Houston, Texas. Above: Wall mural contest in Reno Nevada – annual contest for artists who each have their own section of wall. Submissions are judged and remain on the walls until the following year's contest.

## 1.3.5: GOAL 4 - FLOODING & WATER QUALITY

Nuisance flooding of roadways and private lots during rain events is a persistent problem for Atlantic Beach. While coastal barrier islands have sandy soil that allows fast infiltration of rainwater, islands also often lack topographic relief. This, coupled with a combination of increasing rainfall intensity, increasing amounts of impervious surface, and rising ground water levels, is resulting in an increased prevalence of nuisance flooding in yards and on streets throughout Town. The community survey conducted at the start of this Plan asked residents and landowners to rank or prioritize issues of concern facing our Town. Reducing flooding of streets and lots were the two top-ranked goals, with over 80% of respondents indicating that these should be important issues for us to address.

The need to manage stormwater and maintain near-shore water quality have long been important to the Town. In 2007, we adopted a Stormwater Master Plan that identified nine flooding “hot spots,” or flooding problem areas (comprised primarily of streets and rights-of-way), throughout Town. The master plan made recommendations for solutions to these flooding problems. In the years since, Atlantic Beach has completed six of the nine projects recommended, in addition to a number of other improvements not covered in the 2007 plan. We have also undertaken two stormwater drainage projects (one completed, one under construction) that utilize sheet flow of stormwater over vegetated ground prior to flowing into the adjacent body of water. The Stormwater Infrastructure Projects map below shows the current completed and planned stormwater projects to date. Many of these infrastructure projects connect to DOT storm drainage systems, that have outfall pipes to canals and ultimately, to Bogue Sound. This point-source stormwater discharge is likely to have some impact on surface water quality, as further detailed in Section 2.5.7, Wastewater Disposal, of this Plan. We have a testing initiative that is currently underway that will enhance our understanding of how stormwater discharge and near-shore water quality issues are related.



Source: Atlantic Beach Town Staff

See Appendix 3.1.1 for a larger version of this map.

While the Stormwater Infrastructure Projects Map (above) is new and is a major step forward, there are other projects that have already been completed but that are not currently shown on the map. The Town’s GIS system (the software used to make this map) also lacks many of the details associated with the projects that have already been completed. Updating our current stormwater coverage in the GIS system will provide a more complete picture of the stormwater infrastructure in Atlantic Beach today and what steps need to be taken to continue to address nuisance flooding and protecting near-shore water quality.

### ACTION 1.3.5.A: UPDATE THE TOWN’S STORMWATER MAP

Update the Town’s stormwater map to include information on the full range of stormwater infrastructure currently installed (including inlet type, pipe size, and ownership/maintenance responsibility), updated “hot spots” where flooding events occur, DOT infrastructure, and all point-source stormwater discharges. Incorporate annual updates to this master map in the workplans of relevant departments so that this map and its associated GIS information stay current.

As a follow-on from our 2007 Stormwater Master Plan the Town formed a committee in 2018 to study recreational water quality around Atlantic Beach in order to protect the Town’s greatest tourism and environmental asset- its near-shore waters. The committee came up with three directives for future action:

- 1) Develop a water quality plan;
- 2) Continue surface water quality testing; and
- 3) Continue public education about the importance of water quality protection.

In response to the first directive from the committee, the Town partnered with the North Carolina Coastal Federation, East Carolina Council of Governments, and LDSI Engineering to secure grant funding from the Duke Energy Foundation and the North Carolina Department of Environmental Quality’s 205(j) program to prepare a water quality plan with a focus on watershed restoration. This water *quality* plan has since expanded to also cover water *quantity*—that is, better managing stormwater quantity to help promote near-shore water quality. As an added benefit, this approach will also help mitigate nuisance flooding on lots and in streets resulting from rainfall events. The water quality and stormwater management planning process is underway as of the writing of this Plan, and is expected to produce the Town’s new Stormwater Resiliency Plan by the end of 2020. The Stormwater Resiliency Plan is expected to include updated GIS layers and stormwater calculations covering the Town and to identify specific water quality and quantity management improvements that the Town could undertake to promote near-shore water quality and help prevent nuisance flooding.

Once the Stormwater Resiliency Plan is adopted, we may be eligible for additional funding from North Carolina’s 319 Grant Program. 319 Grants disburse money from the Federal Environmental Protection Agency to states for the purpose of reducing nonpoint source water pollution. The North Carolina Department of Environmental Quality’s Division of Water Resources manages the 319 Grant Program for North Carolina. Grants are made annually and may be used to conduct watershed restoration projects including stormwater and agricultural best management practices. This funding stream could help the Town address its flooding and water quality goals.

#### **ACTION 1.3.5.B: ADOPT AND IMPLEMENT THE STORMWATER RESILIENCY PLAN**

Complete and adopt the Stormwater Resiliency Plan, and incorporate the Plan’s recommendations into the Town’s strategy for addressing stormwater management and near-shore water quality. Use the adopted plan as a means to support 319 Grant funding requests in the 2021 grant cycle for eligible water quality projects identified by the Plan.

In addition, use the recommendations and priorities in the Plan to inform the Town’s capital improvements program with respect to prioritizing and completing stormwater management infrastructure improvements.

In addition to our work on stormwater management planning and improvements to public stormwater infrastructure, we are also exploring ways to ensure new development does not further contribute to nuisance flooding. Recent changes to the UDO adopted in 2019 are intended to limit the deposition of fill on individual lots to the minimum necessary while at the same time requiring the preparation of on-site stormwater mitigation solutions to help ensure that at least some of the stormwater that falls onto an individual lot remains on that lot until it infiltrates into the ground. These solutions include on-site detention basins and swales as well as limitations of severe slope and grading differentials along lot lines where one lot is higher than an adjacent lot and then “sheds” its stormwater to the lower lot.

These regulatory changes are still somewhat new and their impacts on nuisance flooding are still being evaluated. While we expect that these solutions will help limit flooding resulting from new development, there is still a need for a comprehensive solution in parts of our Town that are already developed, particularly those with small lots with limited amounts of pervious surface (like those in the Cottage District). Some options for addressing these issues are identification of potential areas for neighborhood-level stormwater control mechanisms like open space

areas that also serve as inundation ponds during and after storm events. There is also an opportunity to provide incentives for development and redevelopment that can capture and retain larger portions of stormwater (even run-off from adjacent lots) through rainwater harvesting systems, cisterns, and conveyance structures on individual lots. Another option for exploration is a credit system where lots, rights-of-way, or drainage easements that serve as detention/retention points for adjacent lots receive credits towards stormwater or utility bills or some other form of tax credit.



*Flooding following rains from Hurricane Bertha in 2014*

*Source: Twitter user @danapeele*

### **ACTION 1.3.5.C: CONSIDER ADDITIONAL UDO REVISIONS**

Continue to evaluate the effectiveness of new limitations on fill and requirement for engineered stormwater management solutions for retaining stormwater run-off on-site. Consider new maximum thresholds for impervious surfaces that require at least 25 to 35 percent of each lot to remain pervious and allow innovative construction techniques like pervious paving, green roofs, and on-site retention devices to be credited towards pervious surfaces.

Supplement the UDO with incentives for rainwater harvesting devices sized to capture and retain stormwater during storm events.

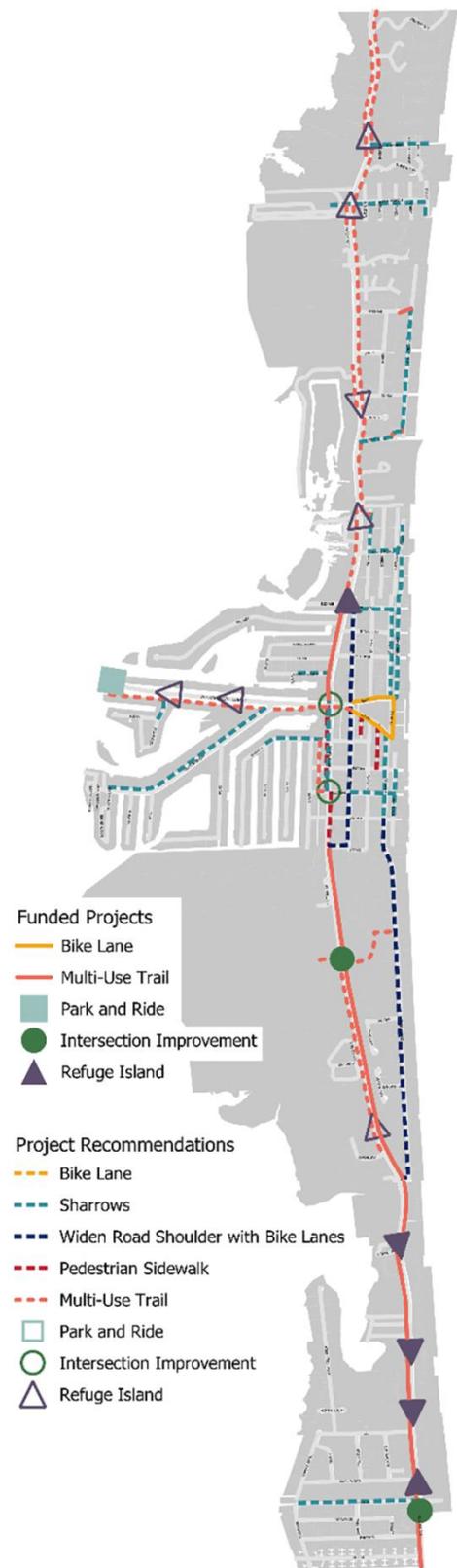
Explore the possibility of using open space requirements to create neighborhood-level stormwater control mechanisms, detention basins, and other sub-regional containment solutions.

### 1.3.6: GOAL 5 - ENHANCE MOBILITY

Walking, bicycling, and use of other non-traditional forms of motorized transport are an important part of life in Atlantic Beach. Visitors and residents alike rely on pedestrian, bicycle, and low-speed vehicle (golf cart) infrastructure to shop and recreate throughout the year. Mobility is vital to tourists heading to the beach and is an important component of “livability” for residents. In 2012 the Town Council adopted the Comprehensive Bicycle Plan which includes 58 recommendations for projects to increase pedestrian and bike friendliness in our Town. These projects included on-road and off-road infrastructure such as new refuge islands, sharrows, crosswalks, and trail installation; improved signage; and amenities such as bicycle parking and landscaping improvements. To date, 14 of the 58 recommended projects have been completed, as shown in the bicycle plan implementation summary in the table below. All but one of the remaining 44 bicycle or pedestrian mobility lack a source of funding.

Comprehensive Bicycle Plan Implementation			
Type of Project	#of Recommended Projects	Completed by May, 2020	Projects Remaining
Bike Lane	1	1	-
Existing Crosswalk Improvement	1	1	-
Intersection Improvement	3	1	2
Multi-Use Trail (segments)	18	6	12
Park and Ride	1	1	-
Pedestrian Sidewalk (segments)	4	-	4
Refuge Island	12	4	7
Sharrows (to be added to existing roadway segments)	16	-	16
Widen Road Shoulder with Bike Lanes (segments)	2	-	2

Source: Town of Atlantic Beach staff



See Appendix 3.1.1 for a larger version of this map.

While the Comprehensive Bicycle Plan did account for some pedestrian infrastructure needs, such as refuge islands in the middle of difficult road crossings, it did not include a full analysis of pedestrian mobility. We need to supplement the Comprehensive Bicycle Plan with a pedestrian mobility analysis to gain a more complete picture of the existing and needed resources.

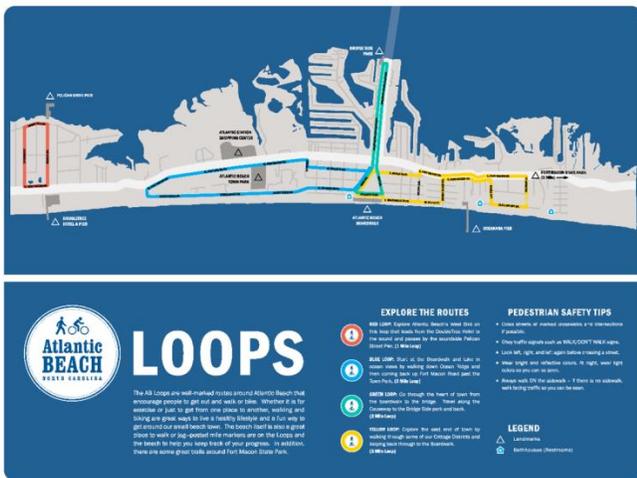


One of the refuge islands installed since the adoption of the Comprehensive Bicycle Plan. This new infrastructure makes it easier and safer for pedestrians and cyclists to cross East Fort Macon Road near Brooks Street and South Wilson Avenue.

**ACTION 1.3.6.A: COMPLETE A PEDESTRIAN MOBILITY ANALYSIS**

Complete a pedestrian mobility analysis to supplement the Comprehensive Bicycle Plan. This analysis should first include a detailed inventory and mapping of existing sidewalks, curb cuts, crosswalks, and refuge islands. The analysis should make recommendations of where sidewalks, curb cuts, crosswalks, and refuge islands are needed, and indicate the priority rating of each project to ensure timely and efficient implementation.

The Town recently completed the AB Loops project. The AB Loops are a set of four routes for walking, jogging, or biking ranging in length from one to three miles and connecting points of interest throughout Town. The four routes are color coded and we installed signs identifying each loop and marking the distance along each route. The AB Loops are an excellent example of low-cost, high-impact mobility projects that we can undertake to further improve our pedestrian and bike friendliness. Recent pedestrian improvements at the Fort Macon State Park site include a connector trail that joins the facility’s walking paths to the Town’s pedestrian and bicycle infrastructure. While this kinds of projects are important components of the non-motorized transportation network, there is more work to accomplish.



The AB LOOPS Map



In 2017, Fort Macon State Park was awarded a grant of nearly \$100,000 to build a connector trail joining the Town’s sidewalks with the park’s 1.5 mile trail system. The connector trail is shown at the left of the park map shown above, and runs to the south of East Fort Macon Road/Hwy 58.

Source: NC Department of Natural and Cultural Resources

One area of focus is to enhance the pedestrian and bicycle network to facilitate more north-south travel along the island, particularly with sharrows and other low-cost improvements that facilitate safe bicycle use. Another important part of encouraging bicycle use is ensure adequate bicycle parking facilities at beach access points, points of interest, and in retail areas.

**ACTION 1.3.6.B: CONTINUE TO PROVIDE BICYCLE AND PEDESTRIAN FACILITIES**

As part of the pedestrian mobility analysis, look for ways to connect existing and proposed multi-use trails to facilitate more north-south movement. Also support and encourage increased use of bicycles such as sharrows, wider street shoulders, increased bicycle parking facilities, and preparation of a bicycle route map similar to the AB Loops map.

Another important mode of transportation for residents and visitors is low-speed vehicles and golf carts. These vehicles allow increased mobility without the traffic and environmental costs associated with typical automobiles. Town rules permit the use of golf carts and low-speed vehicles on streets, but as with bicycles, their use is highly dependent on adequate infrastructure and supporting facilities like signage, safety features, and parking. One area of action is retrofitting or installation of golf cart or low-speed vehicle parking spaces at existing beach access points.

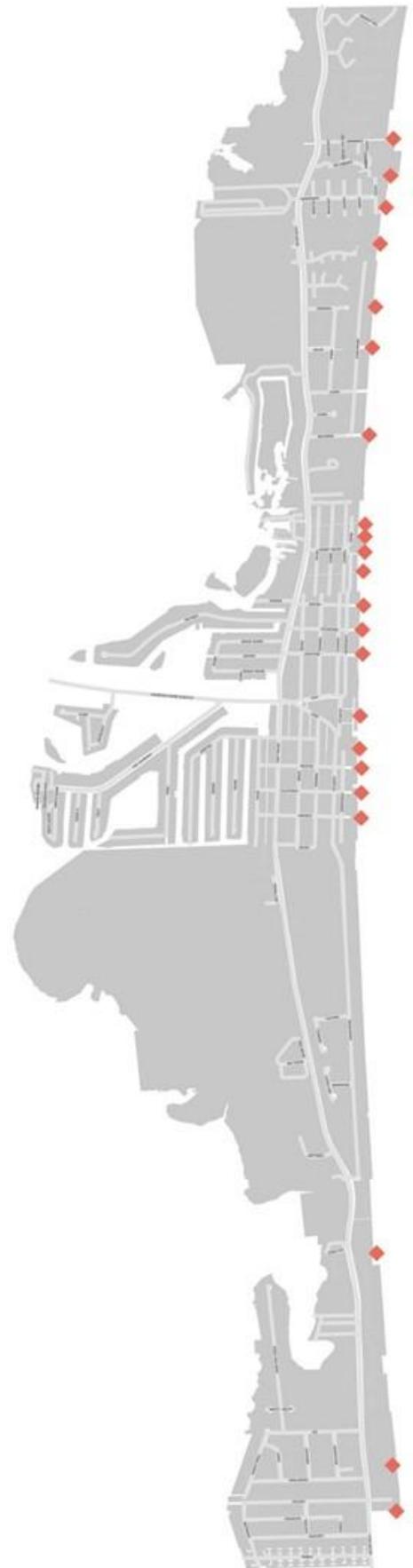
**ACTION 1.3.6.C: INSTALL GOLF CART/LOW-SPEED VEHICLE PARKING**

Supplement existing beach access points with new golf cart/low-speed vehicle parking spaces where sufficient space is available and safe operation can be ensured.

There are a total of 23 beach access points in the Town (shown as orange diamonds in the image to the right). No additional beach or sound accesses are anticipated at this time. We will continue with regular maintenance and servicing of our existing beach access points to ensure they remain accessible, even after beach nourishment activities.

**ACTION 1.3.6.D: MAINTAIN CURRENT ACCESS POINTS**

Continue maintenance of the Town’s 23 beach access points.



See Appendix 3.1.1 for a larger version of this map.

# 1.3.7: GOAL 6 - APPEARANCE & PROPERTY MAINTENANCE

One of the consistent areas of concern identified during the community survey and public forums conducted as part of this Plan is the appearance of existing public and private development, as well as on-going maintenance concerns like solid waste disposal, litter, removal of storm debris, and more expedient post-storm repairs.

In 2018, the Town Council appointed an ad-hoc Appearance Improvement Committee to explore appearance-related issues and make recommendations as to how we could enhance our Town's image. The committee met four times over the course of several months and made a series

of nonbinding recommendations regarding new property maintenance requirements, a garbage can ordinance, new requirements for utilities and street signs, potential design competitions, and master planning for the causeway.

Despite progress being hampered by Hurricane Florence in the fall of 2018, Town staff has already acted upon several of the committee's recommendations. All the street signs have been replaced with new blue street signs that include the Town's logo. A master plan for the right-of-way portion of the causeway was completed in 2019 based on direction from the Appearance Committee.

Given the concerns regarding community appearance, we must now return to the recommendations set out by the committee in a more long-term fashion. In order to carry out this ongoing implementation, the Town will create a formal Appearance Commission.



*A slide from the Appearance Committee's 2018 summary presentation*

## **ACTION 1.3.7.A: CREATE A FORMAL APPEARANCE COMMISSION**

Create a formal Appearance Commission (in accordance with Chapter 160D of the North Carolina General Statutes) charged with identifying, suggesting, funding, and carrying out beautification projects; providing comments on master planned developments; and conducting a nonbinding review of larger-sized non-residential and multi-family site plans that come before the Planning Board for consistency with the Town's appearance goals.

Another important function of appearance commissions in many communities is an annual set of awards or recognition for examples of good design or property maintenance.

One of the original committee’s recommendations that could be implemented in the near term is the desire for more public art in our Town. Public art can take the form of wall murals, art installations, and innovative landscaping or plantings. One way that communities achieve this is by using the tools in the UDO to incentivize the provision of public art in new developments.

**ACTION 1.3.7.B: ADD INCENTIVES FOR PUBLIC ART**

Revise the UDO to incorporate incentives for the provision of public art in new developments. Incentives in the form of reductions of required landscaping or open space provision can be made available for developments that incorporate public art. Design standards can be amended to authorize Town sanctioned mural contests or other decoration on highly visible building façade walls.

In addition to beautification efforts, the UDO could be amended to overhaul the suite of screening standards to address roof-mounted, wall-mounted, and ground-based mechanical equipment. The standards should also address screening of outdoor storage, refuse collection areas (including those serving single-family homes), and service areas. Revising these standards will help beautify non-residential, mixed-use, and multi-family development sites throughout Town. Applying refuse container screening standards to single-family developments will also help to address unsightly street corridors. One of the most important aspects to include when overhauling existing screening standards is to make the new provisions retroactive; in other words, apply the new standards to existing developments that do not comply. Typically, a two-to-three-year compliance period is extended to existing non-conforming development.

**ACTION 1.3.7.C: OVERHAUL THE SCREENING STANDARDS**

Revise the UDO with a comprehensive set of screening provisions for equipment, outdoor storage, outdoor service areas, and refuse collection areas. Ensure the new standards apply retro-actively to existing development within a specified timeframe.

LEVEL OF SCREENING	REQUIREMENTS	LEVEL OF SCREENING	REQUIREMENTS	LEVEL OF SCREENING	REQUIREMENTS
<b>1. Screening Level 1: Understory Tree Hedgerow</b>	 <p>a. All trees shall be of the same species and all shrubs shall be of an evergreen species.                      b. A hedgerow shall include one row of evergreen understory trees and one row of evergreen shrubs.                      c. The hedgerow shall include plants capable of providing a fully opaque screen of at least 36 inches in depth from the grade to the minimum height required.                      d. Trees shall maintain an on-center spacing of no greater than 60 inches. Shrubs shall maintain an on-center spacing of no greater than 48 inches.                      e. Trees shall be of a minimum height necessary at time of planting to achieve a minimum height of 8 feet above grade within 3 years.                      f. Shrubs shall be of a minimum height necessary at time of planting to achieve a minimum height of 6 feet above grade within 3 years.                      g. If damaged in a manner that impairs the performance of the screening, vegetative material shall be promptly replaced.</p>	<b>5. Screening Level 5: Wooden Opaque Fence</b>	 <p>a. Fencing shall be configured in accordance 5.3.11.2, Fences and Walls, and the North Carolina Building Code.                      b. All fencing shall maintain the minimum height necessary to fully screen the site feature or activity, but shall not exceed a maximum height of 8 feet.                      c. All gates shall maintain a complementary level of opacity excluding gaps for mounting hardware, latches, and hinges.                      d. The fence shall be comprised of consistent materials and colors.                      e. Enclosures for refuse and recycling containers shall meet all applicable City requirements.                      f. Screening material shall be promptly repaired if damaged in a manner that reduces the screening function.</p>	<b>8. Screening Level 8: Concealment by Other On-site Structures</b>	 <p>a. Site features and activities subject to these standards may be screened by other permanent buildings or structures on the same lot.                      b. Buildings or structures used to provide screening shall be permanent and shall be of a minimum height necessary to provide required screening.                      (note: red circle in photo added for clarity)</p>
<b>2. Screening Level 2: Evergreen Shrub Hedge</b>	 <p>a. All shrubs shall be evergreen and of the same species.                      b. The screening material shall be configured as two staggered rows of shrubs that together form a hedge.                      c. The screening shall maintain a minimum width of at least 36 inches at the time of planting.                      d. Shrubs shall be capable of providing a fully opaque screen of at least 36 inches in depth from the grade to the minimum height required.                      e. Shrub rows shall be planted no more than 30 inches apart.                      f. Shrubs shall maintain an on-center spacing of no greater than 36 inches.                      g. Shrubs shall be of a minimum height necessary at time of planting to achieve a minimum height of 6 feet above grade within 3 years.                      h. If damaged in a manner that impairs the performance of the screening, vegetative material shall be promptly replaced.</p>	<b>6. Screening Level 6: Opaque Masonry Wall</b>	 <p>a. Walls shall be configured in accordance 5.3.11.2, Fences and Walls.                      b. All walls shall maintain the minimum height necessary to fully screen the site feature or activity, but shall not exceed a maximum height of 8 feet.                      c. The wall shall be comprised of consistent materials and colors to those used on the principal structure.                      d. Masonry walls may incorporate towers or similar features provided the screening function is maintained.                      e. All gates shall be comprised of a complementary material and be opaque, excluding gaps for mounting hardware, latches, and hinges.                      f. Support columns may exceed the maximum height as necessary for wall construction.                      g. Enclosures for refuse and recycling containers shall meet all applicable City requirements.                      h. Screening material shall be promptly repaired if damaged in a manner that reduces the screening function.</p>	<b>9. Screening Type 9: Roof Screening</b>	 <p>a. Roof screening shall be 100 percent opaque, and shall only be used to screen items on a roof.                      b. Roof screening shall extend the minimum height necessary to fully screen roof-mounted equipment as seen at grade from any lot line.                      c. Roof-mounted equipment on pitched roofs shall be located on the side of the roof least visible from the street, to the maximum extent practicable.</p>
<b>3. Screening Level 3: Chain Link Fence with Opaque Slat/Fabric</b>	 <p>a. Fencing must be configured in accordance 5.3.11.2, Fences and Walls.                      b. All fencing shall maintain the minimum height necessary to fully screen the site feature or activity.                      c. Fencing shall be at least 60 percent opaque, when viewed from a distance of ten feet or more.                      d. All gates shall maintain a complementary level of opacity excluding gaps for mounting hardware, latches, and hinges.                      e. Slat or fabric shall extend downwards to the grade.                      f. The fence and screening material shall be comprised of consistent materials and shall maintain a single color.                      g. Slat or fabric may be plastic or wood and shall be promptly repaired if damaged in a manner that reduces the screening function.</p>	<b>7. Screening Level 7: Berms and Mounds</b>	 <p>a. Berms shall be configured in accordance with the standards in Section 5.3.11.1, Berms.                      b. Nothing shall limit the use of retaining walls, as necessary.                      c. Berms shall be supplemented with walls, fencing, or vegetation as necessary to meet screening objectives.</p>	<b>10. Screening Level 10: Parapet Wall</b>	 <p>a. Parapet walls shall be comprised of the same exterior material or be the same color as the building and shall be capped with a cornice, coping, or other decorative molding.                      b. Parapet walls shall be in alignment with the exterior building wall below.                      c. Parapet walls shall extend above the roof deck the minimum height necessary to screen roof-mounted equipment as seen from grade-level at the lot line.                      d. Parapet walls shall be engineered to comply with all applicable North Carolina Building Code requirements, including wind loading.</p> <p>NOTES:                      [1] Screening provided in accordance with this section shall be credited towards perimeter buffer and parking lot landscaping requirements (see Section 5.3.3, Landscaping) when the screening methods contribute to the performance objective of required landscaping.</p>
<b>4. Screening Level 4: Building Wall Projection</b>					

Example performance-based screening approach with tiered screening alternatives

Changes to the UDO should have impact on new development and redevelopment, but the Town also has many existing residential and non-residential buildings and uses where appearance and upkeep is important, particularly in the days and weeks following major storms. Properties that maintain a derelict appearance can have a negative impact on community character and can negatively impact property values (and thus, ad valorem revenues). Adequate maintenance and upkeep of properties consistently ranked as one of the most important aspects in Town, according to the surveys conducted as part of this Plan and in prior community surveys. Article 6 of Chapter 6 of the Town Code of Ordinances sets out the minimum housing standards. These standards establish the minimum requirements for structural integrity, control of rodents, and minimum safety standards for residential uses. Many coastal communities incorporate minimum requirements for speedy repairs and necessary maintenance to ensure that dwellings are able to withstand high winds and heavy rains.

#### **ACTION 1.3.7.D: OVERHAUL MINIMUM HOUSING STANDARDS**

Revise the minimum housing standards in the Town Code to ensure residential structures maintain a minimum standard of appearance and that any storm damage is prepared quickly, particularly from June to November.

Article 7 of Chapter 6 of the Town Code sets out the minimum maintenance standards for non-residential buildings and structures. These standards address appearance, operations, and repair to non-residential development similar to those applied to residential structures. The Town should overhaul the non-residential maintenance standards at the same time as the residential standards to help ensure all building stock meets the minimum appearance standards.

#### **ACTION 1.3.7.E: OVERHAUL NONRESIDENTIAL MAINTENANCE STANDARDS**

Revise the nonresidential maintenance standards in the Town Code to ensure non-residential structures maintain a minimum standard of appearance and that any storm damage is prepared quickly, particularly from June to November.

## 1.3.8: GOAL 7 – ADDRESS CRC MANAGEMENT TOPICS

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Goal Seven addresses the five management topics identified by the Coastal Resources Commission (CRC) as the ones that are the most important for environmental protection. These five topics were identified by the CRC in 2002 as a means of streamlining, simplifying, and standardizing the CAMA land use planning process. All CAMA communities, including Atlantic Beach, must address each of the following five management topics in their CAMA land use plan. Each management topic includes both a series of policies which the Town will continue to follow (unless amended), as well as a set of actions that the Town will take to help address the management topic. These policies and actions are based on current best practices, and may evolve over time as conditions change. In cases when policies or actions change, the Plan will need to be re-certified as compliant by the CRC. Policies associated with each of the five management topics are sequentially numbered in orange boxes. Actions are also numbered and are found in green boxes that follow the policies. In most cases, the actions address one or more of the associated policies. The five management topics are as follows:

1. Public Access to Public Trust Waters;
2. Land Use Compatibility;
3. Infrastructure Carrying Capacity;
4. Natural Hazard Areas; and
5. Water Quality.

### TOPIC 1: PUBLIC ACCESS TO PUBLIC TRUST WATERS

Public Trust Waters include all waters of the Atlantic Ocean and the lands underneath from the normal high water mark on the shore to the edge of the state’s official boundaries three miles offshore. In addition, public trust waters also include all navigable natural water bodies and the lands underneath (except for private lakes). The definition also includes artificially-created water bodies with significant fishing resources that are accessible from other public waters.

The Town of Atlantic Beach currently maintains 23 public beach access sites, three of which are considered “regional” beach accesses with enhanced infrastructure and amenities, such as bathhouses and additional parking. The Town prides itself on the provision of excellent and accessible access to public trust waters, and adopts the following policies and actions to ensure this work is continued:



## CRC MANAGEMENT TOPIC 1: PUBLIC TRUST WATERS - POLICIES

**POLICY 1.3.8.1:** The Town of Atlantic Beach will strive to provide a variety of opportunities for access to public trust waters, especially to areas targeted for beach nourishment, for all segments of the community, including persons with disabilities.

**POLICY 1.3.8.2:** The Town of Atlantic Beach supports the State’s shoreline access policies set forth in NCAC Chapter 15A, subchapter 7M.

**POLICY 1.3.8.3:** The Town of Atlantic Beach shall encourage water access for owners of interior lots in major residential subdivisions(as defined by the UDO) that abut the water’s edge. Major residential waterfront developments are also encouraged to include in the proposed development a plan for public water access.

## CRC MANAGEMENT TOPIC 1: PUBLIC TRUST WATERS - ACTIONS

### **ACTION 1.3.8.A: COMPLETE IMPLEMENTATION OF THE 2019 ADA TRANSITION PLAN**

Continue implementation of the Town’s 2019 ADA Transition Plan, especially as it relates to beach and other public water accesses.

Specifically, by FY 2021, the ADA Transition Plan states that upgrades and additions for accessibility and ADA compliance will be made to four beach accesses: the Circle CAMA Lot; New Bern Avenue; Tom Doe; and Beaufort Avenue Beach Accesses.

By FY 2024, the ADA Transition Plan states that upgrades and additions for accessibility and ADA compliance will be made to two additional accesses: the Boardwalk at Circle Beach Access and DoubleTree East Beach Access. Additionally, the Municipal Complex (Town Hall, Police, Fire, Boardroom, former Public Works, and parking lots) will be demolished and rebuilt as an ADAAG-compliant facility.

## TOPIC 2: LAND USE COMPATIBILITY

Unplanned and haphazard development can both threaten the character of a community and undermine the ability of the natural environment to support people’s activities. The Town of Atlantic Beach adopted its first Unified Development Ordinance in 2009, and undertook extensive updates in 2017 as part of an ongoing commitment to ensuring development activities in the Town protect the natural environment and residents’ quality of life. We are committed to ongoing efforts in line with this goal, including:

### CRC MANAGEMENT TOPIC 2: LAND USE COMPATIBILITY - POLICIES

#### GENERAL LAND USE POLICIES

**POLICY 1.3.8.4:** The Town of Atlantic Beach will ensure that land use and development activities provide a balance between economic development needs and protection of natural resources and fragile environments.

**POLICY 1.3.8.5:** The Town of Atlantic Beach supports growth and development in keeping with the Future Land Use Map in this Plan.

**POLICY 1.3.8.6:** The Town of Atlantic Beach will manage and direct growth and development in balance with available support services.

**POLICY 1.3.8.7:** The Town supports CAMA use standards for coastal wetlands.

**POLICY 1.3.8.8:** With the exception of Money Island, which has a residential zoning district designation, the Town of Atlantic Beach opposes any development on sound and estuarine islands located within the Atlantic Beach planning jurisdiction.

**NOTE: Policy 1.3.8.8 is more restrictive than CAMA minimum use standards.**

**POLICY 1.3.8.9:** The Town of Atlantic Beach will coordinate all development activity with the Carteret County Health Department and state regulatory personnel.

**POLICY 1.3.8.10:** The Town of Atlantic Beach will encourage land use proposals which will have no negative impact on historic, cultural and/or archaeological resources.

**POLICY 1.3.8.11:** The Town of Atlantic Beach shall adhere to the State’s mitigation requirements, criteria, and concepts to minimize conflicts with natural resources and fragile areas. The Town shall also maintain local development standards (such as distance/ separation requirements, buffering/screening requirements, etc.) for special uses in order to assist with mitigating potential negative impacts.

**POLICY 1.3.8.12:** The Town of Atlantic Beach supports citizens’ awareness programs and public educational opportunities for community historic and natural resources, including the conservation, preservation and maintenance thereof.

#### RESIDENTIAL LAND USE POLICIES

**POLICY 1.3.8.13:** The Town of Atlantic Beach encourages development on vacant lots in existing neighborhoods and redevelopment as the preferred locations for residential development.

**POLICY 1.3.8.14:** The Town of Atlantic Beach encourages residential development at a size and scale compatible with the surrounding existing neighborhoods to protect the small-town atmosphere of the Town.

## CRC MANAGEMENT TOPIC 2: LAND USE COMPATIBILITY - POLICIES

### COMMERCIAL LAND USE POLICIES

**POLICY 1.3.8.15:** The Town of Atlantic Beach shall maintain appearance and operational standards for nonresidential developments to require architectural design compatibility within the proposed developments, and to provide landscaping and screening to buffer adjoining residentially used or zoned properties.

**POLICY 1.3.8.16:** The Town of Atlantic Beach shall require shopping center developments to comply with access, screening/buffering, landscaping, setback, building scale, architectural design, outdoor lighting, outdoor storage/activity, and signage requirements to help minimize impacts to public streets and views, adjacent properties, and adjacent residentially zoned areas.

**POLICY 1.3.8.17:** The Town of Atlantic Beach shall maintain minimum landscaping and screening requirements that provide a visual buffer between parking and loading areas and public streets; a visual buffer between parking and loading areas and adjoining residential land uses; screening of solid waste collection dumpsters; and screening between certain incompatible uses.

### INDUSTRIAL LAND USE POLICIES

**POLICY 1.3.8.18:** As shown on the Future Land Use Map, there are no primarily Industrial lands in the Town of Atlantic Beach, as all but the lightest industrial land uses are incompatible with the Town's ecology, existing development, and identity as a family-friendly small beach town.

**POLICY 1.3.8.19:** Industries which are noxious by reason of the emission of smoke, odor, dust, glare, noise, and vibrations, and those which deal primarily in hazardous products such as explosives, will not be permitted by the Town.

The action steps for this topic overlap with other goals, so they are cross-referenced here for ease of review.

## CRC MANAGEMENT TOPIC 2: LAND USE COMPATIBILITY - ACTIONS

### GOAL 2 CAUSEWAY REDEVELOPMENT

#### ACTION 1.3.3.B: PREPARE A SMALL AREA PLAN FOR THE CAUSEWAY

Undertake a planning process to produce a small area plan that addresses the parcels on either side of the Atlantic Beach Causeway. This plan should include information on the types of uses desired in this gateway corridor and give guidance on what future development should look like, how it should be configured, and how it should relate to the improvements suggested in the Causeway Corridor Conceptual Master Plan.

### GOAL 3 IMPROVE THE GROVE AREA

#### ACTION 1.3.4.B: RENEGOTIATE THE PUBLIC SPACE IN THE GROVE

Renegotiate the Grove conceptual master plan to allocate all of the land area ocean-ward of the CAMA line in sub-area 9 to the Town's "festival area" to provide a full block of oceanfront land for the Town to create its community "living room." This could take the form of a use easement, a dedication to the Town, or some form of public-private partnership.

## TOPIC 3: INFRASTRUCTURE CARRYING CAPACITY

As not only a coastal, but an island community, the Town of Atlantic Beach is highly cognizant of the need to keep development and other human activities within levels that can be served by the Town's water, wastewater, stormwater, and transportation infrastructure. This goal is of increasing importance in light of sea level rise and increased threat of flooding from storm events. To this end, the Town commits to the following:

### CRC MANAGEMENT TOPIC 3: INFRASTRUCTURE CARRYING CAPACITY - POLICIES

**POLICY 1.3.8.20:** Development within the Town of Atlantic Beach shall only be approved where adequate public or approved private facilities and service are available, including water, sewage disposal, stormwater, and roads.

**POLICY 1.3.8.21:** The Town of Atlantic Beach strongly encourages new development to locate along existing infrastructure lines, including infill in developed areas of the Town, to the extent practicable.

**POLICY 1.3.8.22:** In areas not served by sewer, the Town of Atlantic Beach will support the construction of package treatment plants which are approved and permitted by the State Division of Environmental Quality. If any package plants are approved, a specific contingency plan specifying how ongoing private operation and maintenance of the plant will be provided, and detailing provisions for assumption of the plant into a public system should the private operation fail or management of the system not meet the conditions of the State permit shall be submitted and approved. The Town, however, opposes the installation of package treatment plants and septic tanks or discharge of waste in any areas classified as coastal wetlands, freshwater wetlands (404), or natural heritage areas.

**NOTE: Policy 1.3.8.22 is more restrictive than CAMA minimum use standards.**

**POLICY 1.3.8.23:** It is the policy of the Town of Atlantic Beach to ensure that infrastructure systems are correlated with population projections and the future land use classifications.

**POLICY 1.3.8.24:** Any application for a wastewater disposal system which is to be located in the planning jurisdiction of the Town of Atlantic Beach shall be coordinated with existing facilities. Wherever possible, a wastewater permit shall not be issued without a corresponding zoning permit.

**POLICY 1.3.8.25:** The Town of Atlantic Beach supports the implementation of the 2014 update of the Carteret County Comprehensive Transportation Plan as it relates to the Town.

### CRC MANAGEMENT TOPIC 3: INFRASTRUCTURE CARRYING CAPACITY - ACTIONS

#### ACTION 1.3.8.B: DEVELOP INFRASTRUCTURE POLICIES

Develop infrastructure service policies and criteria consistent with the future land use map and the land use goals in this Plan and utilize these in development review and when advising prospective developers on project requirements.

**ACTION 1.3.8.C: EXPLORE OPTIONS FOR A PUBLIC-PRIVATE PARTNERSHIP EXTENDING SEWER ALONG FT MACON ROAD AND THE CAUSEWAY**

As introduced in Section 1.3.3, Goal 2, Causeway Redevelopment, a key need for the redevelopment of the Causeway area is the extension of sewer service. Explore options for Town participation in a public-private partnership to connect the parcels in the Causeway Future Land Use Classification to existing sewer capacity. This will likely involve Town investment in infrastructure and brokering the purchase of available capacity from the plants to be used in this key redevelopment area.

**ACTION 1.3.8.D: CONTINUE IMPLEMENTATION OF THE COMPREHENSIVE BICYCLE PLAN**

Continue progress on the list of projects, including upgrades to existing roadways (sharrows, bike lanes, etc.) and the installation of new infrastructure (multi-use paths, refuge islands), contained in the Comprehensive Bicycle Plan.

## TOPIC 4: NATURAL HAZARD AREAS

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The Town of Atlantic Beach faces the potential for significant storm damage. Hazard mitigation involves actions which would reduce the impact of any disaster including evacuation and cleanup. The Town adopted the Pamlico Sound Regional Multi-Jurisdictional Hazard Mitigation Plan (2015) and is covered under the Carteret County Emergency Operations Plan for All-Hazards (updated May 2019). As sea level rise, increased rainfall and tropical storm/hurricane events, and other natural disasters continue to arise, we commit to the following policies and actions:

### CRC MANAGEMENT TOPIC 4: NATURAL HAZARD AREAS - POLICIES

**POLICY 1.3.8.26:** The Town of Atlantic Beach will conserve the natural resources and fragile environments that provide protection from such natural hazards as floods and storm surges.

**POLICY 1.3.8.27:** The Town of Atlantic Beach will minimize the threat to life, property, and natural resources that may result from land use and development within or adjacent to identified natural hazard areas.

**POLICY 1.3.8.28:** The Town of Atlantic Beach will continue to coordinate all development within the special flood hazard area with the NC Division of Coastal Management, FEMA, and the US Army Corps of Engineers. The Town of Atlantic Beach recognizes and will continue to work with NC Emergency Management as the primary agency for risk management and hazard mitigation, including administration of the National Flood Insurance Program.

**POLICY 1.3.8.29:** It is the policy of the Town of Atlantic Beach to ensure that evacuation plans and needs are addressed as new development proposals are reviewed for approval.

**POLICY 1.3.8.30:** It is the policy of Town of Atlantic Beach to ensure that new development is protected from flood hazards through the administration of the flood damage prevention ordinances and continued participation in the National Flood Insurance Program.

**POLICY 1.3.8.31:** The Town of Atlantic Beach shall implement the recommended mitigation measures in the 2015 Pamlico Sound Regional Hazard Mitigation Plan.

**POLICY 1.3.8.32:** The Town of Atlantic Beach will continue to support and enforce the North Carolina State Building Code, particularly requirements of construction standards to meet wind-resistive factors such as design wind velocity. The Town also supports provisions in the State Building Code requiring tie-downs for mobile and manufactured homes, which help resist wind damage.

## CRC MANAGEMENT TOPIC 4: NATURAL HAZARD AREAS - POLICIES

**POLICY 1.3.8.33:** The Town of Atlantic Beach shall maintain flood damage prevention requirements that

- (1) Restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion, flood heights or flood water velocities;
- (2) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- (3) Control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters;
- (4) Control filling, grading, dredging, and other development which may increase erosion or flood damage; and
- (5) Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

**POLICY 1.3.8.34:** The Town of Atlantic Beach supports the CAMA development permit process for estuarine shoreline areas and the requisite development standards which encourage both shoreline stabilization and facilitation of proper drainage.

**POLICY 1.3.8.35:** Based upon the availability of federal and state grant funds, the Town of Atlantic Beach will utilize land acquisition programs in the most hazardous areas to minimize future damage and loss of life.

## CRC MANAGEMENT TOPIC 4: NATURAL HAZARD AREAS - ACTIONS

### **ACTION 1.3.8.E: CONDUCT ANNUAL COMMUNITY RATING SYSTEM PROPERTY OWNER EDUCATION**

As part of the Town's participation in National Flood Insurance Program (NFIP)'s Community Rating System, distribute information to property owners in the floodplain on an annual basis to reduce future flood damage and encourage a comprehensive approach to floodplain management.

### **ACTION 1.3.8.F: MAINTAIN BEACH NOURISHMENT SCHEDULE**

Continue current commitments to regular beach nourishment: both the eastern and western beaches are due for nourishment in 2020, then the eastern side receives no-cost dredge nourishment every three years while the western side is slated for nourishment every 10 years financed by the Town-wide property tax levy.

## TOPIC 5: WATER QUALITY

Preserving the quality of the coastal waters is of utmost importance to all CAMA communities. This includes shellfish habitat, recreational waters, wetlands, and streams and tributaries. The Town of Atlantic Beach is in the process of developing an updated Stormwater Resiliency Plan, in addition to an ongoing commitment to the following policies and actions:

### CRC MANAGEMENT TOPIC 5: WATER QUALITY - POLICIES

**POLICY 1.3.8.36:** The Town of Atlantic Beach shall require that all development adhere to State requirements concerning stormwater runoff limitations and standards.

**POLICY 1.3.8.37:** It is the policy of the Town of Atlantic Beach to coordinate the approval of local land development projects with applicable State agencies to ensure compliance with regulations to prevent or control nonpoint source discharges.

**POLICY 1.3.8.38:** It is the policy of the Town of Atlantic Beach to establish land use categories that maximize the protection of open shellfishing waters and that assist with the restoration of any closed shellfishing waters.

**POLICY 1.3.8.39:** The Town of Atlantic Beach shall maintain requirements that, to the extent practicable, require all development to conform to the natural contours of the land and ensure that pre-existing man-made drainage ways remain undisturbed. All developments shall be provided with a drainage system that is adequate to prevent the undue retention of surface water on the development site. No surface water may be channeled or directed into a sanitary sewer. Whenever practicable, the drainage system of a development shall coordinate with and connect to the drainage systems or drainage ways on surrounding properties or roads. All developments shall be constructed and maintained so that adjacent properties are not unreasonably burdened with surface waters as a result of such developments.

**POLICY 1.3.8.40:** The density and intensity of land development adjacent to ground water supplies shall be in accordance with the density and intensity characteristics of the future land use designations adopted by the Town of Atlantic Beach.

**POLICY 1.3.8.41:** The Town of Atlantic Beach shall require that new developments and expansions of existing developments comply with State requirements with regards to impervious surfaces.

**POLICY 1.3.8.42:** The Town of Atlantic Beach supports state efforts to reduce nutrient loading in the surrounding surface waters.

**POLICY 1.3.8.43:** The Town of Atlantic Beach shall require that development adhere to the state's buffer requirements for developments abutting water bodies and/or AECs and recognizes the ability of an applicant to apply to the CRC for a variance as appropriate.

**POLICY 1.3.8.44:** In order to minimize sedimentation and erosion, the Town Atlantic Beach shall require that all developments maintain a vegetated buffer along each side of a stream or natural drainageway in accordance with State requirements.

The action steps for this topic overlap with other goals, so they are cross-referenced here for ease of review:

## CRC MANAGEMENT TOPIC 5: WATER QUALITY - ACTIONS

### GOAL 4 FLOODING AND WATER QUALITY

#### ACTION 1.3.5.A: UPDATE THE TOWN'S STORMWATER MAP

Update the existing stormwater map for the Town of Atlantic Beach to include information on the full range of stormwater infrastructure currently installed (including inlet type, pipe size, and ownership/maintenance responsibility), updated “hot spots” for flooding events, and DOT infrastructure, including identifying all point-source stormwater discharges. Incorporate annual updates to this master map in the workplans of relevant departments so that this map and its associated GIS information stay current.

### GOAL 4 FLOODING AND WATER QUALITY

#### ACTION 1.3.5.B: ADOPT AND IMPLEMENT THE STORMWATER RESILIENCY PLAN

Complete and adopt the Stormwater Resiliency Plan, and incorporate the Plan’s recommendations into the Town’s strategy for addressing stormwater management and near-shore water quality. Use the adopted plan as a means to support 319 Grant funding requests in the 2021 grant cycle for eligible water quality projects identified by the Plan.

In addition, use the recommendations and priorities in the Plan to inform the Town’s capital improvements program with respect to prioritizing and completing stormwater management infrastructure improvements.

### GOAL 4 FLOODING AND WATER QUALITY

#### ACTION 1.3.5.C: CONSIDER ADDITIONAL UDO REVISIONS

Continue to evaluate the effectiveness of new limitations on fill and requirement for engineered stormwater management solutions for retaining stormwater run-off on-site. Consider new maximum thresholds for impervious surfaces that require at least 25 to 35 percent of each lot to remain pervious and allow innovative construction techniques like pervious paving, green roofs, and on-site retention devices to be credited towards pervious surfaces.

Supplement the UDO with incentives for rainwater harvesting devices sized to capture and retain stormwater during storm events.

Explore the possibility of using open space requirements to create neighborhood-level stormwater control mechanisms, detention basins, and other sub-regional containment solutions.

# 1.4: FUTURE LAND USE

## 1.4.1: FUTURE LAND USE GUIDING PRINCIPLES

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One important part of this Plan is the preparation of a future land use map. The future land use map depicts generalized patterns of anticipated land uses that support the goals and actions for the future, as articulated by our residents. It is the graphical depiction of the desired future land use arrangement. The intent of the map is to illustrate preferred patterns of land use in the future. The purpose for the map is to serve as a decision-making guide for Town officials in the consideration of development applications that seek to establish new development or redevelopment. The future land use map is conceptual and should be regarded as a generalized guide for development rather than a specific blueprint for future development. Like the goals and actions in other parts of this Plan, the future land use map can best be thought of as a goal for the future – it informs, but does not predetermine, the outcome of decisions on land use applications and investment decisions.

The future land use map in this Plan aims to:

- Guide the most intensive development to areas with existing or planned infrastructure as a means of supporting intensive development;
- Inform land use decision making by Town officials;
- Guide decision making about capital investments;
- Promote infill as the primary form of development and encourage infill development that is complementary and consistent with the surrounding area;
- Accommodate a variety of residential densities, in appropriate areas;
- Promote continued commercial development in key areas like the Causeway and the Circle in ways that supports the Town’s desired community character;
- Discourage growth in areas with natural constraints and low development suitability; and
- Conserve fragile environments.

The future land use map sets out the type, location, and attributes of eight future land use categories. Each future land use category references a generalized type or types of appropriate land uses, densities, intensities, and development configurations. The future land use map does not identify the existing land uses or even the type of existing zoning district designations- rather, it identifies the types of land uses and development configurations that would be appropriate in the future.

## 1.4.2: FUTURE LAND USE CATEGORIES

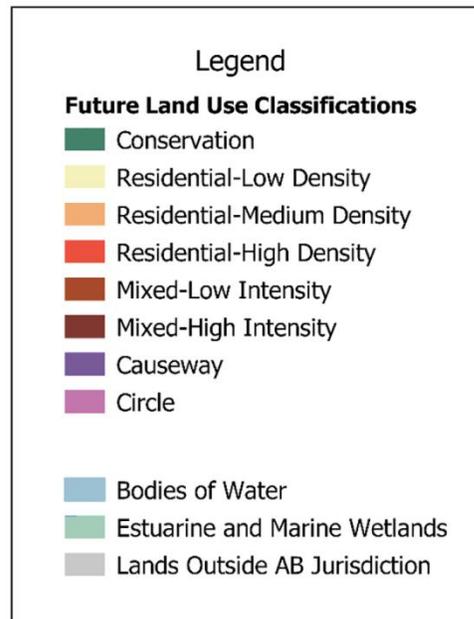
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The future land use map assigns lands within Atlantic Beach to one of eight different land use categories, also referred to as “classifications.” Generally, the classifications describe the type and intensity of development that is desired in each area. Some classifications are general in nature and structured to apply to a variety of different areas throughout the Town’s planning jurisdiction, while others, such as the Causeway and the Circle, are very location-specific and intended to apply to specific locations. The land use categories listed in the future land use map are listed below and explained in greater detail on subsequent pages of this section.



The map on this page is the Official Future Land Use Map for the Town of Atlantic Beach. Land use classifications generally follow parcel boundaries, and the map is part of the Town’s adopted land use policy guidance. A larger version of this map is included in the Appendices to this Plan. A copy of the map is also available online and at Town Hall. Readers are encouraged to examine the larger scale version of the map for more details about the precise boundaries of the land use classifications.

The Official Future Land Use Map in this document may be updated from time to time following approval by Town Council and certification by the State.



See Appendix 3.1.1 for a larger version of this map.

The table below provides summary details by land use classification in the future land use map, including the amount of land area in each classification, anticipated residential densities, and the zoning districts from the Town's Official Zoning Map that correspond to each particular land use classification. The column listing corresponding zoning districts is suggestive or advisory in nature. They may be instances where a particular lot's zoning district designation does not match up to its future land use classification. These kinds of mismatches are possible and do not invalidate the future land map or the zoning map, but revisions for the sake of consistency should be evaluated.

Future Land Use Classification Summary Table					
Future Land Use Classification	Maximum Allowable Residential Density		Acres of Land with this Classification	Percent of Town Land Area in this Classification	Corresponding Zoning District(s) in Official Zoning Map
Conservation	1 unit/acre		366.75	26.0%	RSC
Residential – Low Density	RSW: 7 units/acre RSN & RSM: 8 units/acre		404.96	31.2%	RSN, RSW, RSM
Residential – Medium Density	Single-family detached: 8 units/acre; Duplex: 12 units/acre		43.88	3.1%	RSD
Residential – High Density	Single-family detached: 8 units/acre All other residential: 12 units/acre		29.39	2.1 %	RMF
Mixed-Use – Low Intensity	Single-family detached: 8 units/acre; Multi-family: 12 units/acre		62.58	4.4%	CPY, MUN
Mixed-Use – High Intensity	Single-family detached: 7units/acre; Multi-family: 21 units/acre		440.25	31.2%	COR, MHI
The Causeway	COR: Single-Fam. Detached: 7; Multi-family: 21 units/acre	CIR: 50 units/acre	29.82	2.1%	COR, CIR
The Circle	50 units/acre		33.37	2.4%	CIR
<b>TOTAL</b>			<b>1,411 acres [1]</b>	<b>100 %</b>	
Notes: [1] This total reflects the total area of all the tax parcels within the Town's planning jurisdiction. It does not include public or private right-of-way or lands submerged in water that lie within the official Town boundary.					

The following pages provide a brief description of each of the eight land use categories in the table above, including typical use types, compatible zoning districts, density and intensity of development, restrictions on development, and infrastructure and impact considerations. Updates or revisions to the future land use map require local adoption and State certification of a land use plan amendment.

## 1.4.2.A Conservation Classification

The Conservation future land use classification is assigned to lands that include areas of environmental concern, as well as those which are unsuitable for most types of development, like the Hoop Pole Creek nature trail area just east of the Atlantic Station Shopping Center. Generally speaking, Conservation-classified areas are expected to retain their current natural character over time. The designation is intended to protect these sensitive lands, and limits development to low density single-family residential dwellings (including group homes) and complimentary accessory uses, following approval of a major site plan by the Town. Use of fill is very limited (except where necessary to accommodate on-site waste water facilities), and impervious surfaces are limited to 10 percent of the total lot area.

Parcels with this designation are clustered on the north side of the island facing the sound. These parcels include wetland, marsh, and forested areas that are subject to frequent flooding. Development that does occur on these parcels is expected to be situated outside formally protected areas such as wetlands and in closer proximity to existing roadway infrastructure. Extensions of water and sewer utilities into these areas are not encouraged for the purpose of development.

### Conservation Future Land Use Classification

Corresponding Zoning District(s)	Permitted Uses	Maximum Allowable Residential Density	Maximum Building Height	Minimum Lot Size	Maximum Lot Coverage
Residential Single-Family Conservation (RSC)	Single-family detached dwellings; group homes	1 unit/acre	45 ft	43,560 sf	10%



Image source: Google Maps Satellite View

## 1.4.2.B Residential – Low Density Classification

The Residential – Low Density future land use classification is intended primarily for low density residential uses at 7 to 8 units-per-acre found in traditional neighborhood settings. Single-family detached residences and manufactured homes on individual lots are the predominant types of dwellings within these areas. Supporting public uses (like parks and open spaces) may also be located within this land use classification.

The Residential – Low Density classification includes lands within three zoning districts: The Residential Single-Family Wide Yard (RSW), Residential Single-Family Narrow Yard (RSN), and the Residential Single-Family Manufactured (RSM) zoning districts. Lands bearing the Residential-Low Density Classification are found throughout the Town, including along the beachfront, the canal areas on either side of the causeway, and large areas of land on the sound side at the eastern and western ends of Town.

Land in this future land use classification can be thought of as the most “traditional” residential neighborhoods in Town. Lots range in size from 5,000 to 6,000 square feet, depending upon the zoning district designation. Impervious surface cover is limited to 40 percent or less of the total lot area. Individual manufactured homes on their own lots are allowed in this area.

Residential – Low Density Future Land Use Classification					
Corresponding Zoning District(s)	Permitted Uses	Maximum Allowable Residential Density	Max. Building Height	Min. Lot Size	Max. Lot Coverage
Residential Single-Family Wide Lot (RSW)	Single-family detached dwellings; group homes; manufactured dwellings on individual lots	7 units/acre	45 ft	6,000 sf for single-family detached dwelling; 12,000 sf all other uses	40%
Residential Single-Family Narrow Lot (RSN)		8 units/acre	45 ft	5,000 sf for single-family detached dwelling; 10,000 sf all other uses	40%
Residential Manufactured Dwelling (RSM)		8 units/acre			

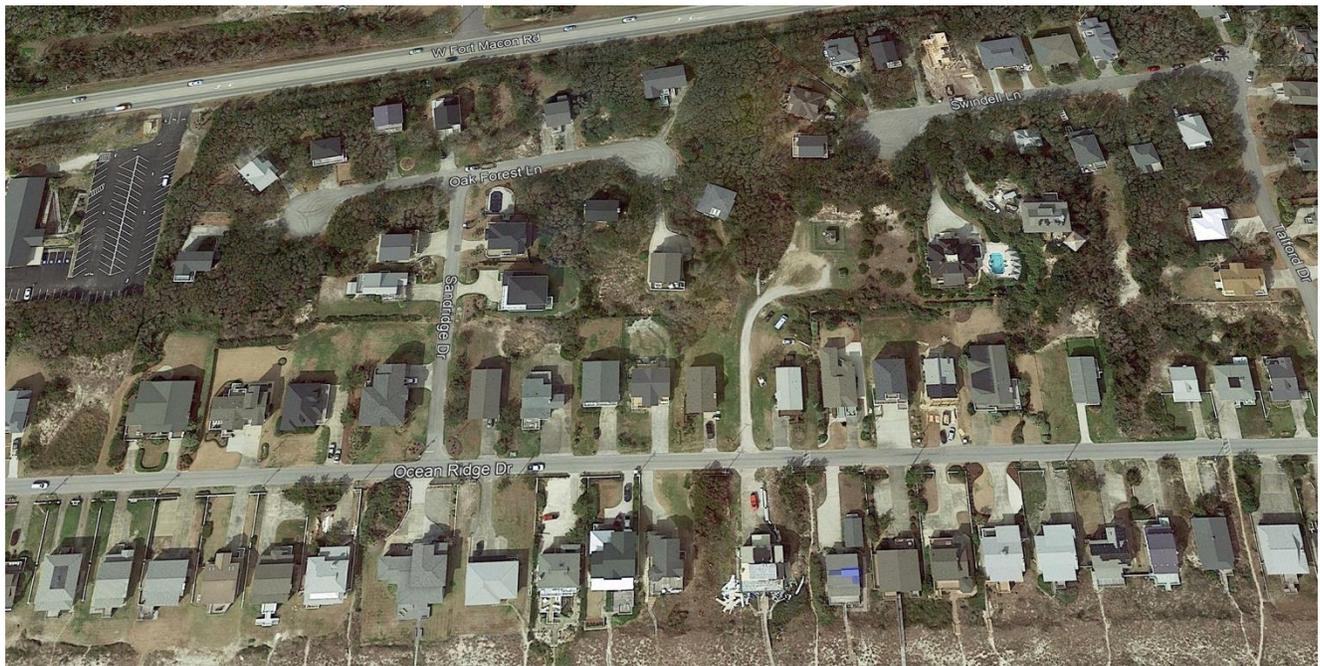


Image source: Google Maps Satellite View

## 1.4.2.C Residential – Medium Density Classification

The Residential – Medium Density future land use classification is primarily intended for residential uses at medium densities of between at 8 and 12 dwelling units-per-acre. Duplex dwellings are permitted in addition to single-family detached residential and group home uses. Single-family detached residences and duplex dwellings are allowed within these areas. Supporting public and institutional land uses like parks and minor utility uses may also be located within this land use classification.

The Residential – Medium Density classification corresponds to the Residential Single-Family and Duplex zoning district designation. This classification is prevalent in the central part of Atlantic Beach in the neighborhoods directly to the east and west of the Circle (including the area commonly referred to as the “cottage district”). The area was one of the earliest to be platted and includes a fine-grained orthogonal street grid layout. Homes are positioned close to streets and back yards typically abut one another. Few vacant lots are found in this area, and any development will likely be redevelopment.

Lots in this area range from 5,000 sf to a little over 7,000 sf, with densities ranging from 8 units an acre up to 12 units an acre, depending upon structure type. Homes have narrow side yards and are often located close to the side lot lines. Redevelopment in the area is expected to retain the existing residential character, and future development is projected to remain between 8 and 12 units per acre.

Residential – Medium Density Future Land Use Classification					
Corresponding Zoning District(s)	Permitted Uses	Maximum Allowable Residential Density	Maximum Building Height	Minimum Lot Size	Maximum Lot Coverage
Residential Single-Family & Duplex (RSD)	Single-family detached and duplex dwellings; group homes; parks; minor utilities	8 units if single-family detached; 12 units if duplex	45 ft	5,000 sf for single-family detached; 7,200 sf for duplex; 10,000 all others	40%



Image source: Google Maps Satellite View

## 1.4.2.D Residential – High Density Classification

The Residential – High Density future land use classification is intended for a broad array of single-family residential uses including detached single-family homes, duplexes, triplexes, quadplexes, and group homes. The district also allows accessory dwelling units (one per lot) along with a fairly broad range of institutional uses, including parks, open space, minor institutional uses, and minor utilities. This classification is intended to accommodate a broad range of housing choices within single-family neighborhoods at densities comparable to other residential parts of Atlantic Beach.

The Residential – High Density classification corresponds to Residential Multi-Family zoning district designation. There are only two areas of Atlantic Beach with this designation: a row of parcels along Davis Drive, just behind the mixed-use corridor along East Fort Macon Road, and the cluster of neighborhoods surrounding New Bern Street, Dunes Court, Dunes Avenue, Willis Avenue, Freeman Lane, and Robin Avenue (situated between the Dunes Club and Crosswinds and north of the Club Colony neighborhood).

Lot sizes in this classification range from around 5,000 square feet to 10,000 square feet or more for institutional and multi-dwelling use types. Maximum residential densities are comparable to the other residential neighborhoods around Town. Given the wide range of allowable use types, land in this classification is likely to redevelop into more dense development formats.

Residential – High Density Future Land Use Classification					
Corresponding Zoning District(s)	Permitted Uses	Maximum Allowable Residential Density	Maximum Building Height	Minimum Lot Size	Maximum Lot Coverage
Residential Multi-Family (RMF)	Single-family detached, duplex, triplex, and quadplex dwellings; utilities; parks and open space; minor institutional uses	8 units/acre for single-family detached; 12 units/acre for multi-family	45 ft	3,600 sf per unit for duplex, triplex, and quadplex dwellings; 5,000 sf for single-family detached; 10,000 sf for all others	40%


Image source: Google Maps Satellite View

## 1.4.2.E Mixed-Use – Low Intensity Classification

The Mixed-Use – Low Intensity classification provides for a wide degree of residential, non-residential, and mixed-use development. New development in this classification should be developed in a coordinated fashion with strong connections to surrounding development. Non-residential and mixed-use developments should maintain a neighborhood-level scale and maintain a strong focus on design quality, pedestrian orientation, and the accommodation of multiple different forms of transportation.

The classification accommodates both the mixed-use neighborhood (MUN) zoning district, which allows for a wide range of residential dwelling types in addition to non-residential uses, all configured to be in close proximity to one another, as well as the commercial periphery (CPY) district, which focuses on moderate-intensity retail, service, and office uses with complimentary upper-story residential. This eclectic blend of districts is intended to facilitate the development of functional neighborhoods where residents and visitors can meet the majority of their daily needs without need for an automobile.

Mixed-Use – Low Intensity areas are scattered across Atlantic Beach, with the intention of breaking up the higher-intensity development possible in the Mixed-Use – High Intensity areas and preserving the small, family-friendly atmosphere of the Town. This designation is found on several large parcels lining West Fort Macon Road, as well as two neighborhoods of smaller parcels in the eastern part of Atlantic Beach.

### Mixed-Use – Low Intensity Future Land Use Classification

Corresponding Zoning Districts	Permitted Uses	Maximum Allowable Residential Density	Maximum Building Height	Minimum Lot Size	Maximum Lot Coverage
Commercial Periphery (CPY)	Medium- and high-intensity retail, office, and service uses; Upper-story residential (as part of a mixed-use development)	8 units/acre	55 ft	None	75%
Mixed-Use Neighborhood (MUN)	Most forms of residential development; many institutional uses; and a range of commercial uses, including marinas and hotels	8 units/acre for single-family detached; 12 units/acre for multi-family	45 ft	Single-family - 5,000 sf per unit; Multi-family – 3,600 sf per unit; 10,000 sf all others	40%



Image source: Google Maps Satellite View

## 1.4.2.F Mixed-Use – High Intensity Classification

The Mixed-Use – High Intensity classification provides for the widest range of residential, non-residential, and mixed-use developments in Town at moderate-to-high intensities. This land use classification is applied to over one-third of the land area in the Town and is the most prevalent future land use classification. The classification includes the Mixed-Use High Intensity (MHI) zoning district and those lots in the Commercial Corridor (COR) district that are not in the Causeway area. Mixed-Use – High Intensity areas extend across Atlantic Beach, including many of the larger parcels and developments along Fort Macon Road and key intersections, as well as two areas in the north-central part of town on the Sound off Old Causeway Road.

Mixed-Use – High Intensity areas are expected to develop or redevelop to serve both year-round residents and visitors with a wide variety of uses in key areas of Atlantic Beach. Though they are expected to remain higher density and intensity areas, they should still convey a family atmosphere in keeping with the historical context and vision of the Town. Manufactured home parks are allowed as a special use. Development in these areas should be configured to facilitate safe and efficient circulation by automobile, bicycle, and on foot.

### Mixed-Use – High Intensity Future Land Use Classification

Corresponding Zoning Districts	Permitted Uses	Maximum Allowable Residential Density	Maximum Building Height	Minimum Lot Size	Max. Lot Coverage
Mixed-Use High Intensity (MHI)	Most use types: residential (including manufactured home parks), institutional, and commercial including retail and hotel uses at higher intensities	8 units/acre for single-family detached; 12 units/acre for multi-family; 21 units/acre for multi-family of 5+ units	45 ft	Single-family residential - 5,000 sf per unit; Multi-family residential - 3,600 sf per unit, 2,000 per unit for developments of 5+ units; 10,000 sf for all others	40%
Commercial Corridor (COR)		7 units/acre for single-family detached; 12 units/acre for multi-family; 17 units/acre for multi-family of 5+ units	45 ft	Single-family residential - 6,000 sf per unit; Multi-family residential – 3,600 sf per unit, 2,500 per unit for developments of 5+ units; All others: none	75%

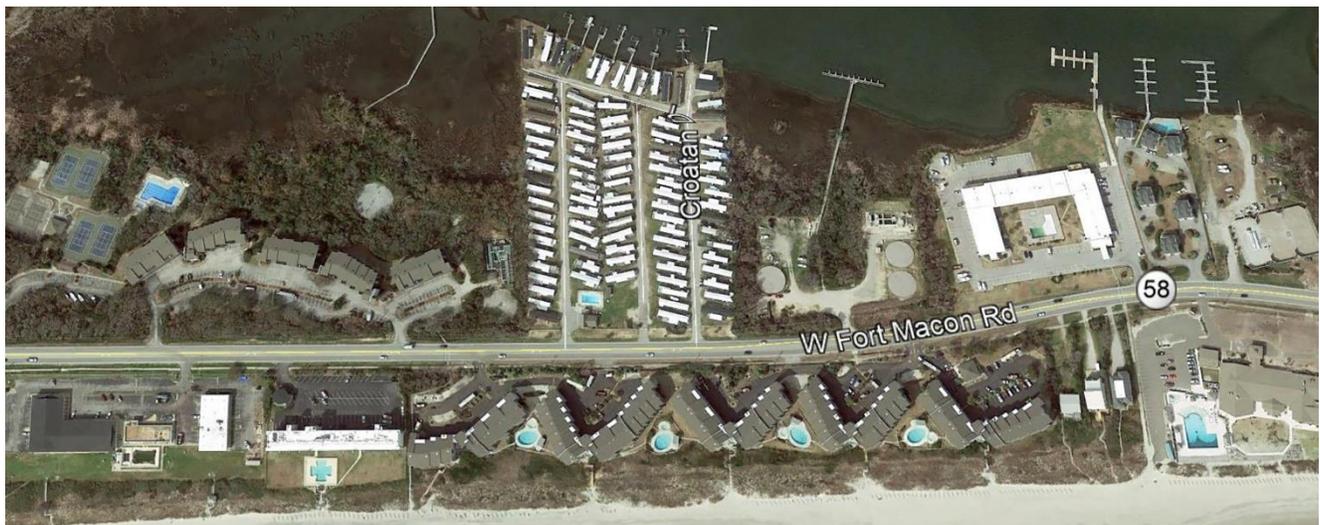


Image source: Google Maps Satellite View

## 1.4.2.G The Causeway Classification

The Causeway future land use classification is applied to lands lining the causeway and those around the intersection of the causeway with Fort Macon Road. This area is the main entryway from the mainland and the area with the most significant redevelopment potential – provided the Town chooses to move forward with providing central wastewater service to the area. In the alternative, the Town may elect not to extend centralized wastewater to the area, which will limit the area’s future development potential to existing uses and single-family detached residential development (given the limited amount of land area and inability to accommodate on-site wastewater systems capable of supporting more intense development).

As the gateway into Atlantic Beach, the area has significant visibility and good access for visitors and residents alike. In addition to its visibility and access, projects fronting the water along the causeway are eligible for application of the Urban Waterfront rules, which could allow for additional development potential in selected areas, subject to State approval. Redevelopment of the lots along the causeway at higher densities based on CAMA flexibility and the extension of centralized wastewater could allow for a wider variety of commercial services, mixed-use development, and recreational activities for residents and visitors. Redevelopment could also help improve the appearance of lands along the corridor. Additional development and redevelopment on lots along the causeway is further supported by the causeway master planning effort completed in 2019.

Development and redevelopment along the causeway should primarily be mixed-use development with an emphasis on resident-serving commercial services, visitor-oriented retail, recreation-related attractions, a strong connection to the water, and opportunities for locally-owned businesses. New development and redevelopment should support pedestrian connectivity with the rest of Town and alternative forms of transportation.

Most land in the Causeway classification is currently designated as Commercial Corridor (COR) on the zoning map. In the event the Town completes a small area plan that includes extending centralized wastewater to the lots along the causeway, a new zoning district or a new zoning overlay zoning district that requires the execution of a development agreement with the Town will be established and applied as a part of development approval. The development agreement sets down the rights and responsibilities of the Town and the applicant, and would address development design, use mix, lot coverage, height, density, and could focus on encouraging local businesses. Development of this new district will take place following the adoption of the small area plan.

### Causeway Future Land Use Classification

Corresponding Zoning Districts	Permitted Uses	Maximum Allowable Residential Density	Max. Building Height	Min. Lot Size	Max. Lot Coverage
Commercial Corridor (COR)	Most use types, including single- and multi-family residential; a wide variety of commercial and institutional uses.	7 units/acre for single-family detached; 12 units/acre for multi-family; 21 units/acre for multi-family of 5+ units	45 ft	Single-family residential - 6,000 sf per unit; Multi-family residential - 2,500 sf per unit, 2,000 per unit for developments of 5+ units; All others: none	75%
Commercial Circle (CIR)		50 units/acre	45 – 185 ft	None	100% with stormwater treatment



Image source: Google Maps Satellite View

## 1.4.2.H The Circle Classification

The Circle classification is assigned to lands that are subject to the approved conceptual master plan for the Grove. The master plan, in combination with the Circle Commercial (CIR) zoning district, is fairly descriptive in terms of the uses, design, and configuration of planned development in this area. The area is intended as a mixed-use town center that includes higher density residential, commercial, and civic spaces. Residential densities on individual parcels range from 8 to 50 units/acre, with some properties hosting purely residential uses, while others containing vertical mixed-use buildings with residential units above ground-floor commercial uses. At the center of the development is a planned hotel site which includes a second lot for its pool and other amenities.

This area is expected to continue to develop as the commercial and civic heart of Atlantic Beach. Public uses, alternative forms of transportation (including bicycle and pedestrian), and streetscape improvements should be prioritized as the area’s development progresses. Additional exploration of a stronger connection between the beach and the causeway area should be explored, along with the possibility of accommodating more public art.

Circle Future Land Use Classification					
Corresponding Zoning Districts	Permitted Uses	Maximum Allowable Residential Density	Max. Building Height	Min. Lot Size	Max. Lot Coverage
Commercial Circle (CIR)	Wide range of residential, commercial, and institutional/public uses as described in the conceptual master plan	50 units/acre	45 – 185 ft	None	40% without stormwater management system, no maximum lot coverage when stormwater management system meeting current standards is present
					
Image source: Google Maps Satellite View					

# 1.5: IMPLEMENTATION SCHEDULE

The table below provides a summary of the goals and associated actions included in this Plan. It also provides details about the potential timing associated with implementation. The timing information is aspiration and decisions about timing must be based on available resources and conditions in place at the time. In some cases, some actions are ongoing. The approximate timeframe for this Plan is around five years, or until 2025-2026.

Implementation Summary Matrix				
Action	Timing			
	Short Term FY 20-22	Medium Term FY 23 – 24	Long Term FY 25 - +	Ongoing
<b>GOAL 1. PROTECT COMMUNITY CHARACTER</b>				
Action 1.3.2.A: Complete a Community Character Assessment		●		
Action 1.3.2.B: Amend the Unified Development Ordinance		●		
Action 1.3.2.C: Establish a Local Business League	●			
Action 1.3.2.D: Track Tourism Impacts				●
<b>GOAL 2: CAUSEWAY REDEVELOPMENT</b>				
Action 1.3.3.A: Create A New Future Land Use Category	●			
Action 1.3.3.B: Prepare a Small Area Plan	●			
Action 1.3.3.C: Establish Wastewater Policies				●
<b>GOAL 3: IMPROVE THE CIRCLE AREA</b>				
Action 1.3.4.A: Update the Grove Conceptual Master Plan	●			
Action 1.3.4.B: Renegotiate the Public Space in the Grove	●			
Action 1.3.4.C: Renovate the Boardwalk		●		

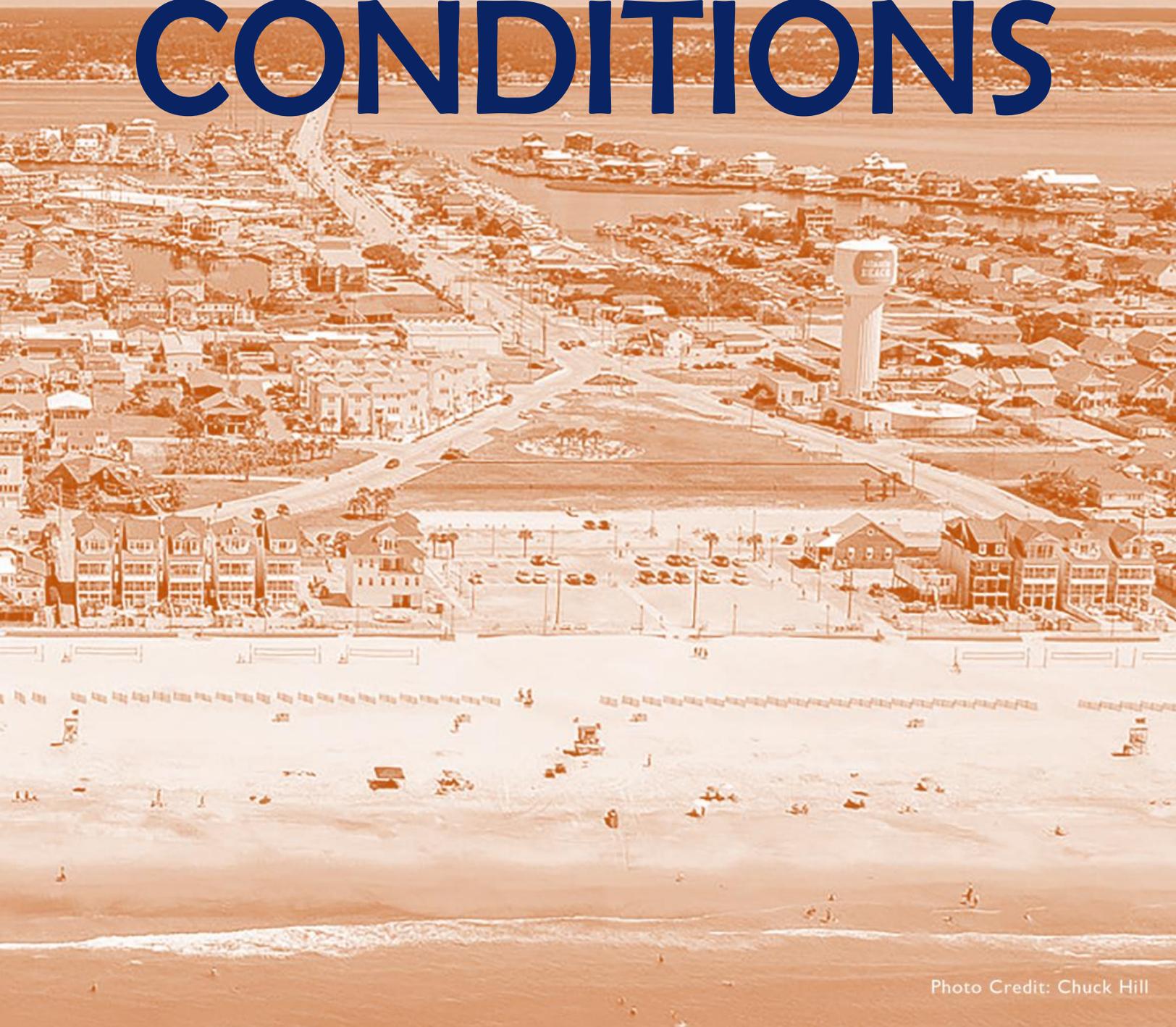
## Implementation Summary Matrix

Action	Timing			
	Short Term FY 20-22	Medium Term FY 23 – 24	Long Term FY 25 - +	Ongoing
Action 1.3.4.D: Establish a Performance Space		●		
Action 1.3.4.E: Incorporate Public Art in the Circle		●		
<b>GOAL 4: FLOODING AND WATER QUALITY</b>				
Action 1.3.5.A: Update the Town’s Stormwater Map	●			
Action 1.3.5.B: Adopt and Implement the Stormwater Resiliency Plan	●			
Action 1.3.5.C: Consider Additional UDO Revisions				●
<b>GOAL 5: ENHANCE MOBILITY</b>				
Action 1.3.6.A: Complete a Pedestrian Mobility Analysis		●		
Action 1.3.6.B: Continue to Provide Pedestrian and Bicycle Facilities				●
Action 1.3.6.C: Install Golf Cart/Low-Speed Vehicle Parking			●	
Action 1.3.6.D: Maintain Current Access Points				●
<b>GOAL 6: APPEARANCE AND PROPERTY MAINTENANCE</b>				
Action 1.3.7.A: Create a Formal Appearance Commission	●			
Action 1.3.7.B: Add Incentives for Public Art	●			
Action 1.3.7.C: Overhaul the Screening Standards	●			
Action 1.3.7.D: Overhaul Minimum Housing Standards	●			

## Implementation Summary Matrix

Action	Timing			
	Short Term FY 20-22	Medium Term FY 23 – 24	Long Term FY 25 - +	Ongoing
Action 1.3.7.E: Overhaul Nonresidential Maintenance Standards		●		
<b>GOAL 7: ADDRESS CRC MANAGEMENT TOPICS</b>				
Topic 1: Public Access to Public Trust Waters				
Action 1.3.8.A: Complete Implementation of the 2019 ADA Transition Plan	●	●		
Topic 2: Land Use Compatibility				
Action 1.3.3.B: Prepare a Small Area Plan	●			
Action 1.3.4.B: Renegotiate the Public Space in the Grove	●			
Topic 3: Infrastructure Carrying Capacity				
Action 1.3.8.B: Develop Infrastructure Policies	●			
Action 1.3.8.C: Explore Options for a Public-Private Partnership Extending Sewer Along Ft Macon Road and the Causeway	●			
Action 1.3.8.D: Continue Implementation of the Comprehensive Bicycle Plan				●
Topic 4: Natural Hazard Areas				
Action 1.3.8.E: Conduct Annual Community Rating System Property Owner Education				●
Action 1.3.8.F: Maintain Beach Nourishment Schedule				●
Topic 5: Water Quality				
Action 1.3.5.A: Update the Town’s Stormwater Map	●			
Action 1.3.5.B: Adopt and Implement the Stormwater Resiliency Plan	●			
Action 1.3.5.C: Consider Additional UDO Revisions				●

# PART 2: EXISTING CONDITIONS

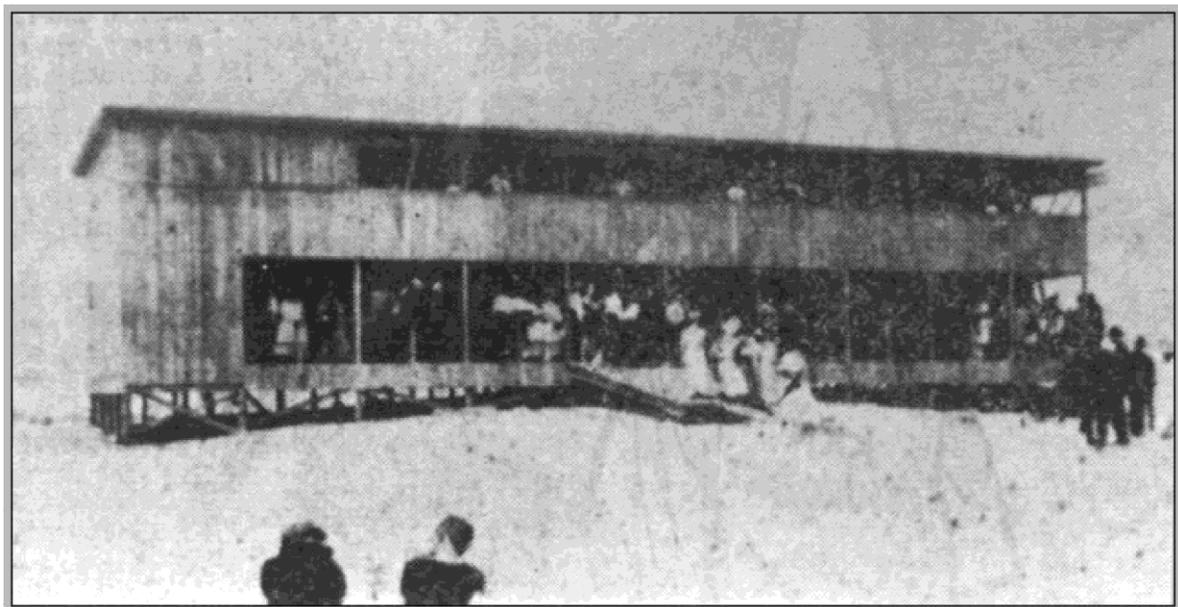


# 2.1: A SHORT HISTORY OF ATLANTIC BEACH

*The following history of Atlantic Beach was prepared by James N. “Cap’n Jim” Willis III. It is an excellent summary and has been reproduced here verbatim.*

The resort that is now Atlantic Beach, North Carolina was first visualized in the 1870s by Appleton Oaksmith, one of the most colorful characters of mainland Carteret County. His vision for east Bogue Banks was that of a new resort by the sea. He first chose Fort Macon, but was unsuccessful. He then turned his attention to the area which now comprises all of Atlantic Beach and a portion of east Pine Knoll Shores. He soon acquired title to all of this property in the names of two straw ladies, his wife, Augusta, and her sister, Ellen Mason. But alas, Oaksmith was not to achieve his dream, for on July 4, 1879, he lost four of his daughters in a tragic accident and lost the will to fulfill his dream.

It remained for John J. Royal of Morehead City and Winfield S. Chadwick of Beaufort to begin the construction of Oaksmith’s vision. In 1887, they built the first bathing pavilion on Bogue Banks in the location of present day Club Colony. They had a ready-made clientele that Oaksmith did not visualize, the patrons of the new Atlantic Hotel across Bogue Sound in Morehead City. The old Atlantic Hotel in Beaufort had been destroyed by the hurricane of 1879 and in 1880 the Morehead City Hotel Company constructed the "New Atlantic Hotel" in Morehead City at the terminus of the Atlantic and North Carolina Railroad in order to make hotel accommodations in the area more convenient for the former patrons of the old Atlantic Hotel. They were quite successful, since many of the old Atlantic customers became patrons of the new hotel. Many of its guests desired to bathe in the ocean surf, but there was no bathing pavilion on the ocean side of Bogue Banks to accommodate them. So, Royal and Chadwick provided one, and the resort of Atlantic Beach was begun. Patrons of the Hotel flocked to the newly accessible beach in droves, and a brisk ferry trade to the Banks ensued.



Royal Pavilion

In 1898 Royal and Chadwick split their holdings, with Chadwick getting the east portion and Royal the west. Royal then built his own pavilion on a much grander scale in the location of today’s Sportsman’s Pier. This was the beginning of the development that became known eventually as Money Island Beach. After Royal’s death in 1909 the development passed through many hands, and a hotel was eventually built near the present site of Courie’s

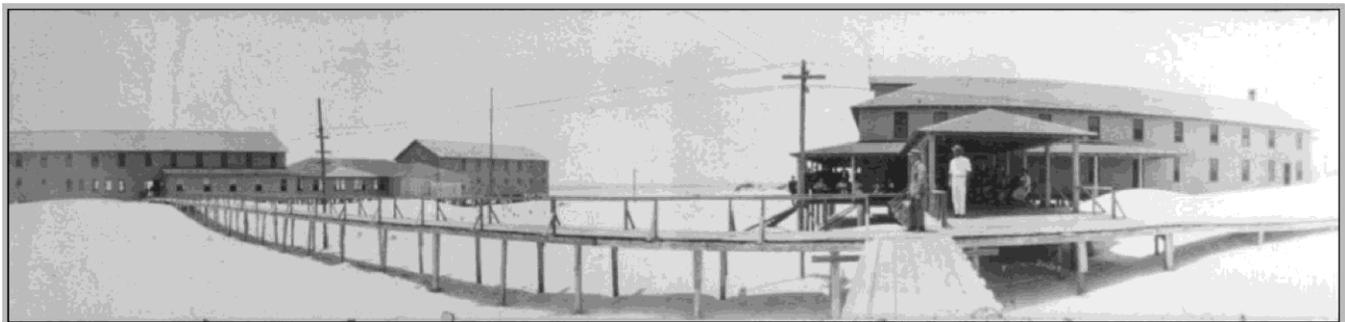
Villa. This new beach development, begun by Royal, thrived over the years while the original pavilion declined in popularity. This resort had many names over the years including Atlantic View Beach, Ocean Beach, and finally Money Island Beach.



*Money Isle, Beach Side*



*Villa Queen Hotel*



*Money Isle Bath House Complex (from North)*

In 1922, another bathing pavilion and ballroom was opened just east of the present Triple-S Pier by V. Asbury. The development was known as Asbury Beach and the following year was reserved exclusively for blacks, since these were the days of segregation.

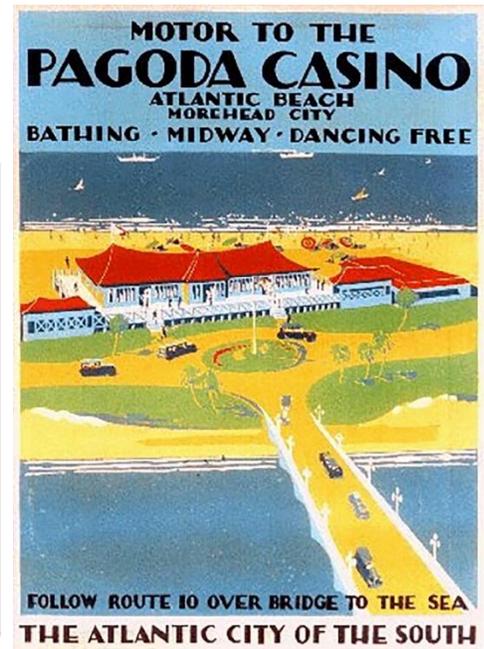
In 1926 an event occurred that signaled the eventual decline of Money Island Beach and the demise of Chadwick’s and Asbury’s pavilions. In that year a group of Morehead City and Beaufort investors formed two corporations, one to buy and develop a new resort on Bogue Banks and the other to build a modern bridge across Bogue Sound to this new development. By the summer of 1928 both goals had been achieved and the new “Atlantic Beach” opened for business. This new resort was located west of the Royal Pavilion in an area that became known as the “Circle”. Initially it contained two bathhouses (formerly known as bathing pavilions), one each for men and women, separated by a large ballroom style dance hall called the Pavilion. There were also several accessory buildings constructed nearby along with an office building in the center of unopened West Bogue Boulevard at its intersection with West Drive. All structures were oriental in design, and referred to as Pagoda, a feature that distinguished them from all past and future construction. More importantly, this new beach was accessible by motor car while the others were not. Thus, the new "Atlantic Beach", which could be reached by motor car, prospered, while the older less accessible developments declined.



Above: Pagoda Pavilion

Right: 1928 Poster

Below: Bridge with pagoda toll booth



This oriental style beach was short lived, however, for on July 20, 1929 fire destroyed all but the little office building. This building was later moved to an oceanfront lot on West Boardwalk and served as the summer residence of the beach managers for many years. Today it is a private residence and is known as the Pagoda House. It is the oldest documented structure in present day Atlantic Beach.



Pagoda House (Aerial)



Pagoda House (note Up-swept Roof Corners)

In the autumn of 1929 the great depression occurred and the owners of the Atlantic Beach property defaulted on their loans. The property finally ended up in the ownership of the Manufacturers Bank and Trust Company of New York. The company sent Robert Cordon down to review the property for a possible reconstruction of the development. Upon receiving a favorable report from Cordon, the officials of the company formed a new corporation, the Atlantic Beach and Bridge Company, to rebuild the resort proper and operate the bridge. The bridge was a toll bridge from its opening and remained so until sold to the State of North Carolina in 1934.

Two new bathhouses, a dance hall named the Casino, and several assorted drink stands were built in 1930, and the beach reopened for business.



*Circle Beach, 1930*

In the fall of the following year construction was begun on the Atlantic Beach Hotel on the site of the present Crab’s Claw and Town Beach Access. At that time Newman Willis, who had worked at the resort since it opened in 1928 and was later to become the town’s first mayor, was hired as caretaker of the new hotel. In November of 1931 he and his new bride, “Miss Etta”, moved to Atlantic Beach and became the first permanent residents who stayed. They spent the first year in the little office building that had not burned, since the hotel was still under construction. In 1934 their son, James N. “Cap’n Jim” Willis III, was born, and he became the first person to call Atlantic Beach home from birth.



Left: Newman Willis, Mayor

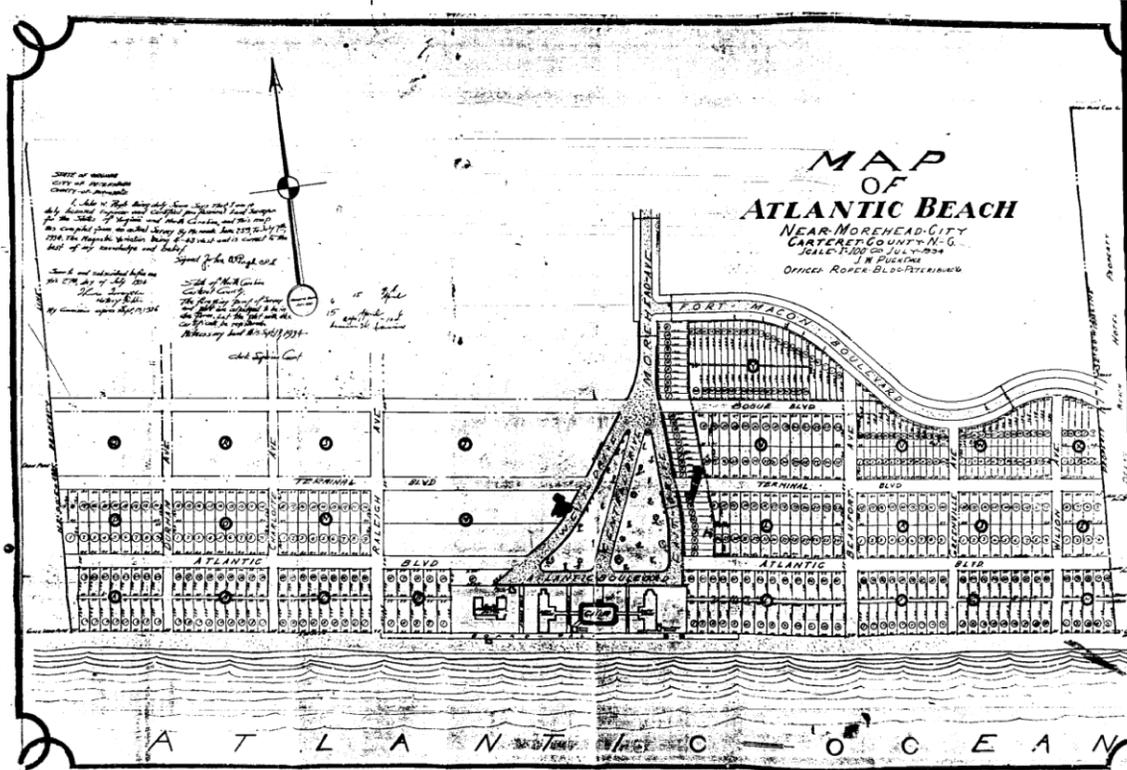
Right: “Miss Etta”

Below: Atlantic Beach Hotel



During the thirties, the tract of land surrounding the “circle” was platted with lots and streets extending out to the east and west of the “Circle”. The streets running east and west were called Boulevards and named for local geographical features, and those running north and south were called Avenues and named in honor of towns and cities in North Carolina. Lots were sold, and in 1932 the first cottage in the new “Atlantic Beach” was built by Ed Batchelor from Greenville, NC, on the lot just west of the future Seashore Club.

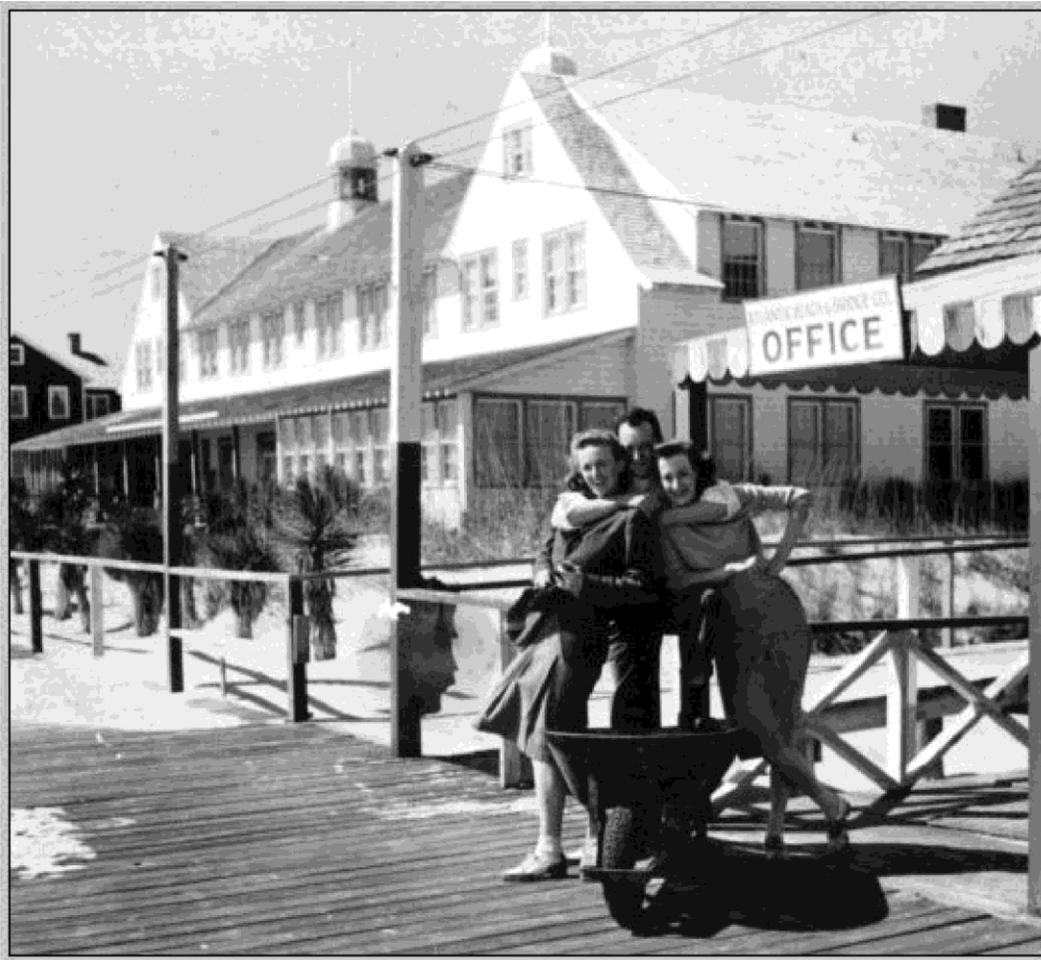
Atlantic Beach Map, 1934



Cottages were also built in Money Island Beach in the 1920's and 1930's, but we are not sure of the dates of construction of those that remain. The Batchelor cottage was destroyed by fire along with the Seashore Club many years ago. A boardwalk was also constructed along the oceanfront from one end of the property to the other. In front of the "Circle" the boardwalk was wider than the east and west portions and the planking ran parallel with the ocean shoreline. In the spring of 1940 the boardwalk here was rebuilt and the planking placed perpendicular to the shoreline. Thus old photos of the "Circle" during this time period can be dated pre or post 1940 by the orientation of the boardwalk planking.



Circle Boardwalk, 1931-32



*Circle Boardwalk,  
1941-42*

During the post-war period through the 1990s, the attractions centered around “The Circle” area and relatively extensive public beach access helped the Town solidify its reputation as a location where hard-working families, primarily from Central and East- Central North Carolina, could come and spend an affordable day, a weekend, or a week at the beach. Commercial and residential development oriented towards tourists, such as restaurants and motels, expanded up and down Fort Macon Road and the Town grew west all the way to its current boundary with the Town of Pine Knoll Shores in the 1990s and east to Fort Macon State Park. Many cottages were replaced by duplexes and mobile homes during this period, to allow for more and more seasonal and permanent residents.

The Town simultaneously became a destination for retirees from throughout the region and the country and numerous condominium developments sprang up during the 1970s, 1980s, and 1990s primarily to serve these newcomers, as well as for rentals to seasonal visitors.



*Atlantic Beach –  
Eastern End,  
2020*

# 2.2: EXISTING CONDITIONS DATA

## 2.2.1: POPULATION

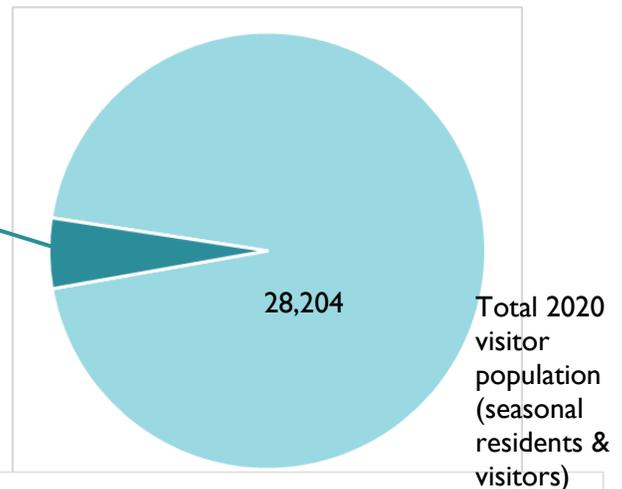
Atlantic Beach’s year-round residents are what makes the Town unique. While this plan takes into account year-round residents, partial-year residents, and visitors, the people who live in Atlantic Beach and keep it running through the year warrant special consideration.

There are approximately

# 1,536

year-round residents in Atlantic Beach as of January 2020. The Town has added about one new year-round resident per year in the past decade, for a growth rate of 0.5%.

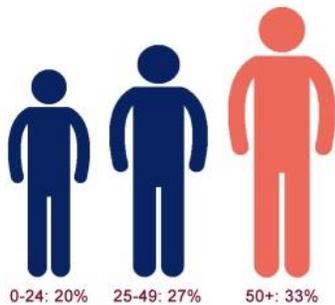
*Source: NC Office of State Budget and Management*



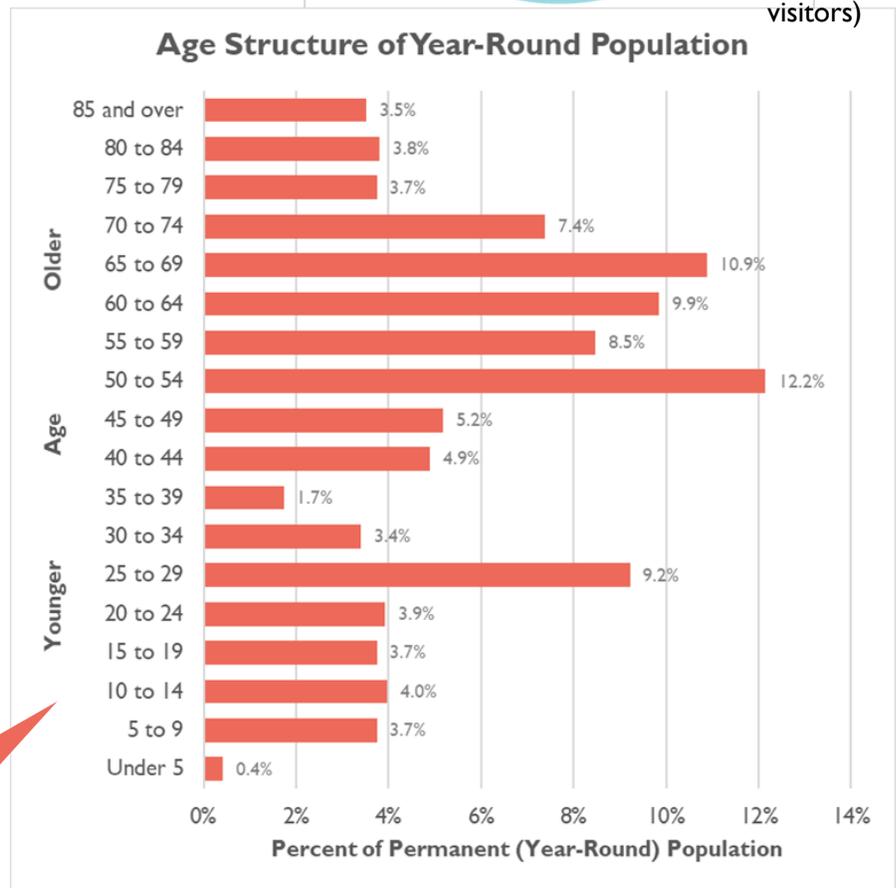
The median age of residents in Atlantic Beach is:

# 56

Nearly a third of Atlantic Beach residents are 65 years or older.

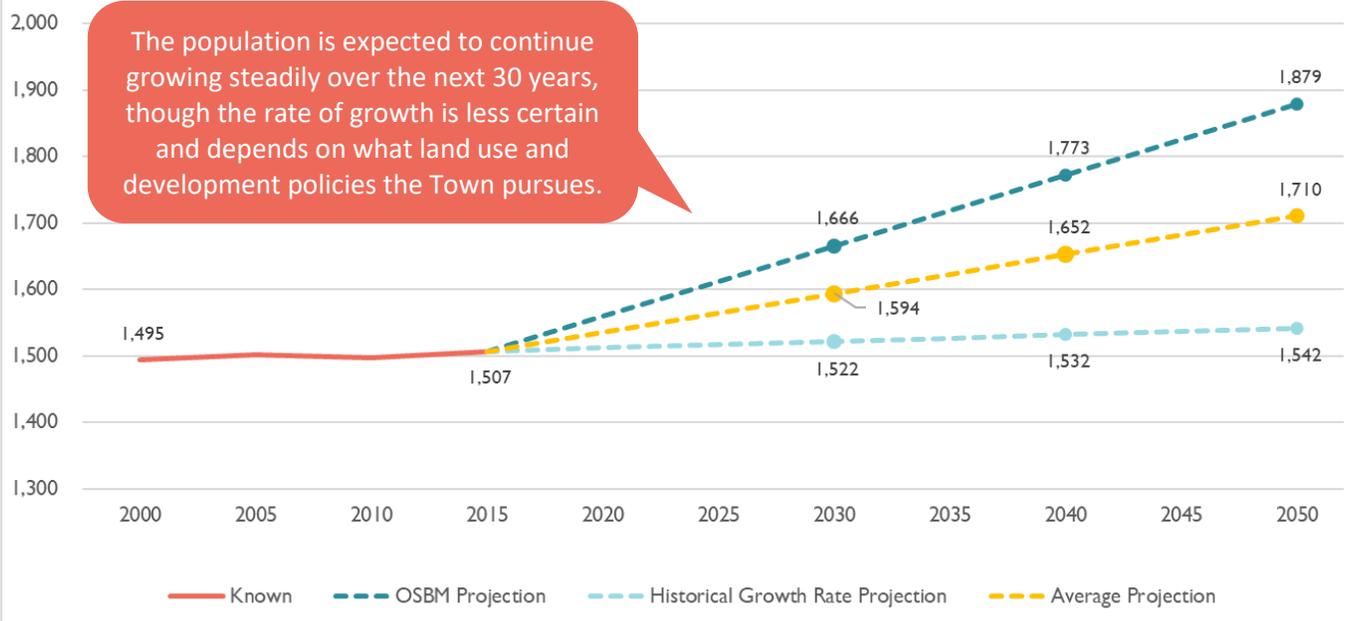


The age structure in Atlantic Beach reflects the area’s status as a retirement destination.



*Source: American Community Survey, 2018 Five-Year Estimates*

### Year-Round Population Projection through 2050



Source: North Carolina Office of State Budget and Management projections for Carteret County; American Community Survey, 2018 Five-Year Estimates.



It's interesting that Atlantic Beach has a lower median income than Carteret County, but less poverty and more education than the County or the State average. This could be because many retired seniors have fixed incomes.

#### How Does Atlantic Beach Compare?



Atlantic Beach

Carteret County

North Carolina

Median Household Income:	\$ 52,905	\$ 54,428	\$ 52,413
Living in Poverty:	7.1 %	9.8 %	14.0 %
High School Completion:	95.5 %	91.1 %	87.4 %

Source: American Community Survey, 2018 Five-Year Estimates.

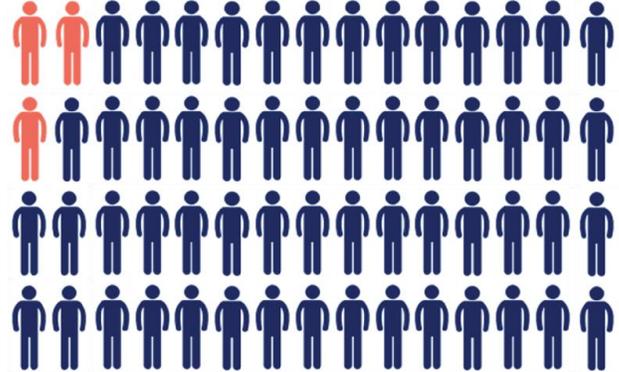
The estimated total **peak population** in Atlantic Beach (including year-round residents, seasonal residents, and visitors) is

# 29,560

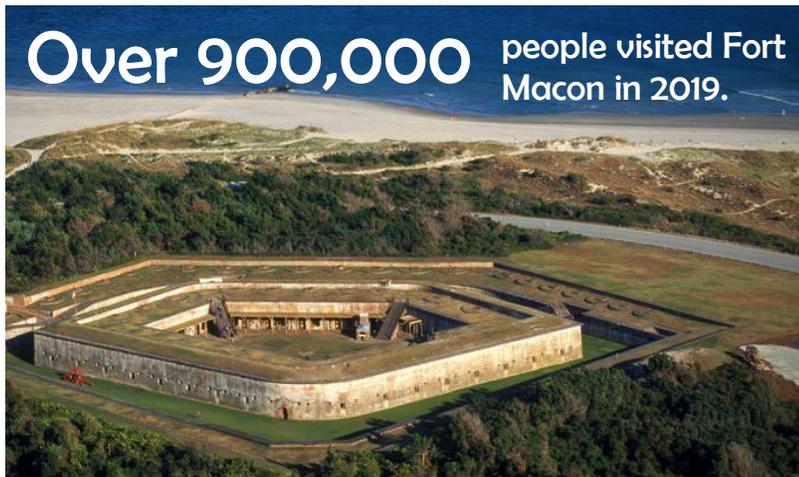
people. Note that this is not the population on an average day—it does not describe actual occupancy. It is an estimation of the largest number of people that could be staying in town on any one night. This number is used to inform the Town about the infrastructure and amenities it needs.

It is calculated using the number of rental properties in the town and multiplying by the average visitor party size, which in 2018 was 2.4 people for NC coastal areas overall, and Atlantic Beach’s average home rental party size of 6.7 guests.

Another way of stating this is that on the busiest night of tourist season, there are more than 18 visitors or seasonal residents for each year-round resident. This ratio is used to make the projections for the total peak population shown on the following page.

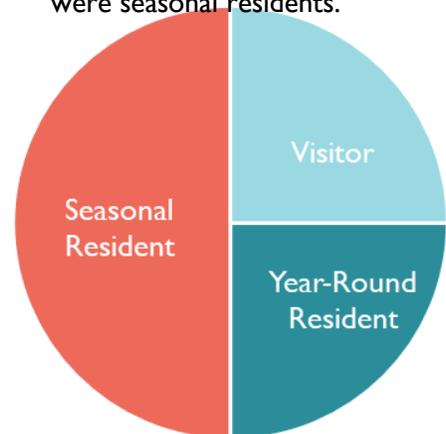


Sources: Town of Atlantic Beach business records; Economic Development Partnership of North Carolina’s 2018 NC Visitor Profile report; North Carolina Office of Budget and Management



Source: Fort Macon/NC Parks visitor counts

Town staff conducted a survey of 1,183 people in January 2018. Even in the off-season, about half of respondents said they were visitors to Atlantic Beach, and another quarter were seasonal residents.

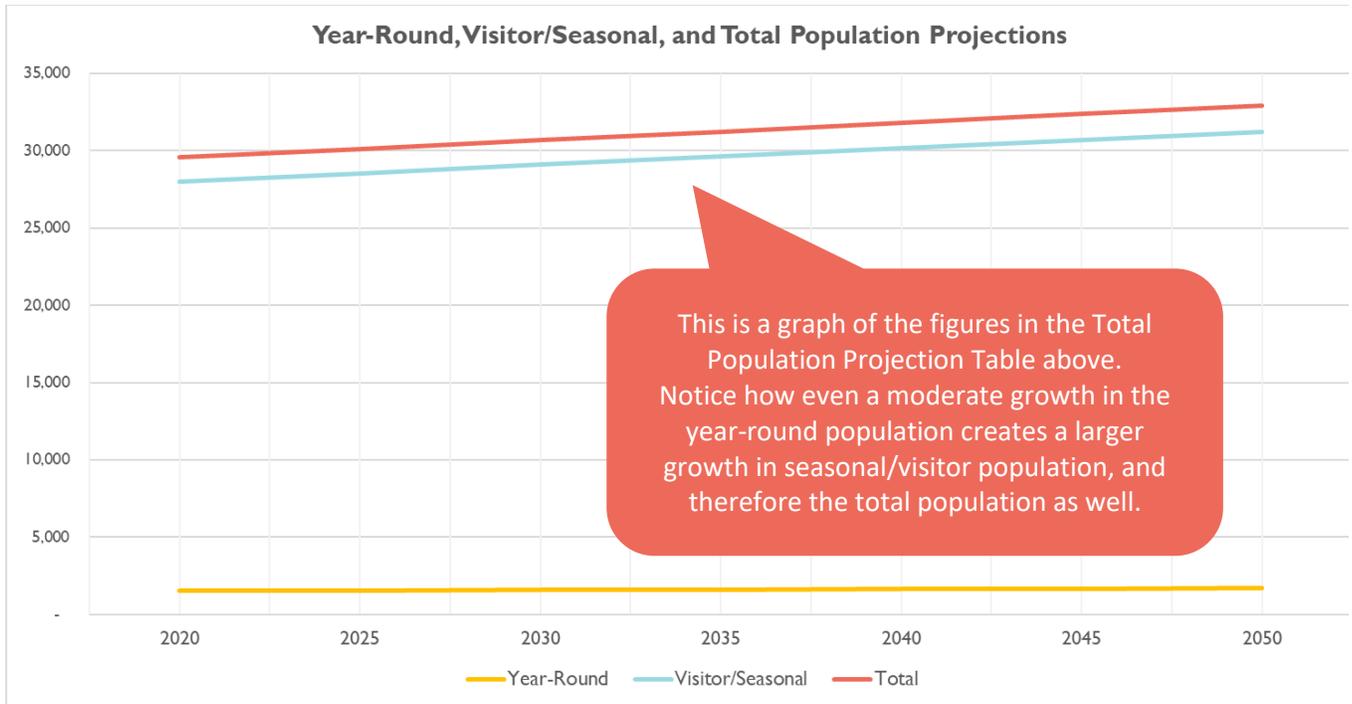


There are many ways to estimate the number of visitors the Town receives each year, and each method gives a slightly different answer. However, there is no doubt that seasonal residents and visitors outnumber year-round residents in Atlantic Beach most, if not all, of the time.

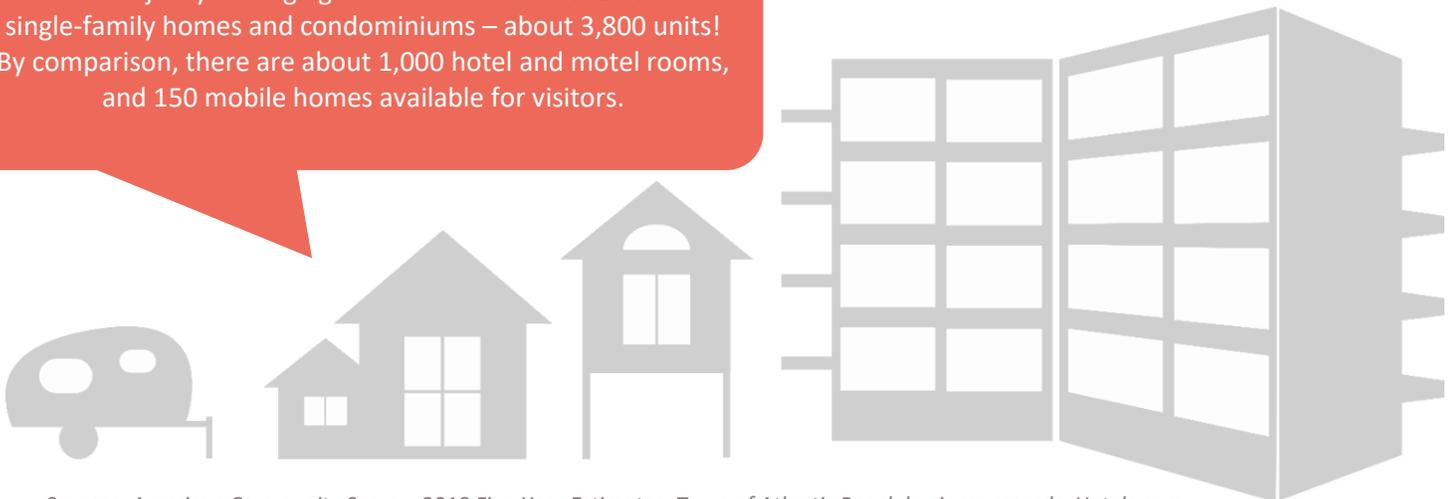
Total Population Projection (Year-Round Plus Visitors)							
	2020	2025	2030	2035	2040	2045	2050
Year-Round Population*	1,536	1,565	1,594	1,623	1,652	1,681	1,710
Visitor/Seasonal Population**	28,024	28,554	29,088	29,622	30,154	30,683	31,213
<b>Total</b>	<b>29,560</b>	<b>30,119</b>	<b>30,682</b>	<b>31,245</b>	<b>31,806</b>	<b>32,365</b>	<b>32,923</b>

\* Calculated as the average of the OSBM population projection and the historical growth rate projection (the yellow dashed line in the graph below).

\*\* Calculated by multiplying the year-round population projection by the current year-round to visitor ratio of 18.25.



The vast majority of lodging for visitors in Atlantic Beach is in single-family homes and condominiums – about 3,800 units! By comparison, there are about 1,000 hotel and motel rooms, and 150 mobile homes available for visitors.

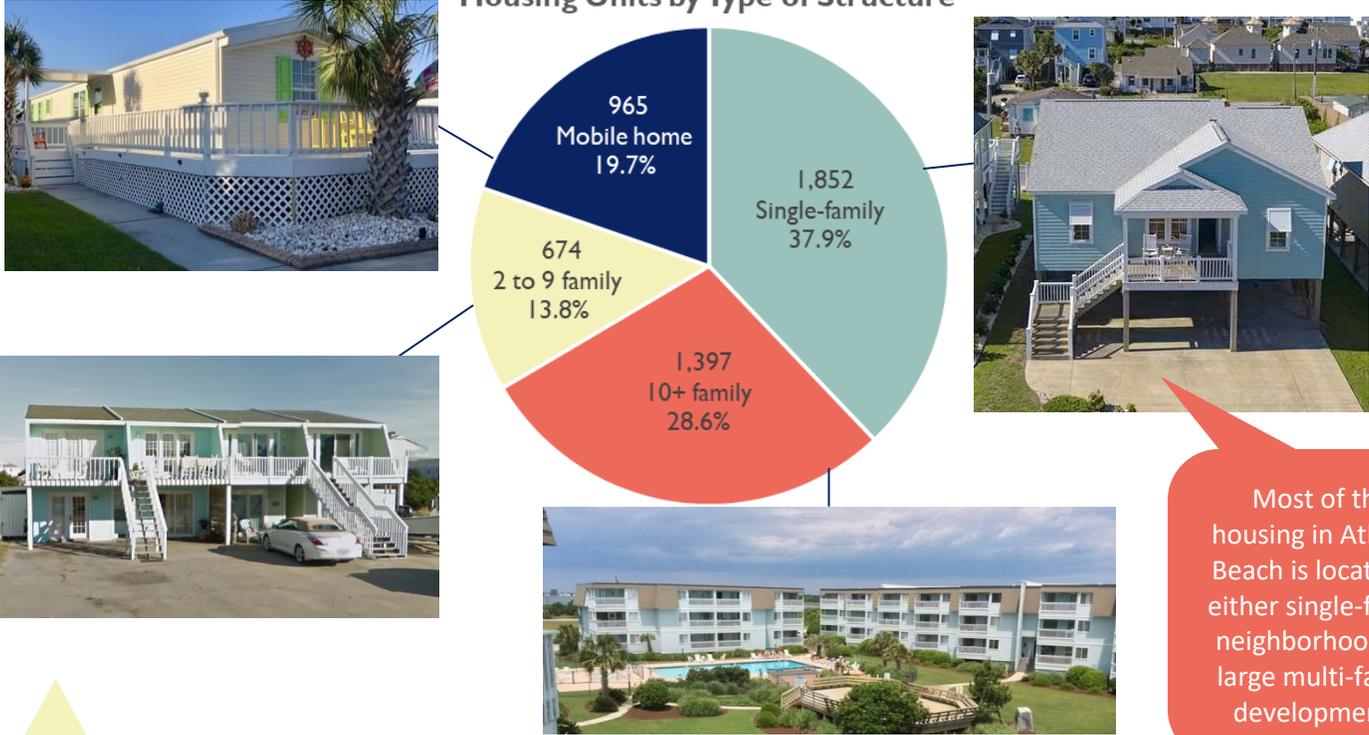


Sources: American Community Survey, 2018 Five-Year Estimates; Town of Atlantic Beach business records; Hotels.com

## 2.2.2: HOUSING

The Town’s housing stock—4,888 units in total—forms the core of its developed areas. The high number of properties used as vacation rentals or seasonal homes makes analysis of housing in Atlantic Beach different from many other communities.

Housing Units by Type of Structure



Most of the housing in Atlantic Beach is located in either single-family neighborhoods or large multi-family developments.

Atlantic Beach has very little vacant housing – only about 4% of the units in town, or about 200 units, are vacant. Of these, most are available for rental. Less than 50 homes on average are up for sale.

The dramatic increase in home values and low vacancy rates indicate a very strong housing market.

Only 1 out of 5 housing units in Atlantic Beach is occupied by a year-round resident.



Median value of owner-occupied housing in 2018:

**\$357,800**

Median value of owner-occupied housing in 2000:

**\$160,200**

Source: American Community Survey, 2018 Five-Year Estimates; Census

# Short-Term Rentals

Short-term vacation rentals are a relatively new form of visitor housing. Websites like AirBnB, VRBO, HomeAway, and others make it easier than ever for a homeowner to turn a residential property into a visitor-oriented property, either full- or part-time. Because of their growing popularity and their effect on available housing, they are an important trend for Atlantic Beach to watch.

There are approximately

# 415

homes used as short-term vacation rentals in Atlantic Beach.

Homes used as short-term rentals make up about

# 10%

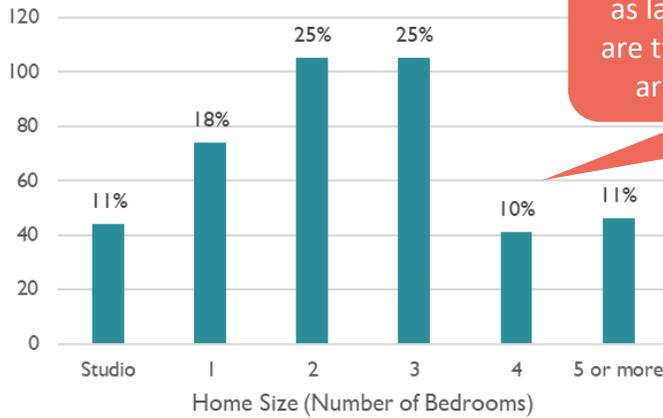
of the visitor-oriented housing in Atlantic Beach.

The average short-term rental in Atlantic Beach can host

# 6.7

guests per stay.

**Short-Term Rental Size**

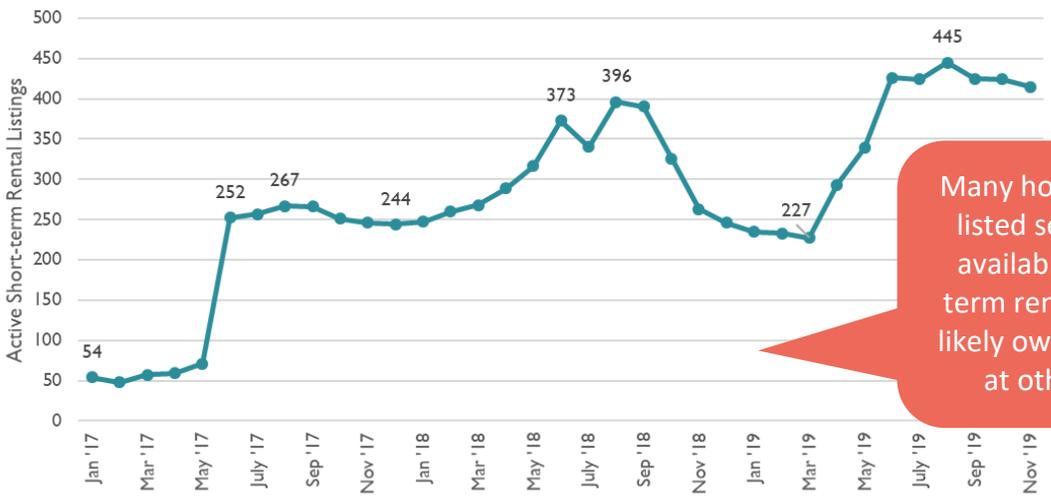


Many people think of short-term vacation rentals as large homes, but half of those in Atlantic Beach are two- or three-bedroom homes. Only about 11% are larger homes with five bedrooms or more.

Only 40% of homes used as short-term rentals are offered for rental full-time.



**Short-Term Rental Home Listings**



Many homes are only listed seasonally as available for short-term rentals, and are likely owner-occupied at other times.

Source for data on this page: AirDNA.com

## 2.2.3: ECONOMY

Atlantic Beach’s businesses provide employment, access to goods and services, and tax revenues to the Town. Understanding the mix of businesses and the employment profile in Atlantic Beach helps inform decisions about future business recruitment, land use, and revenue planning.

As of October 2019,  
there were

# 193

business  
establishments in  
Atlantic Beach.

Of these..:



Source: Town of Atlantic Beach business registrations and staff classification

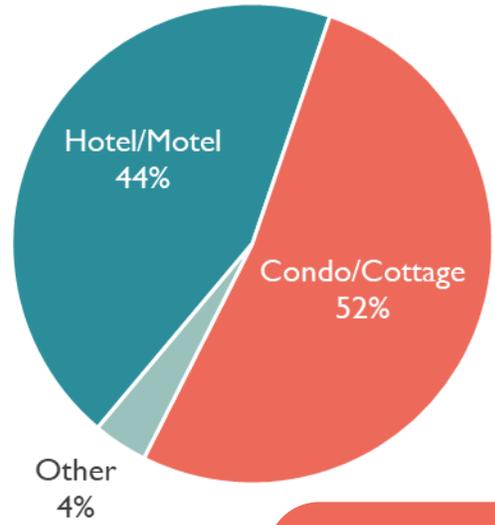
In 2018, the Town of Atlantic Beach  
collected over

# \$1.27

## million dollars

in occupancy taxes.

Source of Occupancy Tax, 2018



Source: Carteret County Shore Protection Office



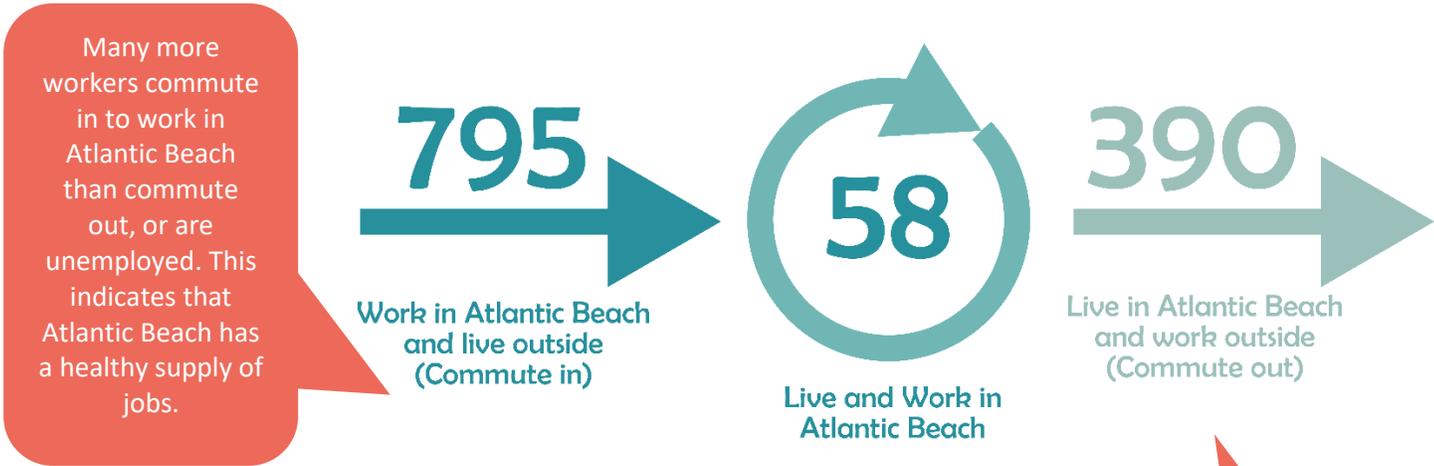
The average group visiting the NC  
Coast in 2018 spent

# \$1,240

over 4.5 nights.

Though there are many more condos and “cottages,” or private homes, for rent than hotel rooms, hotels tend to be more expensive, so the tax collected from each are nearly equal.

Source: Economic Development Partnership of North Carolina’s 2018 NC Visitor Profile report



Source: Census.gov's LEHD On the Map analysis tool, using 2017 data.

The total number of workers in Atlantic Beach is

**885**

as of 2017.



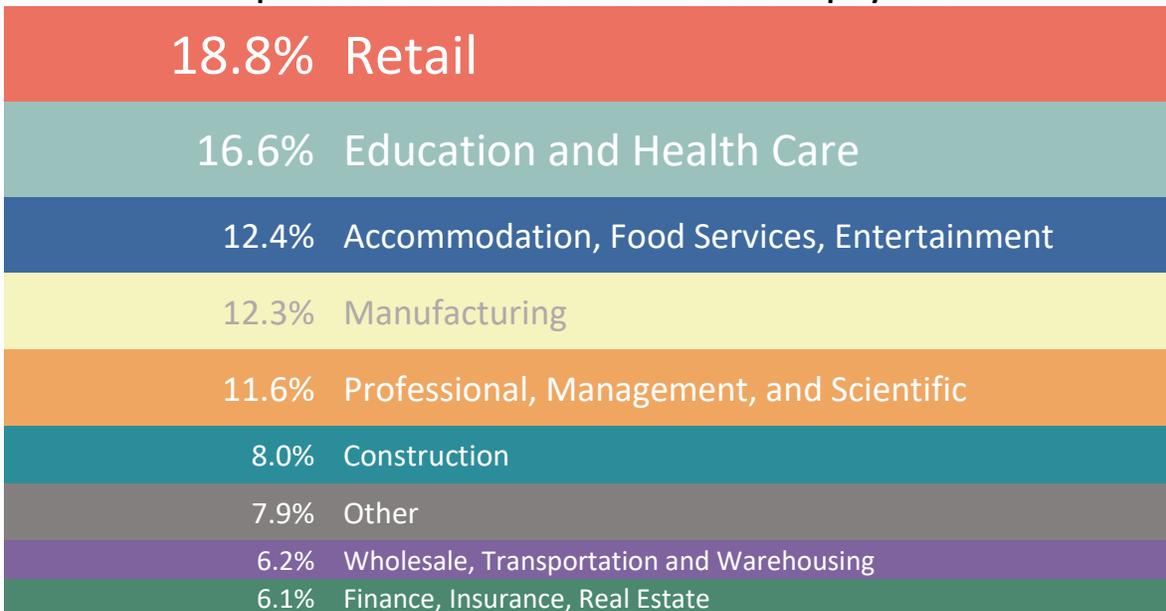
The US Census Bureau estimates that there were between

**39** and **135**  
unemployed people in the Town as of 2018.

*Due to the relatively small size of Atlantic Beach, the unemployment figures are highly uncertain and only released yearly.*

Many of those commuting out of Atlantic Beach work close by in Morehead City, Pine Knoll Shores, and Beaufort, but nearly a third travel over 50 miles each way to work.

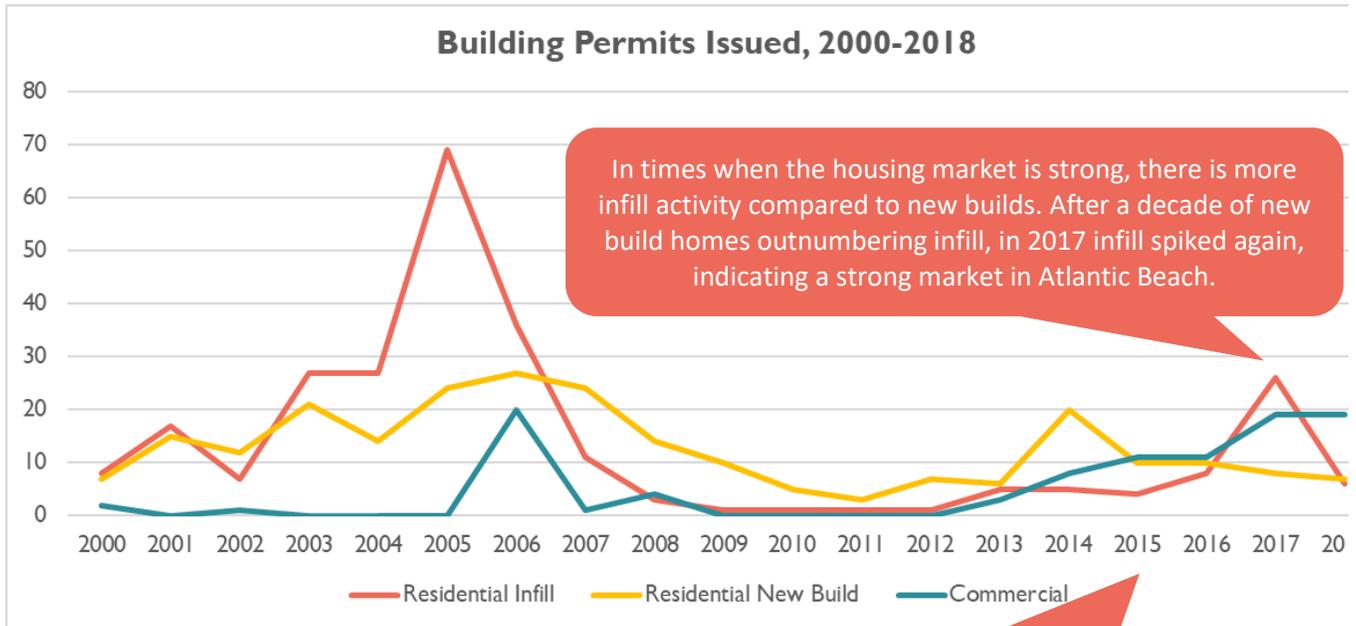
**Top Industries for Atlantic Beach Resident Employment**



Source: American Community Survey, 2017 Five-Year Estimates

## 2.2.4: DEVELOPMENT

Understanding development trends is key to planning for future land use. It is particularly interesting how Atlantic Beach’s housing market changes with respect to new builds versus infill, or demolished and rebuilt homes.



In times when the housing market is strong, there is more infill activity compared to new builds. After a decade of new build homes outnumbering infill, in 2017 infill spiked again, indicating a strong market in Atlantic Beach.

Source: Town of Atlantic Beach Building Permit Records, 2000-2018

After years of almost no commercial building activity, permits have picked up in the past five years, indicating recovery from the Great

This aerial photo shows a full range of residential development in Atlantic Beach, including the newly constructed townhomes shown here.



Atlantic Beach’s land use, development, and environment have primarily been shaped by two factors. First, the geography of the island, a thin strip of land, means that land uses are close together and connected by a few main roadways. The small land area also means that there are no industrial uses in Atlantic Beach, and that most locations are accessible by bike and foot traffic. Secondly, the particular niche of the tourism economy our Town fills—that of a small, family-friendly beach town—has enormous impact on our growth and development. This identity is responsible for the relative lack of chain businesses compared to nearby towns and the majority of the land use as single-family homes and condominiums. Shifting economic conditions such as increased investor interest in coastal real estate and the rise of online short-term rental platforms have arrived in recent years, and we have seen some larger development proposed and built in response. Sea level rise and increased flood events are also shaping how we build, grow, and rebuild our homes and businesses.

## 2.2.5: TRANSPORTATION

The ways that people move to and through Atlantic Beach affect the Town’s economy, land use, and overall character. This section draws on existing sources to provide a picture of the state of transportation in Atlantic Beach.

### Atlantic Beach Roadways by Maintenance Responsibility



See Appendix 3.1.1 for a larger version of this map.

The Town maintains

# 18.25

miles of roadways.

Source: Carteret County GIS

The annual average daily traffic on the Atlantic Beach Causeway was

# 17,500

vehicles in 2018.

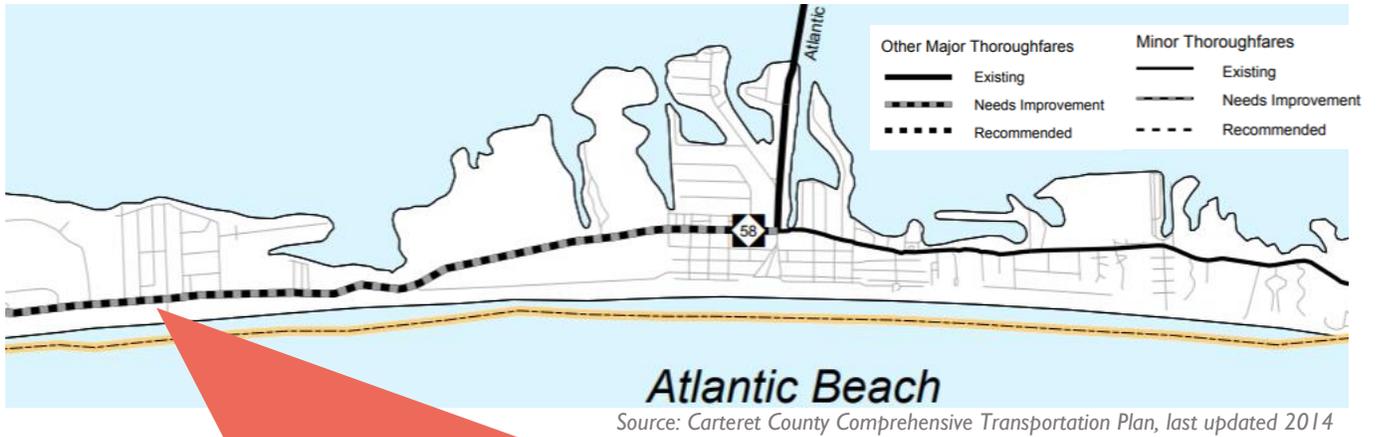
Source: NC DOT

A high traffic count may cause worry about delays and congestion, but it is good news to local businesses that gain customers not only from people whose destination is Atlantic Beach, but also those passing through.

Our Town’s transportation network is built around two main corridors: the Causeway, which runs north-south and is the gateway from the mainland into both Atlantic Beach and the rest of the Crystal Coast; and Fort Macon Road, which forms the east-west “spine” of the island. In the center of town lies the “Circle” – a one-way road that forms a triangle shape and is home to many businesses, both new and old, as well as the boardwalk and beachfront—the Town’s main attraction. These roadways can become quite congested in the summer with guests travelling both to and through Atlantic Beach. Because of the limits of the island’s geography, there is not room for alternate routes to lighten the burden of these streets. However, the close network of streets in the center of Town, coupled with ongoing infrastructure improvements throughout the island, also facilitate alternative modes of transportation, including bicycle and pedestrian travel, which is more efficient in busy summer months.

On either side of the Circle is a dense network of small, low-speed streets that were built to serve the Town’s first cottage neighborhoods and still provide access to the single-family homes that form the core of our housing stock. Many of the newer condominium developments are served by private roadways that branch off of Fort Macon Road. At this point in its development, Atlantic Beach has roadways that extend to all developable lands. This means that infill can happen readily on vacant lots in existing neighborhoods served by roadways (and other infrastructure).

## Functional Classifications

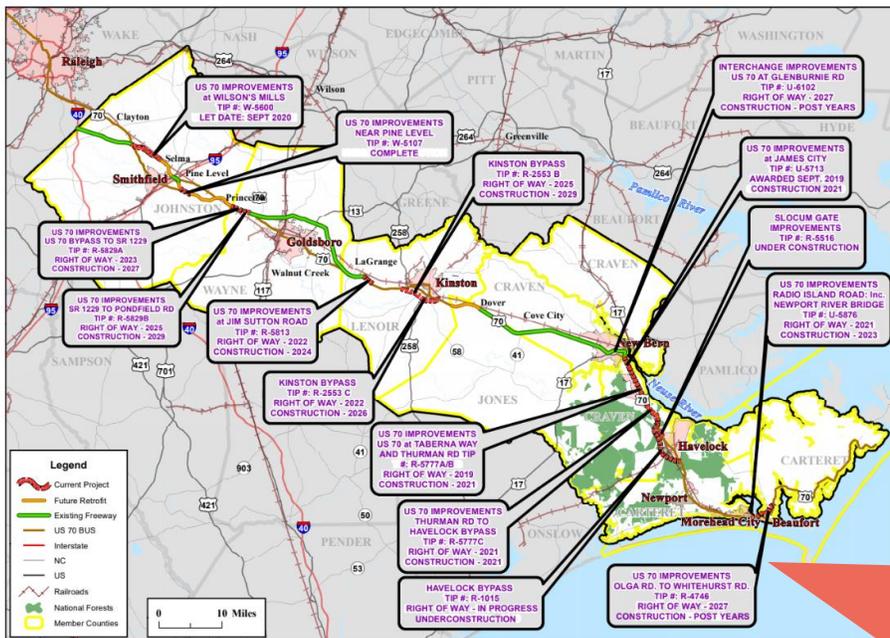


The segment of Route 58/West Fort Macon Road designated as “Needs Improvement” in the Comprehensive Transportation Plan is also identified as “near capacity,” meaning that considering projections of future growth and roadway use, the road will need improvement to keep traffic moving.

The NCDOT 2020-2029 Current State Transportation Improvement Plan (STIP) lists two projects in Atlantic Beach: the first, currently in progress, is rehabilitating the bridge over the Bogue Sound (the Causeway bridge), which was built in 1987 and found to be deficient in past assessments. The second, planned for 2022, is a roadway improvement project installing a right turn lane on West Fort Macon Road where it intersects with the Causeway.



Source: Mark Hibbs/Southwinds



The new I-42 corridor will upgrade US 70 and connect Raleigh to Carteret County, making the journey to Atlantic Beach faster for many in-state travelers, and making commuting from Atlantic Beach to other parts of the state more convenient as well.

After I-40 was extended to Wilmington in 1990, the area saw a population jump. This project could mean that the future population for Atlantic Beach – both year-round and seasonal/visitor – will be on the higher end of the projections in Section 2.2.1, Population.

# LOOPS

The AB Loops are well-marked routes around Atlantic Beach that encourage people to get out and walk or bike. Whether it is for exercise or just to get from one place to another, walking and biking are great ways to live a healthy lifestyle and a fun way to get around our small beach town. The beach itself is also a great place to walk or jog—posted mile markers are on the Loops and the beach to help you keep track of your progress. In addition, there are some great trails around Fort Mason State Park.

### EXPLORE THE ROUTES

- RED LOOP:** Explore Atlantic Beach's West End on this loop that leads from the Doubletree Hotel to the sound and passes by the soundside Pelican Street Pier. (1 Mile Loop)
- BLUE LOOP:** Start at the Boardwalk and take in ocean views by walking down Ocean Ridge and then cutting back up Fort Mason Road past the Town Park. (2 Mile Loop)
- GREEN LOOP:** Go through the heart of town from the boardwalk to the bridge. Travel along the Causeway to the Bilgids Side park and back. (2 Mile Loop)
- YELLOW LOOP:** Explore the east end of town by walking through some of our Cottage Districts and looping back north to the Boardwalk. (3 Mile Loop)

### PEDESTRIAN SAFETY TIPS

- Cross streets at marked crosswalks and intersections if possible.
- Obey traffic signals such as WALK/DONT WALK signs.
- Look left, right, and left-again before crossing a street.
- Wear bright and reflective colors. At night, wear light colors so you can be seen.
- Always walk ON the sidewalk – if there is no sidewalk, walk facing traffic so you can be seen.

### LEGEND

- ▲ Landmarks
- ♻️ Bathhouses (Restrooms)



In the 2018 Citizen and Visitor Survey, many people mentioned that bicycle and pedestrian infrastructure was one area that the Town could improve. The AB Loops effort takes steps toward meeting this goal.

In 2018 the Town invested in signage, infrastructure, and maps promoting the “AB Loops,” four color-coded routes around town that are recommended for walking or biking.

# 2.3: EXISTING LAND USE

## 2.3.1: EXISTING LAND USE DESIGNATIONS

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The Existing Land Use Map on the following page assigns a color designation to each lot, or parcel, in the Town. The designations are assigned based on a staff survey of existing land uses and structures. The designations include:

### 2.3.1.A Single-Family Residential

This designation denotes areas occupied by single-family homes, including conventional, modular, or manufactured homes located one to a lot. Because it is very difficult to be certain whether a particular house is used exclusively by a year-round or partial-year resident versus as a vacation rental, this designation includes all single-family homes, regardless of who uses them. Additional information on seasonal residency patterns would be especially helpful, and one of the Plan goals is to begin collecting more details on how single-family homes in Town are used.

### 2.3.1.B Multi-Family Residential

Multi-family residential includes apartments, condominiums, townhouses, and duplexes—any housing where more than one unit is located on one lot, except manufactured housing. As with single-family homes, multi-family residential uses are labelled the same way regardless of whether they are used by residents or visitors to the Town.

### 2.3.1.C Manufactured Housing

This designation shows places where there are more than one manufactured or mobile home on a lot, such as manufactured home parks.

### 2.3.1.D Commercial

Land designated as commercial has buildings with uses including retail or wholesale sales, restaurants, personal services (businesses such as hair salons), offices, and hotels and motels.

### 2.3.1.E Mixed-Use

Lands designated mixed-use are occupied by at least two different uses on one lot, most often a residential and one or more commercial uses.

### 2.3.1.F Institutional

Institutional land uses include government offices, utilities, places of worship, public or private schools, civic institutions, and healthcare uses.

### 2.3.1.G Vacant and Buildable

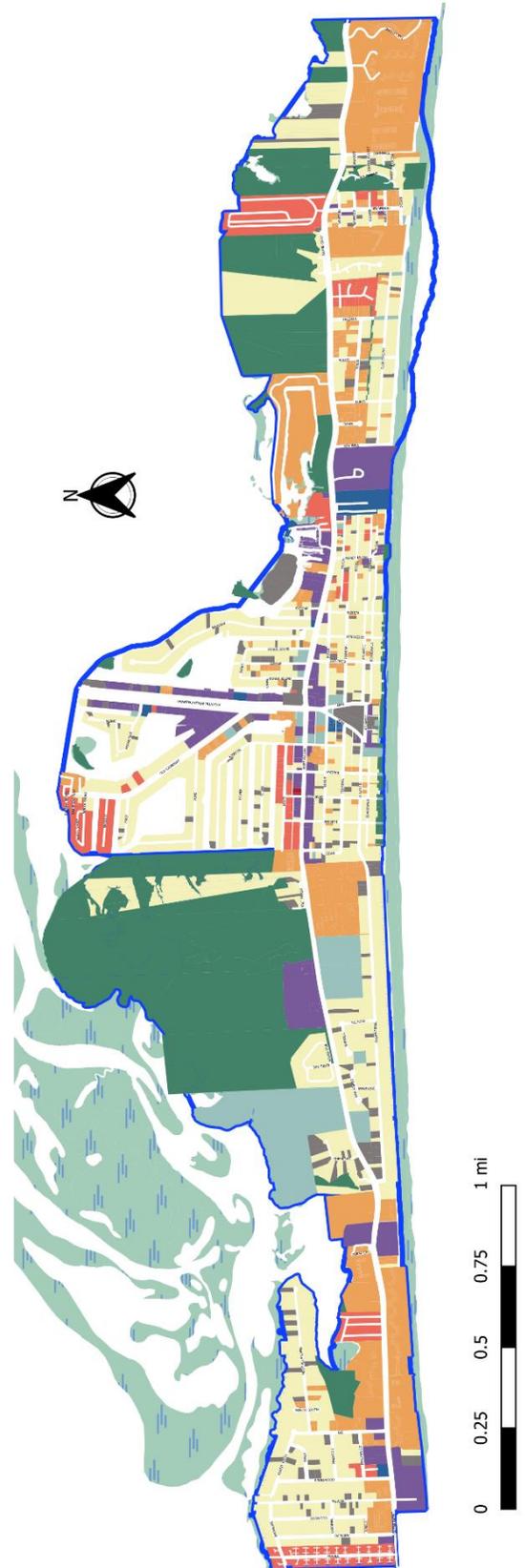
Land which contains no structures, but at present could be built upon without significant grading or other geographical changes, is labelled as vacant and buildable.

### 2.3.1.H Conservation

Land which contains no structures, and at present could not be built upon without significant grading or other changes, is labelled as conservation.

## 2.3.2: EXISTING LAND USE MAP

<p><b>SINGLE-FAMILY RESIDENTIAL</b></p>	<p><b>31%</b>  <b>431 ACRES</b>                  single-family detached homes and single-family attached homes (townhouses), including those used as vacation rentals</p>
<p><b>CONSERVATION (VACANT AND NOT BUILDABLE)</b></p>	<p><b>28%</b>  <b>388 ACRES</b>                  includes wetlands and protected areas</p>
<p><b>MULTI-FAMILY RESIDENTIAL</b></p>	<p><b>18%</b>  <b>247 ACRES</b>                  duplexes, triplexes, apartments, and condominiums</p>
<p><b>COMMERCIAL</b></p>	<p><b>7% · 95 ACRES</b>                  restaurants, retail, offices, and personal services</p>
<p><b>INSTITUTIONAL</b></p>	<p><b>7% · 95 ACRES</b>                  town-owned properties, churches, schools, utilities</p>
<p><b>MANUFACTURED HOUSING</b></p>	<p><b>6% · 80 ACRES</b>                  mobile and manufactured homes</p>
<p><b>VACANT AND BUILDABLE</b></p>	<p><b>5% · 63 ACRES</b>                  land that is buildable but with no buildings currently</p>
<p><b>MIXED-USE</b></p>	<p><b>1% · 12 ACRES</b>                  mixed-use developments</p>



Source: Town of Atlantic Beach staff survey

These numbers reflect the total area of all the tax parcels within the Town's planning jurisdiction. It does not include public or private right-of-way or lands submerged in water that lie within the official Town boundary.

See Appendix 3.1.1 for a larger version of this map.

## 2.3.3: EXISTING LAND USE PATTERNS

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The Town’s jurisdiction includes approximately 1,400 acres of land. Around 1,000 of those acres are buildable, and around 400 are unbuildable. The Town is largely built-out – only 63 acres of the 1,000 buildable acres are vacant. These vacant lands are dispersed throughout the Town, and most are individual lots within established residential subdivisions. The notable exception is the center of the “Circle” area, which is currently unbuilt but has a development plan in place (see Section 1.4.2.H, The Circle Classification). There are a small number of other lots in the commercial corridors along Fort Macon Road and the Causeway that are vacant as well.

Of the built-upon lands, the vast majority are occupied by single-family residential uses. Nearly a third of all lands in the Town (31% or 431 acres) are occupied by single-family homes—either detached or attached (townhouse) single-family structures. Most of these uses are located in established neighborhoods throughout Town. While these neighborhoods tend to be exclusively residential in use, most are located within walking and biking distance of the Town’s commercial corridors, recreational opportunities, and institutional uses such as churches.

Around 28% of the Town’s total land area is classified as Conservation—this includes formally protected lands as well as wetlands and other unbuildable areas. These areas are located almost entirely on the north (or Sound) side of the island, with the majority concentrated in a few large parcels in the northwest-central part of Town.

The next most common land use is multifamily residential, including duplexes, triplexes, apartments, and condominiums (around 18%). These areas are interspersed with the single-family neighborhoods in the Town, and concentrated on the ocean side of Fort Macon Road. Importantly, this classification system does not distinguish between residential uses that are occupied year-round by owners or renters and those that are used primarily as visitor accommodations. The oceanfront condominium developments at the east and west ends of the island likely have a large number of units used as visitor accommodations, but the exact details of this information is not readily available at this time.

There are also several pockets of manufactured housing located across the Town (80 acres in total, or 6% of total land area), including larger areas off Old Fort Macon Road on the sound side and several parks that front Fort Macon Road on both the east and west sides of town.

The non-residential land uses in Atlantic Beach (commercial, institutional, and mixed-use designations) are concentrated around the two main road corridors: the Causeway running north-south and joining the island to the mainland, and Fort Macon Road running east-west through Town. Commercial lands occupy 7% or 95 acres of land, and include a collection of restaurants, retail shopping, and services such as hairdressers, banks, and real estate offices. Institutional uses occupy another 7% or 95 acres, and include churches, utilities, and Town-owned properties. Most civic uses, such as Town Hall and the Police Station, are located near the Circle area. There are no industrial land uses in Atlantic Beach. 1% of the land area, or 12 acres, is occupied by mixed-use development. These are located in the Circle area and along the Causeway, and include ground-level retail with upper-story residential units.

In terms of recreation and natural areas, the Town Park and the Hoop Pole Creek Nature Trail are located across Fort Macon Road from one another in the west-central part of Town. There are numerous public and private beach accesses on both the ocean and sound sides, including two privately-owned fishing piers.

## 2.3.4: HISTORIC, CULTURAL, AND SCENIC AREAS

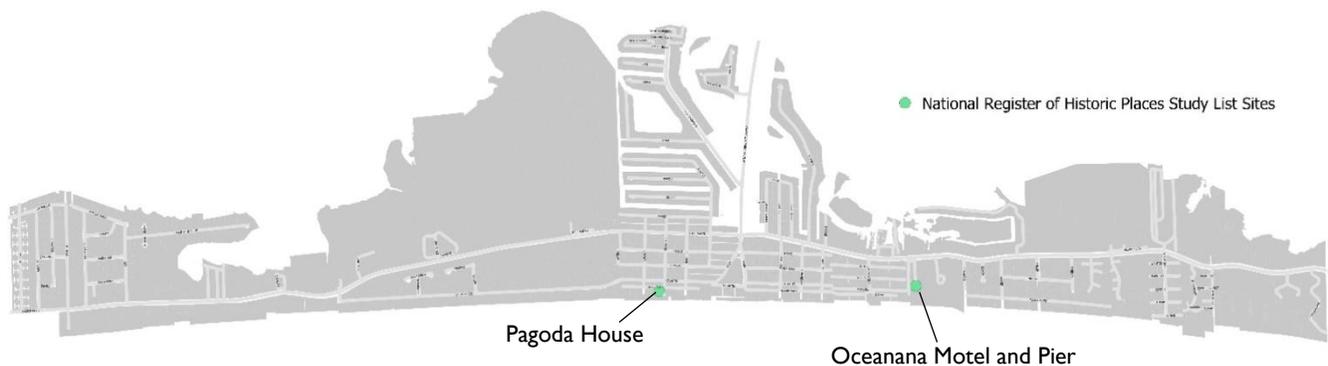
Currently there are no State or federally-designated historic, cultural, or scenic areas within the Town’s jurisdiction. However, two sites are currently on the Study List, which is the first step toward eventual National Register of Historic Places designation. Those two sites are: the “Pagoda House,” a 1931 beach cottage built in the “pagoda” style with distinctive flared eaves; and the Oceanana Motel and Pier.



The “Pagoda House.” Source: Zillow.com



The Oceanana Motel. Source: Dean Jeffrey, flickr.com



See Appendix 3.1.1 for a larger version of this map.

One of the most significant cultural resources near Atlantic Beach is Fort Macon State Park, a fully-restored Civil War era fort, museum, and education center that lies just to the east of Town. Though not located within the Town’s boundaries, all visitors to Fort Macon must access the site by travelling through Town. As noted in Section 1.3.6 under Goal 5, Enhance Pedestrian & Bicycle Mobility, we have been steadily working to improve alternative transportation including bicycle and foot paths from the Town’s jurisdiction to Fort Macon State Park.

Should any previously unknown cultural or historic sites be discovered within the Town’s jurisdiction, we will act to investigate, protect, mark, and preserve these resources.

## 2.4: DEVELOPMENT MANAGEMENT PROGRAM

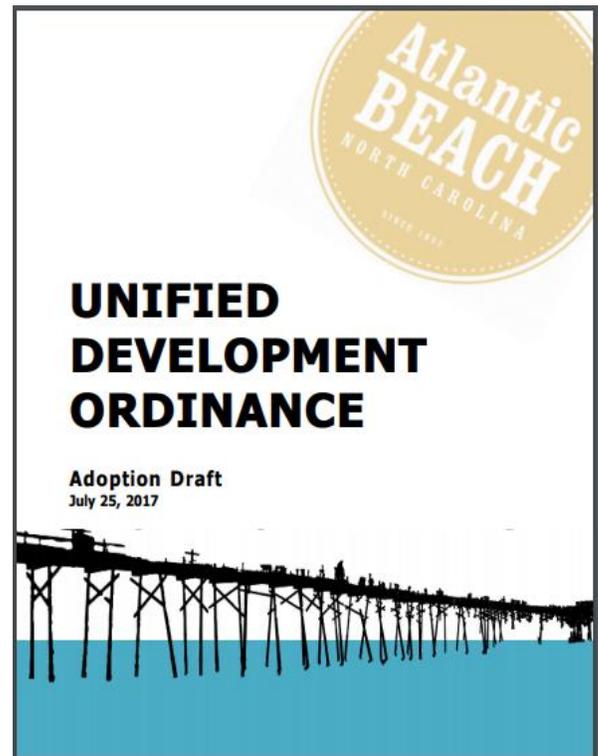
The Town has a wealth of land use policy documents and ordinances that provide direction and guidance for land use decision-making. This section summarizes the key aspects of the Town’s adopted policy guidance. These documents were used in the preparation of goals and actions for this Plan and will continue to inform Town decision making on land use matters into the future.

These tools are administered by the Community Development Department under the leadership of the Town Manager, Planning Board, Board of Adjustment, and Town Council.

### 2.4.1: UNIFIED DEVELOPMENT ORDINANCE & ZONING MAP

---

The Unified Development Ordinance (UDO) and its accompanying zoning map are the primary tools guiding land use and development within the Town. The UDO was updated in 2017, and includes all the procedures, development and design standards, subdivision rules, and enforcement information within one comprehensive document. The zoning map, which is incorporated by reference into the UDO, designates the types and intensities of development allowed on each parcel throughout the Town. Both the UDO and the zoning map are accessible from the Town website at <http://atlanticbeach-nc.com/>.







Building elevations from the Lookouts Phase II

The development is designed to incorporate several differing types of residential, non-residential, mixed-use, and open space features. The development also includes its own wastewater treatment facility and parking facilities. Several parts of the development have already been constructed, such as the Lookouts (vertical mixed-use condominium units with ground floor non-residential uses), several detached single-family structures along the beach, and several small retail establishments also near the beach.

Changes in the master plan are reviewed by the Town on an annual basis, and any specific site plans or permit applications must be

approved by the Town prior to construction.

## 2.4.4: COMPREHENSIVE BICYCLE PLAN

The Comprehensive Bicycle Plan was adopted by the Town in 2012. It includes an inventory and assessment of existing bicycle facilities, and bicycle-related ordinances. It also includes a strategic plan for the development of additional bicycle infrastructure throughout Town based on a set of bicycle facility standards and guidelines included in the plan document.

Since adoption, the Town has made progress on implementing several of the recommendations contained in the plan, though there are several more identified projects in need of additional funding. There is a map in the Goals portion of Part I of this Plan that describes the completed projects and those still anticipated but not yet funded.

TOWN OF ATLANTIC BEACH COMPREHENSIVE BICYCLE PLAN		
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		5-1
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		5-20
		5-23
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		5-29
		5-30

## 2.4.5: ADA TRANSITION PLAN

The Town adopted its ADA Transition Plan in 2019 with the goal of correcting accessibility issues throughout the Town and ensuring that all citizens, regardless of ability, can safely navigate the Town's transportation, services, and recreational resources. The plan includes an evaluation of the facilities throughout the Town, identifies any accessibility issues with each, and provides a cost estimate for any needed remedies. It also includes an

implementation schedule for fiscal years 2020-2025 and calls for ongoing evaluation and iterative planning for future needs.

## 2.4.6: APPEARANCE IMPROVEMENT COMMITTEE

In 2018, the Town Council appointed an appearance committee to explore a wide range of property maintenance and community appearance issues. The committee met four times and identified a list of projects to be addressed (including preparing a master plan for the causeway). The committee identified four project categories: ordinance improvements, in-house improvements pursued by Town staff, consultant projects, and a range of initiatives. Recommendations included the need to develop property maintenance standards, new controls for parking in residential districts, signage improvements, utility line appearance improvements, and additional encouragement for public art.



## 2.4.7: STORMWATER RESILIENCY PLAN (UNDERWAY)

In January 2019, the Town of Atlantic Beach Recreational Water Quality Committee recommended that the Town partner with the North Carolina Coastal Federation to create a Watershed Restoration Plan. In response to Town Council's adoption of this recommendation, we are partnering with the North Carolina Coastal Federation, LDSI Engineering, and the Eastern Carolina Council of Governments to create a Stormwater Resiliency Plan. Work on the plan is on-going, and is expected to be completed by the end of 2020.

The Stormwater Resiliency Plan will provide a guide for improving near shore water quality and reducing nuisance flooding associated with rainfall events. In order to combat water quality issues, the plan will include a 'Nine Minimum Elements Watershed Restoration Plan' for the Town. In addition to the standard watershed restoration elements of the plan, the Stormwater Resiliency Plan will also identify ways to reduce stormwater flooding through a volume reduction approach to replicate pre-impairment hydrology and set a framework for improving local water quality.

Specifically, the Stormwater Resiliency Plan goals are to:

- Turn back the clock on water pollution by restoring natural hydrology;
- Identify capital improvement projects that address major flooding issues;
- Align future capital improvements with stormwater retrofits;
- Increase community awareness; and
- Position the town for future funding opportunities, particularly through Section 319 funding.

## 2.5: COMMUNITY FACILITIES DATA

This community facilities section is carried forward from the Town’s current CAMA Land Use Plan as last updated in April, 2019. The majority of this data and information is from 2008 or earlier. New data added since 2008 is identified with an asterisk (\*) at the beginning and end of new or updated text and tables.

### 2.5.1: TRANSPORTATION

NC Highway 58 (East and West Fort Macon Road) and the Atlantic Beach Causeway (State Road 1182) are the Town’s only major thoroughfares. The Town is connected to the mainland by the Atlantic Beach/Morehead City Bridge. These roadways are all owned and maintained by the North Carolina Department of Transportation (NCDOT).

The Causeway and Fort Macon Road are extremely congested during peak summer months. On Memorial Day, 2004, the NCDOT conducted a traffic count at the Sea Water Marina off the Atlantic Beach Causeway (NCDOT, Bogue Banks Pedestrian and Bicycle Safety Review, 2004). According to NCDOT, the design capacity of the road is 29,500 average daily traffic. NCDOT recorded 32,162 cars passing on Fort Macon Road at the Sea Water Marina on May 30, 2004. The results from this study are shown in the table below:

Town of Atlantic Beach Motor Vehicle Counts Memorial Day Weekend, 2004	
Location of Traffic Count	Number of Vehicles Passing Location
Coral Bay Club	17,303
Town Park/Atlantic Station Shopping Center	26,395
Durham Avenue	25,369
Raleigh Avenue	23,833
Beaufort Avenue/Center Drive	16,841
Bayview Boulevard	14,972
Oceanana Drive	15,346
8 ½ Marina and Condos	11,555
Henderson Boulevard	10,604
Sea Water Marina	32,162
Channel Marker Restaurant	31,635

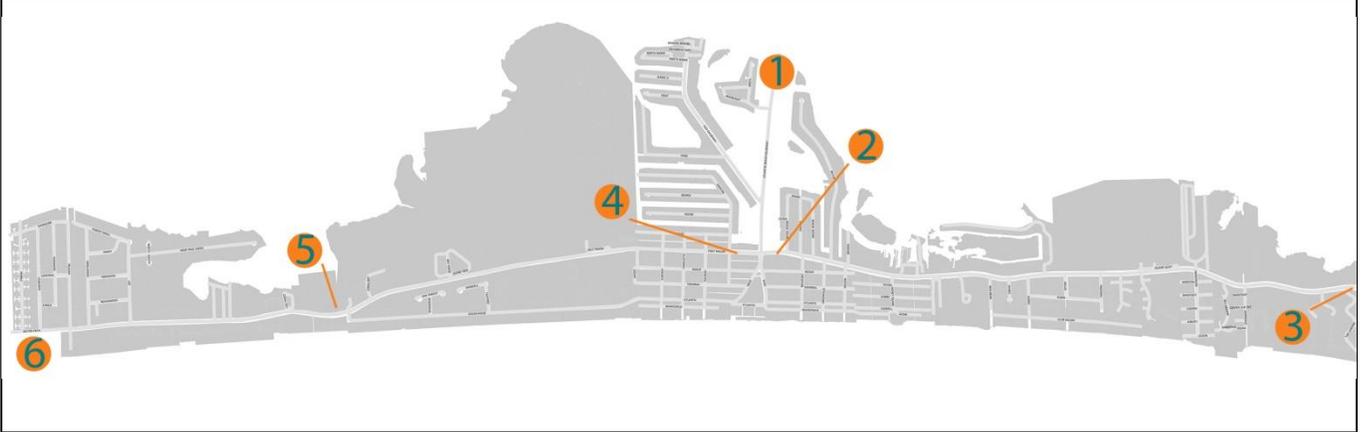
Source: NCDOT, Bogue Banks Pedestrian and Bicycle Safety Review, 2004.

The traffic counts in the table above were collected on Memorial Day weekend (May 29-31) of 2004, and therefore, should be considered as “peak” or maximum traffic loads.

NCDOT maintains traffic count data from specific locations in Town over time (though data is not collected from each location every single year). The locations of official traffic counts differ from those collected during the Bogue Banks Pedestrian and Bicycle Safety Review in 2004. The following table shows traffic count data from 2014 through 2018.

**\*NCDOT Traffic Counts in Atlantic Beach 2014-2018\***

Location	2014	2015	2016	2017	2018
The Causeway [1]	16,000	ND	17,000	ND	17,500
Main Intersection - NC-58 & Causeway (east side) [2]	7,200	7,400	7,600	8,600	8,000
In Fort Macon State Park [3]	ND	1,100	1,200	1,700	ND
Main Intersection - NC-58 & Causeway (west side) [4]	ND	13,000	18,000	14,000	ND
West Fort Macon Road at Ocean Ridge Dr. [5]	12,000	10,000	15,000	9,900	ND
Border of Pine Knoll Shores [6]	8,800	ND	9,500	ND	11,000
Source: NCDOT Official Traffic Counts	"ND" = No data collected				



The Streets Division of the Town’s Public Works Department is primarily responsible for the maintenance of the Town’s 17.06 miles of streets. \*This maintenance includes paving, patching, storm drainage, and the installation or replacement of street signs. In fiscal year 2019-2020, the Town received Powell Bill funding in the amount of \$56,927, down from \$57,360 for fiscal year 2018. Many of the roads in the older residential sections are in need of repair and/or resurfacing.\*

## 2.5.2: HEALTH CARE

Carteret Health Care is the community hospital located at 3500 Arendell Street in Morehead City, about two miles from the Town, and is the primary source of emergency and critical care for citizens of Atlantic Beach. Some relevant information regarding the hospital is as follows:

- Fifty-six active staff physicians, 45 consulting physicians and 12 visiting/ courtesy physicians cover a comprehensive range of specialties.
- A Cancer Care Center provides medical oncology for patients who require chemotherapy and a full service radiation therapy center equipped with a state-of-the-art linear accelerator and simulator. The medical oncology clinic is provided through collaboration between the East Carolina University School of Medicine Oncology department and Carteret General Hospital.

- Specialty outpatient clinics are offered at the hospital for neurology and autologous blood transfusions. Sophisticated technologies provided include nuclear medicine, CT scanning, mobile lithotripsy, laser surgery, and laparoscopic surgery.
- The hospital has 117 beds with an average of 87 inpatients each day and performs over 410 surgeries each month. In addition, over 4,000 outpatient tests or treatments are provided each month.
- Approximately 23,000 patients are treated in the Emergency Department and over 570 babies are delivered annually in the Brady Birthing Center.
- The AllWell program, a collaboration between Carteret General Hospital and the Carteret County Health Department, provides successful wellness programs for area employers. This division offers numerous community and industrial health and education programs.
- The Taylor Extended Care Facility provides skilled nursing services for residents who require long-term care. The facility accommodates 104 residents on Nelson's Bay.
- Carteret Home Health and Hospice of Carteret County are divisions of Carteret General Hospital. These mergers have allowed outstanding continuity of care and assistance for patients as they move from hospital to home.

There are no medical, dental, or pharmaceutical services offered within the Town's corporate limits. Numerous primary care physicians and dentists can be found in Morehead City, Beaufort, Emerald Isle and Pine Knoll Shores.

### 2.5.3: LAW ENFORCEMENT

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The Atlantic Beach Police Department (ABPD) is a full-service law enforcement agency responsible for the enforcement of all laws and the investigation of any crimes within the town limits of Atlantic Beach. The Department is committed to building a strong partnership with the community, to communicating effectively, maintaining the public's trust, and ensuring that those who live in and visit the Town are free to enjoy what the area has to offer.

The Department is composed of 16 full-time sworn police officers, 1 civilian support staff member, and 21 part-time sworn officer positions that are used during the peak tourism season (approximately Memorial Day to Labor Day). The Police Department is divided into three sections: Administration, Patrol, and Support Services. Emergency response is available through 9-1-1.

The Department has 18 patrol vehicles, one utility trailer with lights, cones, and other emergency equipment, a John Deere Gator, a Honda Pioneer All-Terrain Vehicle (ATV), and a 21-foot Marine Patrol vessel, primarily used for monitoring the Sound. The Marine Patrol Unit is comprised of 3 part-time sworn officers and work mainly on weekends and holidays.

The Police Department participates annually in the National Night Out program, focused on educating the public on crime reduction through exhibits and entertainment each year in the fall. The Department has a VIPs, or Volunteers in Police Services program which relies on the volunteer assistance of community members to assist with different functions throughout the year.

### 2.5.4: FIRE/EMERGENCY MEDICAL SERVICES

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The mission of the Atlantic Beach Fire/EMS Department is to provide protection of life and property to the citizens and visitors of the Town of Atlantic Beach from the adverse effects of fire, rescue, medical emergencies and dangerous conditions, either man made or natural.

The career staff consists of a Fire Chief, a Deputy Fire Chief/Fire Marshal, three Shift Captains, three Lieutenants and six additional Firefighter/EMT's. There are three shifts consisting of four personnel led by the Shift Captain

working 24 hours on and 48 hours off. The staff is supplemented by 15 volunteer firefighters and 15 part-time Firefighter/EMT's. The department operates with one ladder truck, one engine/pumper, one heavy rescue truck, one ocean rescue vehicle, two chief officer vehicles, a rescue boat, jet-ski and three ATV/UTV's.

The Fire Department provides ocean rescue and lifeguard services to the main Circle Beach access area with roaming lifeguards on ATV's along the remainder of the beach strand. Ocean rescue services are staffed with 15 seasonal lifeguards from early May to late August operating with guards at three stationary lifeguard towers at the main beach strand and one roamer during the week and two roamers on weekends patrolling the east and west end beach strands.

The Department also provides EMS and technical rescue services and maintains two paramedic level ambulances. Since 2002, the Department has expanded its rescue services to the community and become one of the premiere fire departments in the region through its specialization in numerous rescue disciplines. All Department personnel are qualified as "North Carolina Rescue Technicians," with specialties in vehicle & machinery, high-angle rope rescue and confined space rescue. Additionally, the Department is certified in dive rescue/recovery, surface water (i.e., flood and swift water) rescue, and ocean/surf rescue- one of only four departments in the State to earn this latter certification.

The Department maintains automatic aid agreements with Morehead City, Pine Knoll Shores, and Beaufort, meaning the Department is dispatched automatically to any significant fires within these towns. These towns provide reciprocal service in accordance with the auto-aid agreements. The Department also maintains a mutual aid agreement with the County and the State that either party can utilize when local resources are insufficient for a given situation.

The Town's Response Rating (formerly ISO) is a Class 3, improving from a Class 4 in 2014 (on a scale of 1 to 10, with Class 1 being the best), due to the improvement and additional installations of fire hydrants at the west end of Town and increased training and emergency response operations.

## 2.5.5: ADMINISTRATION

Atlantic Beach operates under a Council-Manager form of government with a full- time Town Manager and five governmental departments: Administration and Finance, Public Works, Planning and Inspections, Police, and Fire/EMS. On land use planning matters, the Town Council is supported by a Planning Board and Board of Adjustment. \*The table below shows the total work force of Town employees in accordance with the 2020-2021 annual budget:\*

*Town of Atlantic Beach Workforce*		
Department	# of Full Time Employees	# of Part Time Employees
Police	17 total (16 sworn)	25 Seasonal
Fire/EMS	14	15
Administration	3	-
Finance	3	-
Public Works	11	-
Planning & Inspections	3	-
Water	4	-
Parks & Recreation I	1	-
Summer Lifeguards		12
Summer Park Attendants		8
Summer Public Service Attendants		4

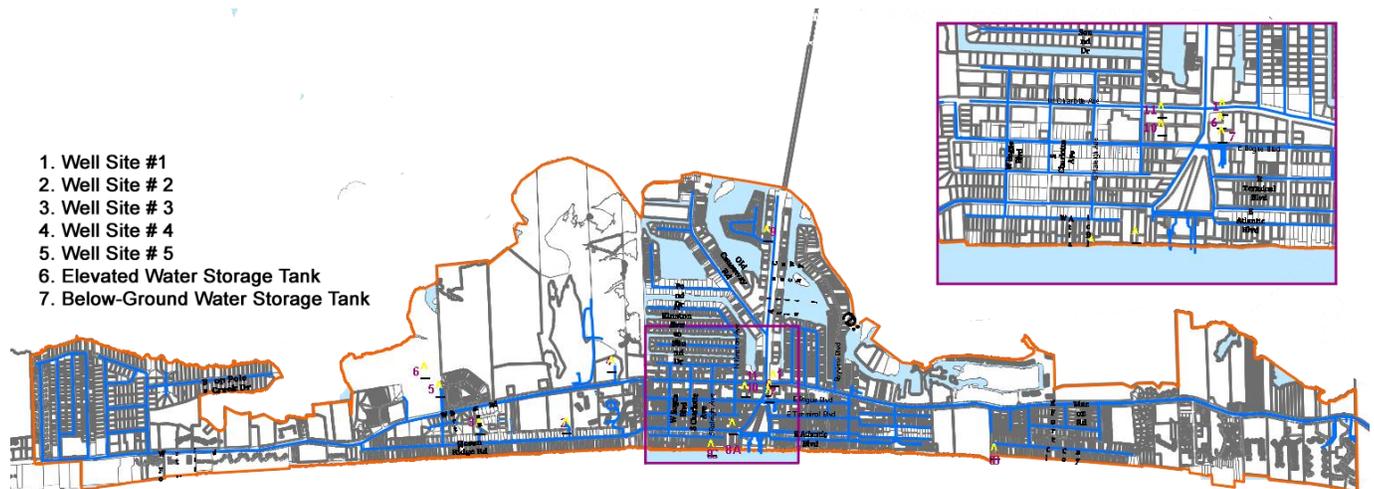
*Source: Atlantic Beach Annual Budget FY 20-21*

## 2.5.6: WATER SUPPLY

The Town of Atlantic Beach operates its own water supply system, drawn from groundwater of the Castle Hayne aquifer underlying the Town. The system is supplied by seven deep wells, located at sites throughout the Town. Water storage is provided by two elevated and one below ground storage tanks which have a total storage capacity of 1,500,000 gallons. Water pressure is sufficient to provide for adequate fire protection.

The water supply is of good quality and the supply has been consistent. Treatment provides softened fluoridated water. \*Based on the Town’s 2019 Local Water Supply Plan submitted to the North Carolina Division of Water Resources, the system can produce 2.61 million gallons in a 12-hour period. The system’s water treatment capacity is 2,500 gallons per minute, or 2.5 million gallons per day. This is anticipated to supply future population projections. No overflows, bypasses or other problems that would degrade water quality or constitute a threat to public health have been documented for the Town’s water supply system. No additional public or private water supply service areas are planned as of October 2020.\*

The map below is reproduced from the 2008 CAMA Land Use Plan, and depicts the Town’s potable water system (water lines are shown in blue).



Source: Town of Atlantic Beach 2008 CAMA Land Use Plan

See Appendix 3.1.1 for a larger version of this map.

\*In 2019, maximum daily use per day varied from a low of 489,000 gallons per day in December to 1,621,000 gallons per day in July, or approximately 64.8% of system capacity on the peak day of the year. Total water usage for 2019 was 264 million gallons, up only slightly from 2002 totals. Peak monthly usage of approximately 37.2 million gallons (July or August) has remained roughly constant for approximately 24 years, due to the fact that new water connections are increasingly rare due to near “build-out” under existing zoning and development demands. The table below provides average and maximum daily water usage by month for the year 2019.\*

### \*Atlantic Beach Average Daily and Maximum Daily Water Usage, 2019\*

Month	Average Daily Use (in MGD)	Maximum Daily Use (in MGD)
January	0.484	1.021
February	0.452	0.781
March	0.484	0.710

**\*Atlantic Beach Average Daily and Maximum Daily Water Usage, 2019\***

Month	Average Daily Use (in MGD)	Maximum Daily Use (in MGD)
April	0.617	0.825
May	0.863	1.562
June	1.008	1.400
July	1.206	1.621
August	0.998	1.522
September	0.827	1.362
October	0.764	1.113
November	0.582	0.880
December	0.489	0.655

Source: Town of Atlantic Beach, 2019 Local Water Supply Plan.

## 2.5.7: WASTEWATER DISPOSAL

The Town of Atlantic Beach does not have a central sewer system. Most residences and businesses rely on individual on-site septic tank usage for sewage disposal or through centralized wastewater treatment package plants that operate in the Town.

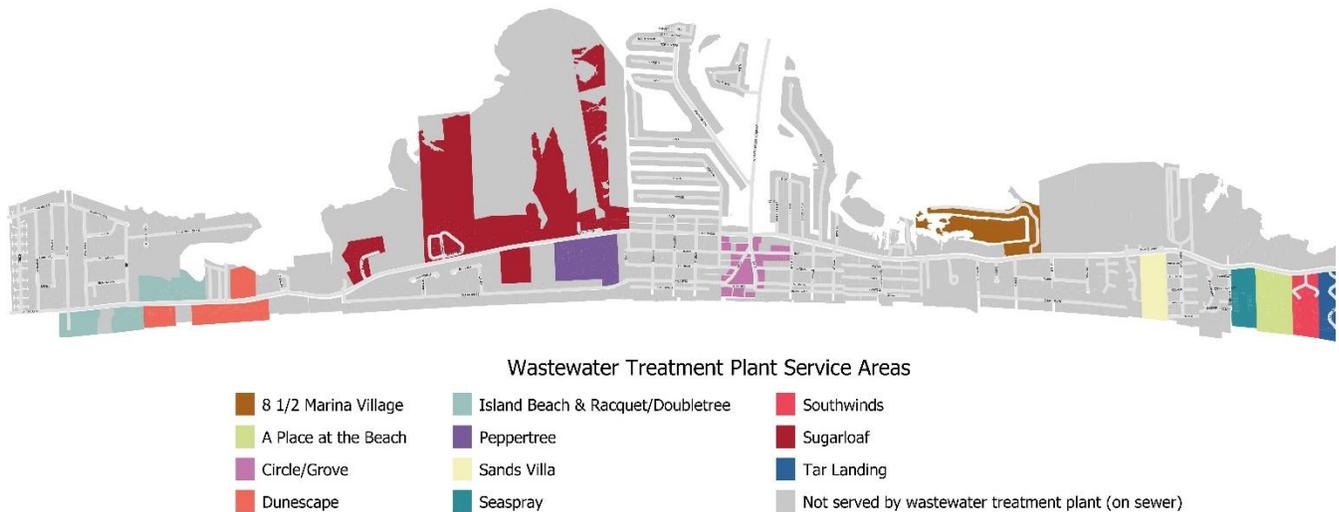
Approximately 50% of the Town’s residences are provided sewage treatment by a privately-operated sewage treatment plant, or “package” plants. Most of these units are located in condominium projects but some provide service to entire neighborhoods as well as commercial development. \*These package plants are currently in working order and are monitored regularly by the Carteret County Environmental Health Department or the NC Division of Water Resources.\*

The following table provides a list of package plants in the Town:

<b>*Town of Atlantic Beach Package Treatment Plants, 2019*</b>	
Treatment Plant Location	Capacity (Gallons per Day)
Tar Landing Condominiums	19,000 GPD
Southwinds Condominiums	43,200 GPD
A Place at the Beach Condominiums	60,000 GPD
Seaspray Condominiums	50,000 GPD
Sands Villa Condominiums	43,000 GPD
8½ Marina Condominiums	30,000 GPD
The Grove	110,000 GPD
Sugarloaf	100,000 GPD
Dunescape	70,200 GPD
Peppertree Resort	80,000 GPD
Island Beach & Racquet Club	101,460 GPD

Source: Town of Atlantic Beach Planning and Inspections Department.

\*The following map shows the service areas of the listed package plants.\*



Source: Town of Atlantic Beach

See Appendix 3.1.1 for a larger version of this map.

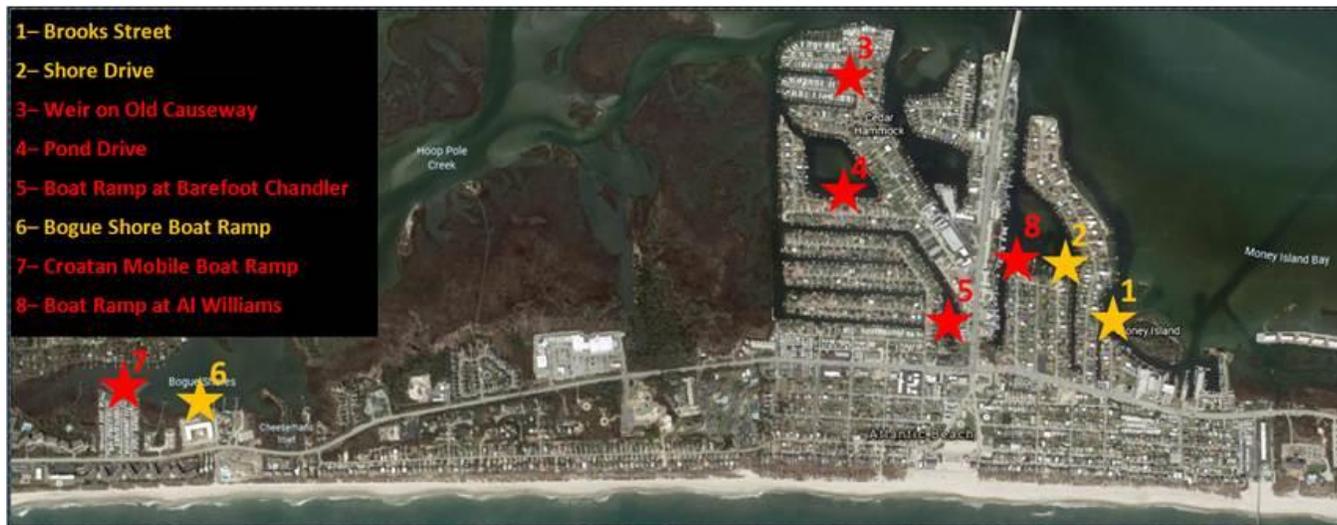
\*The Town is exploring options for a centralized wastewater treatment service for the area generally identified as “the Causeway” in this Plan. If extended, wastewater from existing and redeveloped uses along the causeway would most likely be addressed by connection to existing package plants with available capacity. The service area for this initiative has not been defined, and so is not depicted on the above map. There are no known failures or chronic malfunctions occurring at any of the treatment plants listed above.

The remaining properties in Atlantic Beach are served by on-site septic systems. These systems generally work well for residential and low-intensity commercial development. There are some older systems in Town that were installed prior to the implementation of modern permitting standards. Older systems are more likely to fail than modern systems. As the Town redevelops, many older systems will be upgraded. Because these systems are older and were installed prior to geographically-based record keeping, the Town has no records on the locations of these older systems.

In the meantime, the Town’s ongoing water quality monitoring program will help identify failing systems which can be dealt with on a case-by-case basis. As part of its Recreational Water Quality effort, the Town is currently undertaking a water quality testing effort. The map below shows eight testing sites; all eight sites have been tested in 2020 and the five sites shown in red are subject to ongoing testing and monitoring for human waste, among other water quality threats, (which would indicate septic system failure on nearby lands). This testing effort will be followed up with tracking to identify causes of nonpoint source pollution on the island, and it is anticipated that this will help reveal any private septic systems that are failing. If and when failing systems are identified, the Town will take appropriate action to encourage landowners to repair or replace failing systems, and other mitigation and restoration efforts in recreational waters may also result.

The Town anticipates that with proper upgrades and maintenance, the current wastewater treatment facilities, both on-site septic systems and package plants, will serve future population projections without deleterious impacts on water quality.\*

## Recreational Water Quality Testing Sites



Source: Town of Atlantic Beach

See Appendix 3.1.1 for a larger version of this map.

## 2.5.8: SOLID WASTE DISPOSAL

Residential refuse collection and recycling service is provided by GFL (Green For Life) Environmental, a private contractor. Collection is provided once per week from September through May. Twice per week service is provided from June through August. Businesses are required to contract individually with private waste collectors. Condominium developments and mobile home parks have the option of utilizing bulk containers. Once per week pick-up service is provided year-round for glass, steel, aluminum, paper, and plastic recyclables. Participation in the recycling program is voluntary.

Beginning in 1994, a regional landfill at Tuscarora, west of New Bern in Craven County, operated cooperatively by Carteret, Craven, and Pamlico Counties through the Coastal Regional Solid Waste Management Authority (CRSWMA) replaced the Carteret County landfill in Newport. Waste disposal costs increased considerably upon opening of the Tuscarora facility. The Town must pay CRSWMA \$50.50 a ton for waste disposal at the Tuscarora facility, and is \$14.60 a month for residential customers.

CRSWMA also operates a transfer station at the site of the old Carteret County landfill in Newport for household hazardous waste, such as paint, used oil, and auto batteries.

## 2.5.9: SCHOOLS

\* According to the 2010 U.S. Census, there were approximately 119 children of school age (ages 5 to 17) in Atlantic Beach in 2010.

Atlantic Beach is served by the Carteret County School System. Kindergarten through third grade students attend Morehead City Primary School. Grades 4 and 5 attend Morehead City Elementary School at Camp Glen and Grades 6 through 8 attend Morehead City Middle School. All three of these schools are located in Morehead City, roughly two miles from Town.

High school students (Grades 9 through 12) attend West Carteret High School, approximately five miles away in Morehead City. The following table provides detailed information on the schools serving Atlantic Beach. \*

*Carteret County Public Schools Serving the Town of Atlantic Beach, 2019*	
Facility	Enrollment
Morehead City Primary School (K-3)	590
Morehead City Elementary School at Camp Glen (4-5)	255
Morehead City Middle School (6-8)	510
West Carteret High School (9-12)	1,142
<i>Source: Carteret County Public School System.</i>	

The Tiller School (Grades 1-6) in the Beaufort area is a charter public school and thus attract students from across Carteret County, including the Town. Adult secondary education, including General Equivalency Degrees (GED) for adult students can be obtained from Carteret Community College.

There are also a number of private schools in nearby communities, including Beaufort Christian Academy (Baptist, Beaufort), Carteret Academy (Non-Denominational Christian, Morehead City), St. Egbert Elementary (Roman Catholic, Morehead City), and Gramercy Christian School (Non-Denominational Christian, Newport).

Beyond the secondary school level, there are three community colleges located in reasonably close proximity to Atlantic Beach -- Carteret Community College in Morehead City, Coastal Carolina Community College in Jacksonville, and Craven Community College in New Bern.

## 2.5.10: RECREATION

The Atlantic Beach Town Park, previously known as Atlantic Beach Commons, was built in 2017 and is located along West Fort Macon Road across from the Atlantic Station Shopping Center. The park includes an 18-hole mini-golf course, basketball court, skate park, splash pad, picnic shelter, playground, a concessions/restrooms building, parking, and numerous annual events.



Source: Town of Atlantic Beach

The Town owns and maintains 23 regional beach accesses, three of which are larger facilities with public parking and a bathhouse. The first of these three larger facilities is located on New Bern Avenue and features 50 parking spaces, restrooms, and showers. A second access is located on Henderson Blvd and features 60 parking spaces, restrooms, and showers. The third, and largest regional beach access, is located at the Atlantic Beach Circle (201 West Atlantic Blvd.) and features 330 parking spaces, a large bathhouse, and multiple shower facilities. \*There are three sound-side accesses: a boat ramp on Moonlight Drive, a fishing area with parking west of the bridge abutment, and a small pier with parking at the northern end of Pelican Drive. A map of these sites is available from the DCM website at <http://www.coastalaccess.nc.gov/>.\*

Other recreational opportunities include two privately-owned fishing piers (Oceanana Pier and DoubleTree Hilton), numerous privately-owned boat ramps, tennis courts, and swimming pools, the Hoop Pole Creek trail on the sound side near Atlantic Station, and Fort Macon State Park, located east of Atlantic Beach. The Atlantic Beach Parks & Recreation Department employs a full-time Director and 10+ seasonal part-time staff members. Lifeguards operate during the summer season and are managed by the ABFD.

In addition to the numerous physical recreation opportunities, Atlantic Beach also hosts events and recreation programs throughout the year. Each spring, Easter is celebrated at the Town's annual Easter Eggstravaganza and in May, over 5,000 people attend the Atlantic Beach Music Festival. Summer features movies at the Town Park, live music events, outdoor fitness classes, dog-based community events, fireworks, and National Night Out. The Town hosts a large Halloween event in the fall, Christmas parade in the winter, and partners with various local organizations to hold road races, bike races, and beach clean-ups within Town limits.

Many residents use recreational facilities in and near Morehead City, particularly Shevans Park, which is a two-acre neighborhood park with tennis courts, picnic shelters, a playground, and splash pad. Swinson Park, a 34-acre regional park owned and operated by Carteret County, is also a popular destination and features adult and youth ballfields, tennis courts, basketball courts, picnic shelters, playgrounds, and related facilities. Rotary Park, a 15-acre park featuring soccer and basketball facilities, owned by Morehead City, and home of the Morehead City Marlins collegiate baseball team, is located within a short driving distance.

## 2.5.11: ELECTRIC SERVICE

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The majority of Atlantic Beach is provided electrical service by Duke Progress Energy (formerly Progress Energy Carolinas). A small area in the west end of Atlantic Beach is provided service by the Carteret-Craven Electric Co-op. The Town has never experienced any significant power shortage problems or "brown-outs," except following major hurricanes/windstorms due to equipment damage.

## 2.5.12: TELEPHONE SERVICE

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Local telephone service is provided by either Spectrum or Centurylink. The Town has not experienced any significant problems with telephone service availability.

## 2.5.13: INTERNET SERVICE

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High-speed internet service is available through Spectrum, Sprint, Inc., DSL service, Crystal Coast Wifi, or through satellite internet service provided by numerous providers, including Earthlink.

## 2.5.14: CELLULAR TELEPHONE SERVICE

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Cellular services are available town-wide from a number of service providers with offices in Morehead City and/or Beaufort, including Verizon, AT & T Wireless, US Cellular, and T-Mobile (who has acquired Sprint).

## 2.5.15: CABLE TELEVISION

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Cable television service is provided by Spectrum, with offices in Newport. Satellite television is available through DirectTV and other service providers.

## 2.5.16: STORMWATER MANAGEMENT/DRAINAGE

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This section has been carried forward from the 2008 CAMA Land Use Plan and remains unchanged. The data and information in this section is likely to be substantially revised following completion and adoption of the Stormwater Resiliency Plan, which is currently underway and expected to be complete at the end of 2020 or in early 2021.

### 2.5.16.A Introduction

Stormwater discharges are generated by run-off from land and impervious areas such as paved streets, parking lots, and building rooftops during rainfall and snow events. They often contain pollutants in quantities that can adversely affect water quality and create flooding problems. When roads, parking lots, sidewalks, homes, and offices replace the natural and permeable landscape, rainfall that would once soak into vegetated ground is now available for storm water runoff. As surfaces become more and more impermeable, water simply moves across them. These impermeable surfaces connect to form a stormwater super highway.

One of the effects of this water super highway is that more and more stormwater reaches streams because there is less opportunity for it to infiltrate the ground. Peak flows also increase, transporting runoff from large areas rapidly. Velocities in streams increase causing more erosion potential, and lastly, base flow is lower during dry weather because of a lack of infiltration. Using a traditional analysis, such as the Natural Resource Conservation Service (NRCS) stormwater model, TR 55, or the United States Corps of Engineers' (USCE) many versions of HEC, it can be shown that peak flows alone can increase by as much as four times from pre- post development conditions. Flooding is the result of this urbanization.

### 2.5.16.B Erosion and Sedimentation

Erosion and sedimentation have long been recognized as water quality concerns. The North Carolina legislature passed laws to curb sedimentation in 1973; however, sedimentation remains the number one pollutant in NC waters. In the 1990s, the focus of the Piedmont and Eastern NC watersheds turned towards excess nutrients in surface waters. The excess was due to extensive farming operations in the area. Fertilizers contain nutrients for plants to grow, but if excess fertilizer is inadvertently applied to pavement, these nutrients enter the waters during runoff periods causing harm to water quality. Even proper amounts of applied fertilizer can allow nutrients to enter streams in other ways, such as atmospheric deposition, wildlife and pet waste, and septic system malfunctions.

There are numerous ways to reduce pollutant loading. Proper application of fertilizer and proper maintenance of septic systems can reduce loading. Structural devices can also help curb this problem. These structural devices, known as Best Management Practices (BMPs), can be constructed to treat runoff, thereby reducing the amount of pollutant that enters the waterways. These BMPs include wet ponds, stormwater wetlands, infiltration trenches, wells, sand filters, bioretention rain gardens, rubble spreaders, riparian buffers, and reinforcing grassy swells.

### 2.5.16.C EPA Regulations

The Environmental Protection Agency (EPA) has begun implementation of Phase II of the Stormwater Management Plan. These policies apply to municipalities with populations greater than 10,000 and/or with

densities of 1,000 per square mile. For municipalities that meet these parameters, submittal of a stormwater management plan is required.

Phase II regulations also apply to entities designated under the 1990 census as a Small MS4 (Small Municipal Separate Storm Sewer System). MS4's are defined as a publicly-owned conveyance or system of conveyances designed or used for collecting and conveying stormwater. MS4's are not combined with sewer and are not part of a publicly- owned treatment facility. Municipally-owned MS4's can include counties, towns, airports, federal properties, hospitals, schools, etc. Small community MS4's are regulated if they discharge into impaired or sensitive US waters. In addition, counties classified as a Tier 4 or Tier 5 county are regulated. At this time, the Town of Atlantic Beach is not required to meet the new EPA Phase II Stormwater Management Program regulations, but expects to be required to meet all Phase II requirements in the near future (i.e., 5 to 7 year planning period for this Plan).

The EPA has developed guidelines for implementing the Phase II Stormwater Management Program. The stormwater pollution problem has two main components: the increased volume and rate of runoff from impervious surfaces and the concentration of pollutants in the runoff. Both components are directly related to new developmental and urbanizing areas. Both components also cause changes in the hydrology and water quality that result in a variety of problems, such as habitat modification, increased flooding, decreased aquatic biological diversity, and increased sedimentation and erosion. Effective management of stormwater runoff offers a multitude of possible benefits. Benefits include protection of wetlands and aquatic eco-systems, improved quality of receding water bodies, conservation of water resources, protection of public health through flood control, and improved operation and hydraulic characteristics of streams receiving run-off; all of which can cause higher peak flow rates that increase frequency and duration of bank full and sub-bank full flows. Increased occurrences in downstream flooding can also be reduced by lowering base flood levels, such as with traditional flood control methods that rely on the detention of the peak flows. They are generally not targeted to the reduction of flooding and in many cases have exacerbated the problems associated with changes in hydrology and hydraulics. The EPA recommends an approach that integrates control of stormwater peak flows and the protection of natural channels to sustain physical and chemical properties of aquatic life.

The EPA has outlined six steps for the development of BMP's for a stormwater management plan. The six steps are as follows:

1. Public Education and Outreach on Stormwater Impacts
2. Public Involvement and Participation
3. Elicit Discharge Detection and Elimination
4. Construction Site and Stormwater Runoff Control
5. Post-Construction Stormwater Management, and New Development or Redevelopment
6. Pollution Prevention and Good Housekeeping for Municipal Operations

### 2.5.16.D Construction Activities

Stormwater runoff from construction activities can have a significant impact on water quality, contributing sediment and other pollutants exposed at construction sites. The NPDES Stormwater Program requires operators of both large and small construction sites to obtain authorization to discharge stormwater under a NPDES construction stormwater permit. In 1990, the Phase I Stormwater Management Program regulations addressed large construction operations that disturbed five (5) or more acres of land. The NPDES program also addresses small construction activities – those that disturb less than five acres of land – which were included in the Phase II final rule. Construction activities that disturb over one acre of land are required to develop and implement a stormwater pollution prevention plan specifically designed for the construction site. The development implementations of the plan follow the basic phases listed below:

1. Site Planning and Design Development Phase
2. Assessment Phase

3. Control Selection/Design Phase
4. Certification/Verification/Approval Phase
5. Implementation/Construction Phase
6. Final Stabilization/Termination Phase

### 2.5.16.E North Carolina Shoreline Buffering

In August 2000, the State of North Carolina developed a 30 foot buffering rule for all new development in the 20 coastal counties governed by the Coastal Area Management Act (CAMA). This rule applies to all navigable waters, excluding the ocean, which has previously established setback requirements. The development of this buffer does not restrict the construction of water dependent structures, such as docks and boat ramps. The benefits of the buffering include the following:

1. Flood Control – by reducing the velocity and providing a collection area for stormwater runoff and precipitation. Buffers encourage water infiltration into the ground, rather than flooding low-lying areas.
2. Groundwater Recharge – buffers are also beneficial to recharging the ground water supply and promoting ground water flow.
3. Soil Erosion Prevention – vegetated buffers stabilize the soil and reduce sedimentation.
4. Conservation of Coastal Riparian Wildlife Habitats – these natural areas provide breeding, nesting, and habitat, and protect wildlife from predation. Vegetated buffers help increase the diversity of wildlife while providing site for foraging and corridors for dispersal.

### 2.5.16.F Stormwater Management/Drainage as Related to Atlantic Beach

Atlantic Beach experiences drainage problems throughout the town. These problems all result from low elevation and depressed areas that do not have any natural drainage. A particularly serious problem exists at the Wilson Avenue/East Terminal Boulevard intersection. However, the town has taken mitigative action to substantially reduce the problem.

In terms of regulatory action, the Town of Atlantic Beach requires developments to provide stormwater control for a 2” storm, going above the CAMA requirement of 1.5”, in an effort to reduce the amount of stormwater flowing off sites and into the surrounding waters during rainfall events.

The Town has also attempted to address this problem through the installation of 11 stormwater pumps to quickly remove standing water from closed drainage basins. These pumps remove water from developed residential and commercial areas to between the first and secondary dune lines where it can be filtered and safely discharged to the sea or to Bogue Sound.

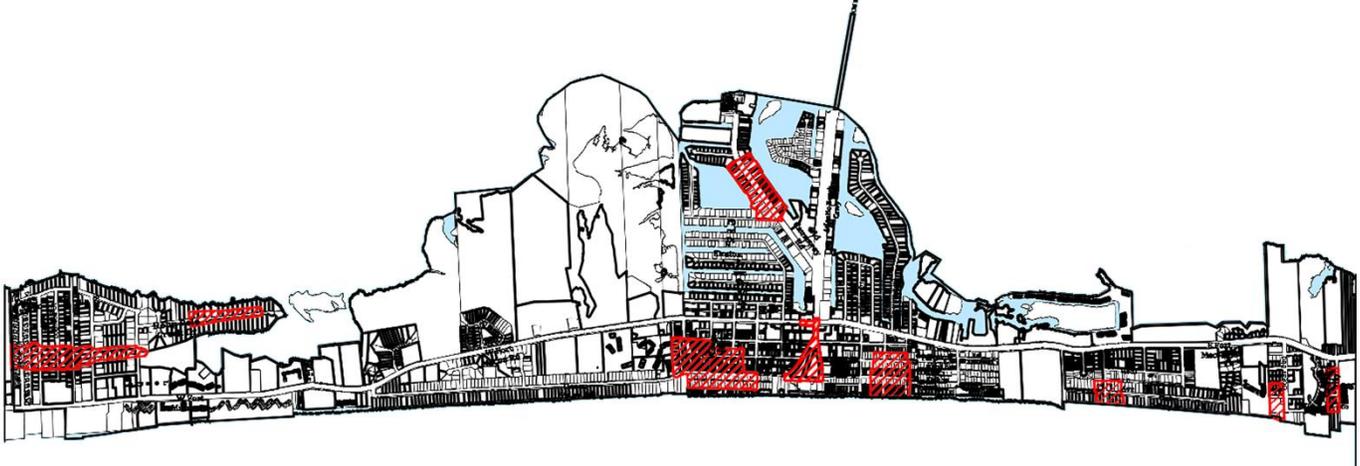
It should be noted, however, that the Town has very limited options in effectively dealing with stormwater management/drainage concerns, due to the generally high water table and the extremely limited amount of available land on which to detain or retain stormwater runoff.

The above-referenced stormwater pumps, while somewhat effective in reducing stormwater-related flooding and standing water, contribute to elevated fecal coliform levels in Bogue Sound that contribute to the closure of shellfish beds. Stormwater runoff quantity is increased and water quality decreased by landscaping practices that focus on sod and non-native vegetation, rather than xeriscaping and use of local vegetation.

The installation of a sanitary sewer system town-wide would allow the Town to install ditches/swales along major roadways to help capture and filter stormwater and undertake other stormwater management BMPs. Under current conditions, this practice has the effect of interfering (either directly or through removing repair areas) with existing septic systems in the vast majority of areas of the Town (i.e., those areas without package wastewater treatment systems).

Flooding is most serious during strong summertime conventional storms. Because of the porous soils, the standing water normally seeps into the ground in several hours. The town does not have a master drainage plan. Stormwater runoff into the estuarine canals located within the town adds to the pollution from malfunctioning septic tanks. Many of the canals have little or no "flushing" action. Therefore, pollution is allowed to accumulate without any regular cleansing.

The map below depicts areas of particular drainage/stormwater management concerns in red crosshatch.



#### Areas of Stormwater Management Concern

Source: Atlantic Beach 2008 CAMA Land Use Plan

See Appendix 3.1.1 for a larger version of this map.

# 2.6: NATURAL SYSTEMS DATA

The section carries forward Part 5, Section B, from the Town’s 2008 CAMA Land Use Plan with minor updates where new data or information is available, and the removal of the section on the environmental composite map as this information is no longer accurate or necessary.

## 2.6.1: MAPPING AND ANALYSIS OF NATURAL FEATURES

The purpose of this section of the CAMA Land Use Plan Update is to describe, analyze, and map the natural features and environmental conditions currently found in Atlantic Beach and to assess their capabilities and limitations for development.

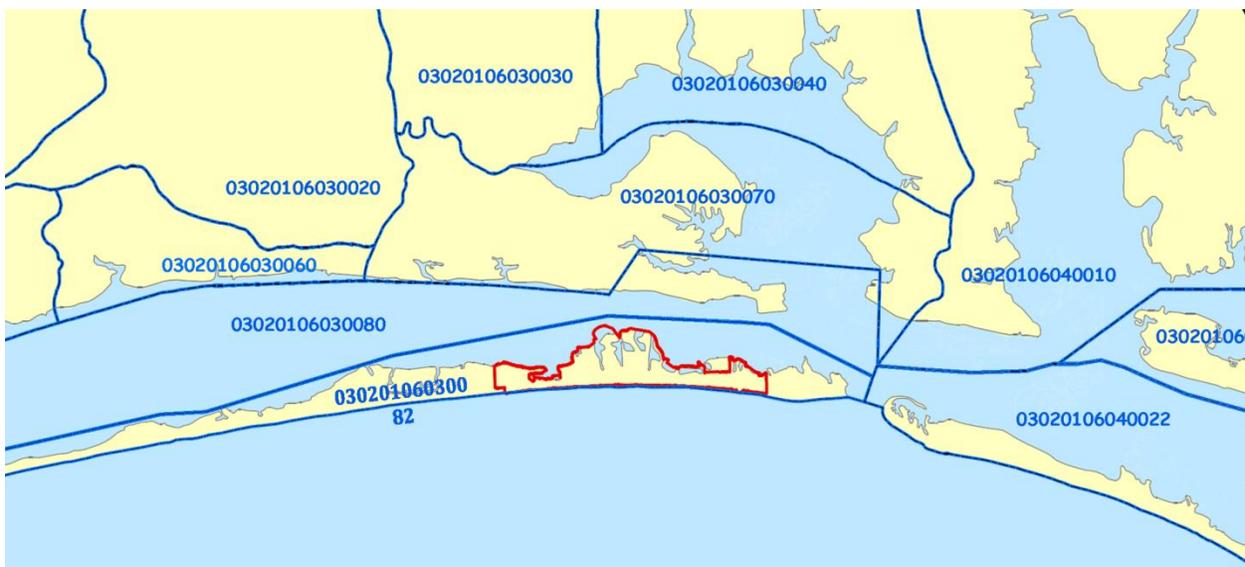
The entire Atlantic Beach planning jurisdiction is located within hydrological unit code (HUC) number 03020106030082, the boundaries of which are provided on the map below.

The adjacent text box provides a definition of the hydrological unit code (HUC) and a description of its significance.

### What are Hydrological Units?

The United States is divided and sub-divided into successively smaller hydrologic units which are classified into six levels. The first of these four are established by the U.S. Geological Survey and are as follows: regions, sub-regions, accounting units, and cataloging units. The hydrologic units are arranged within each other, from the smallest (cataloging units) to the largest (regions). Each hydrologic unit is identified by a unique hydrologic unit code (HUC) consisting of two to eight digits based on the four levels of classification in the hydrologic unit system.

The Natural Resources Conservation Service (NRCS) has further subdivided the aforementioned cataloging units into smaller units - the 11-digit HUC (watershed) and the 14-digit HUC (sub watershed or local watershed). This smallest level of analysis - the 14-digit HUC - is the best level of analysis since it allows for the assessment of localized conditions and impacts, particularly in regards to water quality.



Town of Atlantic Beach Outlined in Red.

Source: Town of Atlantic Beach 2008 CAMA Land Use Plan

## 2.6.1.A Topography/Geology

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Atlantic Beach ranges in elevation from sea level at the coast to approximately 45 feet above sea level at some primary dune areas. The majority of the dune areas are between 10 and 20 feet above sea level. The highest elevation in a developed area is approximately 20 feet above sea level, just east of the Circle area.

Whereas large areas of the Town have been filled for development, a majority of the Town is completely level and slopes range primarily from zero to four percent throughout Town. Within dune areas, slopes can range up to 30 percent, with the steepest slopes found in the Beaches-Newhan, Fripp fine sand, and Newhan fine sand complex soils.

The Town of Atlantic Beach (and all of Carteret County) is underlain by a thick wedge of sedimentary deposits of the Pleistocene era. This material, however, is overlain by approximately 80 to 120 feet of shell fragments, calcareous materials and loamy soils, with a thick layer of limestone below 120 feet. The upper reaches of this limestone layer are probably part of the Yorktown geological formation of the Pliocene era.

\*Two primarily limestone aquifers underlay Atlantic Beach—the Yorktown and Castle Hayne aquifers—but only the Castle Hayne aquifer serves as the source of its water supply. This will be discussed in further detail in the section on estuarine waters and shorelines below.\*

The primary ramifications of the Town's topography and geology are:

1. The susceptibility of the Town's beaches to erosion due to the effects of alongshore sediment transport and other features of the coastal geomorphology of the Town. Without beach nourishment, the Town can expect continued erosion into the indefinite future. In 1998, the North Carolina Division of Coastal Management (DCM) estimated the natural (i.e., without beach nourishment) average erosion rate of the Town's beaches as 2 feet per year (Source: Long-Term Average Annual Shoreline Change study, DCM, 1998).
2. The flat, low-lying topography of the Town, coupled with its location directly on the Atlantic Ocean, exposes the Town to significant risks from hurricanes and other tropical/extra-tropical weather systems and the potential impacts of sea level rise or tsunamis. Hurricane and other weather system impacts on flooding will be discussed in detail in the section on flood zones below.

Flooding resulting from sea level rise may be a long-term problem for the Town. Over the last 100 years, the sea level has risen approximately one foot. Most experts agree that the rate of sea level rise will increase over the next 100 years. The most reliable current estimate of sea level rise over the next century is approximately 2 feet, with a maximum increase of as much as 4 to 7 feet. (Source: The Probability of Sea Level Rise. James G. Titus and Vijay Narayanan. 1995. Washington, D.C.: U.S. Environmental Protection Agency. 186 pp. EPA 230-R95-008).

An increase of that magnitude (i.e., 4 to 7 feet) would be a serious problem for Atlantic Beach. Approximately 50% or more of the Town could be inundated. The impact of sea level rise has serious adverse transportation and access implications for all of Bogue Banks. Many inland Carteret County roads could be inundated and impede access to Bogue Banks.

The aforementioned Castle Hayne aquifer, because of its geological composition, is susceptible to salt water intrusion. This condition is exacerbated by the expected sea level rise.

Salt water is present in the eastern portion of the Castle Hayne aquifer. The top of the salt water ranges from 250 to 800 feet below ground surface. There does not appear to be any impermeable strata separating the fresh and salt water. The US Marine Corps base at Camp Lejeune in Onslow County, the Town of Wrightsville Beach in New Hanover County, and the PCS Phosphate mining operations in Beaufort County have witnessed increases in chloride concentrations in groundwater which had previously been fresh water.

Because of the concerns regarding salt water intrusion and aquifer recharge rates, approximately 2,500 square miles of the Castle Hayne aquifer, including the portion underlying Carteret County, have been designated as a capacity use area by the NC Groundwater Section due primarily to large groundwater withdrawals by the PCS Phosphate mine near Aurora and to increased withdrawals associated with urban development. A capacity use

area is defined as an area where the use of water resources threatens to exceed the replenishment ability to the extent that regulation may be required (see text box on water withdrawal rules below).

**What are the CCPCUA Water Withdrawal Rules?**

The Central Coastal Plain Capacity Use Area (CCPCUA) rules took effect on August 1, 2002, administered by the NC Division of Water Resources. The rules regulate water withdrawals within a 15-county area of east-central North Carolina, including the Town of Atlantic Beach.

**Who Must Comply with the Rules?**

All those within the region who withdraw more than 10,000 gallons per day of groundwater and/or surface water.

**What Does the New Rule Require?**

- \* Users of more than 10,000 gallons per day of groundwater and/or surface water must register and report their annual water use.
- \* Users of more than 100,000 gallons per day of groundwater must apply for a water use permit, and those permitted users of the Cretaceous Aquifer System in critical areas must reduce withdrawals.
- \* Well pump intakes must be placed above the top of the aquifer from which water is withdrawn.
- \* Permitted users must monitor and report water levels and withdrawal amounts to the State.
- \* Owners of mines, sandpits, and quarries are required to apply for withdrawal permits and develop dewatering or depressurization monitoring plans. (Source: NC Rural Center)

According to DWR Hydrologist Nat Wilson, since PCS Phosphate shifted its mining operations and decreased pumping activities from approximately 68 MGD in 1990 to 35 MGD in 2003, the cone of depression centered on the mine has lessened, showing that the aquifer is capable of recharging itself fairly quickly. Wilson said these developments indicate that it may be possible to manage the resources of the Castle Hayne aquifer by methods other than limiting withdrawals (Source: Water Resources Research Institute). In any case, salt water intrusion will continue to be a serious problem confronting the town, and must be closely monitored.

**2.6.1.B Climate**

Owing to the proximity of the Atlantic Ocean, the climate of Atlantic Beach is mild throughout the year, as illustrated in the climatic conditions table included below. The sea breezes along the coast during the hot summers and the mild winters make this an ideal climate. Cover crops and hardy vegetables can be grown during the winter, and outdoor work can be carried on. The ground very seldom freezes and then only a thin crust forms which thaws very quickly. The snowfall is very light and lasts only a short time.

The average annual rainfall is 51.26 inches. It is well distributed throughout the year.

Climatic Conditions by Month at Atlantic Beach, NC (2008)												
Observation Type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average temp. (°F)	46.3	47.9	54.1	61.3	69.4	76.4	80.5	79.6	75.4	65.8	57.3	49.6
High temperature (°F)	57.0	59.0	65.1	72.0	78.8	84.9	88.6	88.0	84.5	76.5	68.3	60.3
Low temperature (°F)	35.5	36.8	43.0	50.6	59.9	67.8	72.3	71.1	66.2	55.1	46.3	38.9
Precipitation (in)	5.4	4.0	4.3	2.9	4.7	4.0	5.9	7.5	6.5	4.4	4.1	4.5

## Climatic Conditions by Month at Atlantic Beach, NC (2008)

Observation Type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Days with precip.	11	10	10	8	9	10	13	12	10	8	8	9
Wind speed (mph)	10.1	10.4	10.7	10.7	9.6	9.2	8.7	8.1	8.7	8.9	9.0	9.5
Morning humidity (%)	81	80	81	80	83	84	86	88	88	86	83	81
Afternoon humidity (%)	61	57	56	53	59	63	66	66	64	59	58	60
Sunshine %)	53	56	62	69	66	65	64	63	62	62	60	54
Days clear of clouds	10	9	10	11	8	7	6	7	9	12	11	10
Partly cloudy days	6	6	8	8	11	11	11	11	10	7	7	7
Cloudy days	15	13	14	11	12	12	13	12	12	11	11	14
Snowfall (in)	0.5	0.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6

*Source: National Weather Service*

### 2.6.1.C Natural Hazards

#### Flood Zones

Approximately 95% of Atlantic Beach lies within Special Flood Hazard Areas (SFHAs). A SFHA is defined as a land area with a greater than 1% chance per year of flooding and is also known as a “floodplain” (Source: Federal Emergency Management Agency or “FEMA”). SFHA are indicated on Flood Insurance Rate Maps (FIRMs), which are considered the most reliable and consistent source for delineating SFHAs and are the source used to determine whether or not the purchase of flood insurance is mandatory for developed properties with mortgages. According to FEMA, a home located within an SFHA has a 26% chance of suffering flood damage during the term of a 30-year mortgage.

SFHAs are broken into “A” zones and “V” zones. “A” zones are areas subject to risk of flooding by standing or relatively static flood waters, while “V” zones are areas subject to wave action. Shaded X is a supplemental flood hazard area in which there is a 0.2% per year chance of flooding, also known as the “500- year floodplain” (Source: FEMA). Flood hazard areas are depicted graphically on the map and characterized in the table below.

Town of Atlantic Beach Land Area by SFHA		
Flood Hazard Areas	Acres	% of Total
A zone	1,037.6	62.9%
V zone	195.9	11.9%
Shaded X	341.2	20.7%
X (Outside of SFHA)	75.9	4.6%
<b>TOTAL</b>	<b>1,650.6 [1]</b>	<b>100.0%</b>

*Source: Town of Atlantic Beach 2008 CAMA Land Use Plan*

Notes:  
 [1] This total reflects the total area of all lands within the Town’s planning jurisdiction, including public and private right-of-way and lands submerged in water.



### Flood Hazard Areas Map

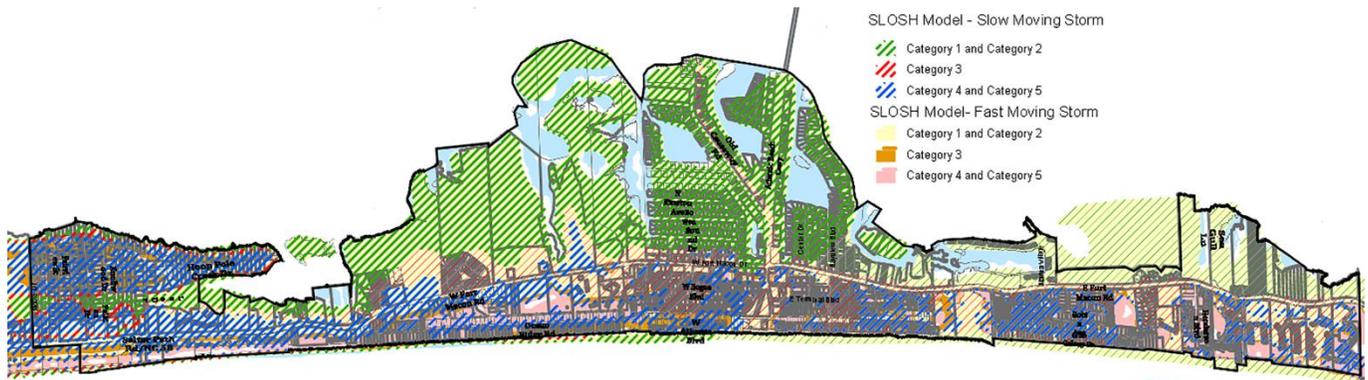
Source: Town of Atlantic Beach 2008 CAMA Land Use Plan

See Appendix 3.1.1 for a larger version of this map.

The greatest threat of flooding in the Town of Atlantic Beach is from storm surge. The majority of Atlantic Beach's land area lies below ten feet above mean sea level and is potentially subject to storm surge related flooding. Storm surge is ocean overwash associated with hurricanes or other tropical or extra-tropical weather events. \*The Flood Hazard Area Map above is carried forward from the 2008 Land Use Plan and is the most recent data available; the Stormwater Resiliency Plan that is currently being developed (underway as of October 2020) will include additional detail including updated areas of recurrent flooding and specific recommended project areas.\*

### Storm Surge

The map below shows the general areas of Atlantic Beach which may be affected by hurricane-generated storm surge based on the SLOSH (Sea, Lake, and Overland Surges from Hurricanes) model developed by the National Oceanic and Atmospheric Administration (NOAA), which computes storm surge heights from tropical cyclones, such as hurricanes. The SLOSH model estimates the extent of storm surge inundation for “fast-moving” storms (forward velocity greater than 15 miles per hour) and for “slow-moving” storms (forward velocity less than 15 miles per hour).



### Hurricane Storm Surge Inundation (SLOSH) Map

Source: Town of Atlantic Beach 2008 CAMA Land Use Plan

See Appendix 3.1.1 for a larger version of this map.

The following table provides a tabular representation of the area in the Town inundated by storm surge flooding at different category events.

Town of Atlantic Beach Storm Surge Inundation at Different Magnitude Storm Events based on SLOSH Model		
Fast Storm Inundation	Acres	% of Total Town Land Area
Category 1/2	1,102.9	66.8%
Category 3	1,241.4	75.2%
Category 4/5	1,409.0	85.4%
Slow Storm Inundation	Acres	% of Total Town Land Area
Category 1/2	611.3	37.0%
Category 3	891.7	54.0%
Category 4/5	1,246.8	75.5%

*Source: Town of Atlantic Beach 2008 CAMA Land Use Plan*

The various categories of storm surge areas and a description of expected damages are described below:

Category 1	Winds of 74 to 95 miles per hour. Damage primarily to shrubbery, trees, foliage, and unanchored mobile homes. No appreciable wind damage to other structures. Some damage to poorly constructed signs. Storm surge possibly 4 to 5 feet above normal. Low-lying roads inundated, minor pier damage, some small craft in exposed anchorage torn from moorings.
Category 2	Winds of 96 to 110 miles per hour. Considerable damage to shrubbery and tree foliage; some trees blown down. Major damage to exposed mobile homes. Extensive damage to poorly constructed signs. Some damage to roofing materials of buildings; some window and door damage. No major wind damage to buildings. Storm surge possibly 6 to 8 feet above normal. Coastal roads and low-lying escape routes inland cut by rising water 2 to 4 hours before arrival of hurricane center. Considerable damage to piers. Marinas flooded. Small craft in unprotected anchorages torn from moorings. Evacuation of some shoreline residences and low-lying island areas required.
Category 3	Winds of 111 to 130 miles per hour. Foliage torn from trees; large trees blown down. Practically all poorly constructed signs blown down. Some damage to roofing materials of buildings; some window and door damage. Some structural damage to small buildings. Mobile homes destroyed. Storm surge possibly 9 to 12 feet above normal. Serious flooding at coast and many smaller structures near coast destroyed; larger structures near coast damaged by battering waves and floating debris. Low-lying escape routes inland cut by rising water 3 to 5 hours before hurricane center arrives.
Category 4	Winds of 131 to 155 miles per hour. Shrubs and trees blown down; all signs down. Extensive damage to roofing materials, windows, and doors. Complete failure of roofs on many small residences. Complete destruction of mobile homes. Storm surge possibly 13 to 18 feet above normal. Major damage to lower floors of structures near shore due to flooding and battering by waves and floating debris. Low-lying escape routes inland cut by rising water 3 to 5 hours before hurricane center arrives. Major erosion of beaches.
Category 5	Winds greater than 155 miles per hour. Shrubs and trees blown down; considerable damage to roofs of buildings; all signs down. Very severe and extensive damage to windows and doors. Complete failure of roofs on many residences and industrial buildings. Extensive shattering of glass in windows and doors. Some complete building failures. Small buildings overturned or blown away. Complete destruction of mobile homes. Storm surge possibly greater than 18 feet above normal. Major damage to lower floors of all structures less than 15 feet above sea level.

The Town adopted the Pamlico Sound Regional Hazard Mitigation Plan in May, 2020. The plan is designed to enable the Town to be more prepared for natural disasters. If either the Land Use Plan or the Hazard Mitigation Plan are revised, a review of each plan for consistency is necessary.

## High Winds

\*North Carolina’s coast is subject to high winds, especially areas on the oceanfront. The 2018 NC State Building Code requires additional protections for construction within counties in high wind zones. Carteret County is within the 150 miles per hour wind zone, which is the highest wind zone category in this code. For example, new windows and doors are required to meet certain design pressure standards in order to better withstand high winds. These building code provisions will ensure that structures will better withstand high winds as they undergo renovation or redevelopment.\*

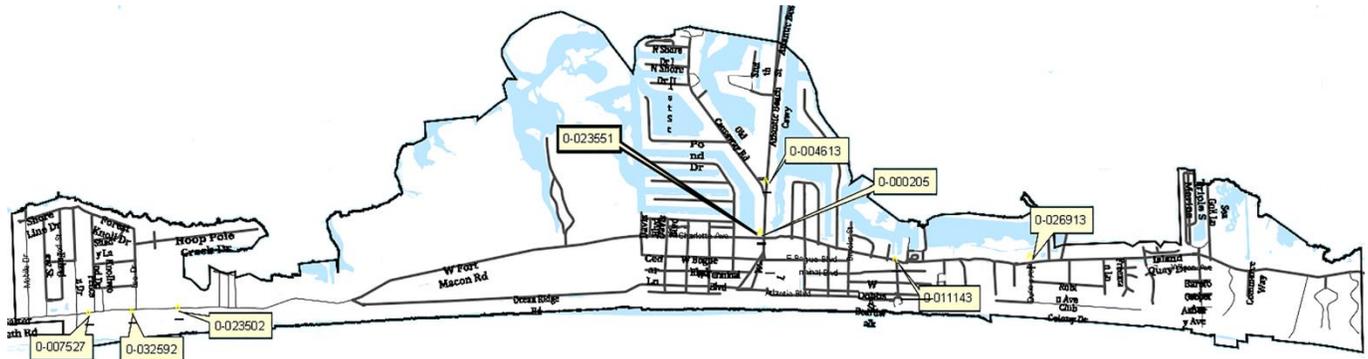
### 2.6.1.D Man-Made Hazards/Restrictions

Atlantic Beach does not have any sites that have a quantity of hazardous materials sufficient to require reporting to the State, the U.S. Environmental Protection Agency (USEPA), or the County Emergency Management Office.

The only man-made hazards located in Atlantic Beach are fuel storage tanks located at marinas, retail stores, and service stations that are engaged in selling fuel. Because the Town relies on groundwater for its water supply, the underground fuel tanks could pose a threat. The following table provides a list of facilities with underground storage tanks registered with the Groundwater Section of the North Carolina Division of Waste Management, Department of Environment and Natural Resources. It also indicates facilities with identified UST leaks, and the sites with leaks are included in the map below the table.

Town of Atlantic Beach Registered Underground Storage Tanks			
UST Number	Facility Name	Facility Address	Known Petroleum Leak? (Y or N)
0-007527	Holiday Inn (Jim Dandy)	Salter Path Rd	Y
0-023551	Town of Atlantic Beach Complex	125 West Fort Macon Rd	Y
0-004613	Scotchman #57	303 Morehead Ave	Y
0-032592	White Sand Mini Mart	701 Salter Path Rd	Y
0-011143	Kwik Mart #9 (The Pantry 908)	605 East Fort Macon Rd	Y
0-026913	Scotchman #140	Fort Macon Rd	Y
0-000205	Former Walter’s Exxon Station	122 West Fort Macon Rd	Y
0-023502	Scotchman #189	2510 West Fort Macon Rd	Y
0-007194	Fort Macon Marina	Fort Macon Rd	N
0-007370	USCG Base Ft. Macon	P.O. Box 237	N
0-011143	The Pantry 918	605 East Fort Macon Rd	N
0-007520	Crows Nest Yacht Club, Inc.	407 Atlantic Beach Causeway	N
0-004858	Sea Water Marina	400 Atlantic Beach Causeway	N
0-007512	Town of Indian Beach	Salter Path Rd	N
0-032592	Handy House 5	Fort Macon Rd	N
0-036649	Island Cove	2500 West Fort Macon Rd	N
0-031783	Fort Macon State Park	2300 East Fort Macon Rd	N
0-031490	Pilot House/DBA Jungleland	Salter Path Rd	N
0-025125	Atlantic Beach Causeway	300 Atlantic Beach Causeway	N
0-033219	Triple S Partnership	1151 East Fort Macon Rd	N
0-032899	Morehead City-Pine Knoll Shores	Roosevelt Dr	N
0-021492	Atlantic Beach RMS	Cedar Ln	N

Source: Walter Plekan, Hydrogeologist, UST Section, DEQ January, 2005



## Underground Storage Tank Leaks

Source: Town of Atlantic Beach 2008 CAMA Land Use Plan

See Appendix 3.1.1 for a larger version of this map.

North Carolina's underground storage tank program is administered by the Division of Waste Management's UST Section in the North Carolina Department of Environment Quality (DEQ). The UST Section enforces UST regulations and manages funds used to perform cleanups of petroleum UST discharges or releases. The program was initiated in 1988 in response to growing reports of USTs leaking petroleum into soil and drinking water supplies. All tank removal and efforts to remove ground and groundwater contamination should be coordinated with the UST Section of DEQ.

Additionally, the NC Division of Waste Management's Underground Storage Tank (UST) Section has the following recommendations for new developments:

- Remove any abandoned or out-of-use USTs. The UST Section should be notified of any USTs to be permanently closed or installed.
- Any UST installed within 500' of a public water supply well or within 500' of any surface water classified as HQW, ORW, WS-I, WS-II, or SA must be secondarily contained.
- Any releases from USTs must be reported to the local UST section.
- Any soils excavated during demolition or construction that show evidence of chemical or petroleum contamination, such as stained soil, odors, or free product must be reported immediately to the local Fire Marshall to determine whether explosion or inhalation hazards exist. Contaminated soils must be properly disposed and the final disposition of soils must be reported to the local UST section.
- Any above ground fuel tanks must be installed and maintained in accordance with applicable local, state, and federal regulations.
- Any chemical or petroleum spills to the land surface or "waters of the state" must be contained and the area of impact properly restored. Spills of significant quantity must be reported to the NC Division of Water Resources.

There was no offshore oil exploration or drilling underway in 2005. However, future exploration and/or drilling could pose a threat for the Atlantic Beach shoreline if it were to occur.

The North Carolina Division of Waste Management's Superfund Section investigates uncontrolled and unregulated hazardous waste sites by identifying risks, prioritizing them for clean up, and directing cleanup. The Section urges developers to examine site maps to locate the proximity of CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System) or hazardous waste sites to proposed project locations. There are no hazardous waste sites identified in Atlantic Beach, but one is located close to the Town. That site, the ANT US Coast Guard Fort Macon Station Site (NC5 690 308 262), is located 3.2 miles east

of Atlantic Beach. The site has been removed from the CERCLIS list and the NC Inactive Hazardous Sites Branch granted it a status of No Further Action.

### 2.6.1.E Soils

The most reliable information regarding soils in the Town comes from the US Department of Agriculture (USDA) and National Cooperative Soil Survey (NCSS) soil survey completed in 1978. All data in this section is derived from this source unless otherwise noted.

According to the aforementioned USDA/NCSS survey, there are 11 different soil associations located within Atlantic Beach. These associations are delineated in the table and map below. The table provides a tabular representation of the soil coverages as well as the range of slopes found and the flooding prevalence in each soil association.

Town of Atlantic Beach Prevalence of Soil Types and Range of Slopes Within Each Soil Type			
Map Symbol	Soil Name/Range of Slopes/Flood Prevalence	Acres	% of Total
Bn	Beaches-Newhan complex, 0 to 30 percent slopes	79.2	6.0%
CH	Carteret sand, frequently flooded	58.1	4.4%
CL	Carteret sand, low, frequently flooded	224.1	16.9%
Co	Corolla fine sand	34.4	2.6%
Cu	Corolla-Urban land complex	181.6	13.7%
Du	Duckston fine sand, frequently flooded	103.4	7.8%
Fr	Fripp fine sand, 2 to 30 percent slopes	70.9	5.3%
Nc	Newhan fine sand, 2 to 30 percent slopes	145.5	11.0%
Nd	Newhan fine sand, dredged, 2 to 30 percent slopes	10.4	0.8%
Ne	Newhan-Corolla complex, 0 to 30 percent slopes	177.8	13.4%
Nh	Newhan-Urban land complex, 0 to 8 percent slopes	133.3	10.1%
w	Water	106.9	8.1%
<b>TOTAL</b>		<b>1,325.6</b>	<b>100.0%</b>

*Source: Soil Survey of Carteret County, North Carolina, USDA/NCSS, 1978.*



Map of Soils Types

Source: Town of Atlantic Beach 2008 CAMA Land Use Plan

See Appendix 3.1.1 for a larger version of this map.

Most soils within Atlantic Beach are poorly suited for development. The Beaches-Newhan complex, Carteret sand (both high and low), and Duckston fine sand associations, collectively accounting for 34.6% of the land area in the Town, are hydric soils. Hydric soils are those that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

Although areas with hydric soils are not necessarily wetland areas, they almost always have consistently wet conditions that make the installation of septic systems difficult and costly, and are poorly suited for the construction of dwellings, streets, or roads due to their propensity to flood. Whereas the Town of Atlantic Beach relies exclusively on septic systems and package treatment plants for wastewater disposal, the prevalence of such a large amount of wet soils constitutes a significant limitation to the density and intensity of development.

Town of Atlantic Beach Soil Types and Septic Tank Conditions		
Map Symbol	Soil Name/Range of Slopes/Flood Prevalence	Septic Tank Conditions
Bn	Beaches-Newhan complex, 0 to 30 percent slopes	Severe: poor filter, high slopes
CH	Carteret sand, frequently flooded	Severe: flooding, ponding, poor filter
CL	Carteret sand, low, frequently flooded	Severe: flooding, ponding, poor filter
Co	Corolla fine sand	Severe: wetness, poor filter
Cu	Corolla-Urban land complex	Severe: wetness, poor filter
Du	Duckston fine sand, frequently flooded	Severe: flooding, ponding, poor filter
Fr	Fripp fine sand, 2 to 30 percent slopes	Severe: poor filter, slope
Nc	Newhan fine sand, 2 to 30 percent slopes	Severe: poor filter, slope
Nd	Newhan fine sand, dredged, 2 to 30 percent slopes	Severe: poor filter, slope
Ne	Newhan-Corolla complex, 0 to 30 percent slopes	Severe: poor filter
Nh	Newhan-Urban land complex, 0 to 8 percent slopes	Severe: poor filter, slope

*Source: Soil Survey of Carteret County, North Carolina, USDA/NCSS, 1978.*

All of the remaining non-hydric soils are very loamy soils that percolate quickly and thus risk contamination to the underlying water supply aquifers. Therefore, mound systems, package treatment systems and other similar systems are necessary for waste disposal, which raises the cost of development. Furthermore, if these systems are improperly designed, maintained or operated, it can result in groundwater contamination and diminution in water quality in nearby estuaries and sounds.

## 2.6.1.F Water Supply

### Groundwater - What Is it?

The ground beneath our feet is not completely solid. It is more like a sponge with pores of many shapes and sizes. When rain falls, it soaks into the ground and moves throughout this pore space. Pore space may account for up to 50 percent of the total volume of some soils.

Near the soil surface, in the unsaturated zone, the pores contain a combination of air and water. Further down is the saturated zone where all of the pore space is filled with water. This water is called groundwater. The water table is the boundary between the saturated zone and the unsaturated zone. A well must reach down below the water table, into the saturated zone, to obtain groundwater.

### Groundwater

#### *Aquifers and Confining Beds*

The word aquifer comes from the Latin for “water bearing” and is used for any geologic formation that contains water in sufficient quantity and with sufficient mobility to be useful as a water source (for example, a layer of sand or gravel). When water mobility is very limited (such as in a layer of clay or silt), the formation is called a confining bed or an aquitard.

#### *Recharge and Discharge*

Aquifer recharge is the movement of water from the surface down into an aquifer. In a recharge area, the net movement of water is downward. Recharge usually occurs in the upland areas between streams. On the other hand, a discharge area is an area where the net movement of water is toward the surface. Groundwater discharge usually occurs in low areas close to streams and through the banks and beds of streams.

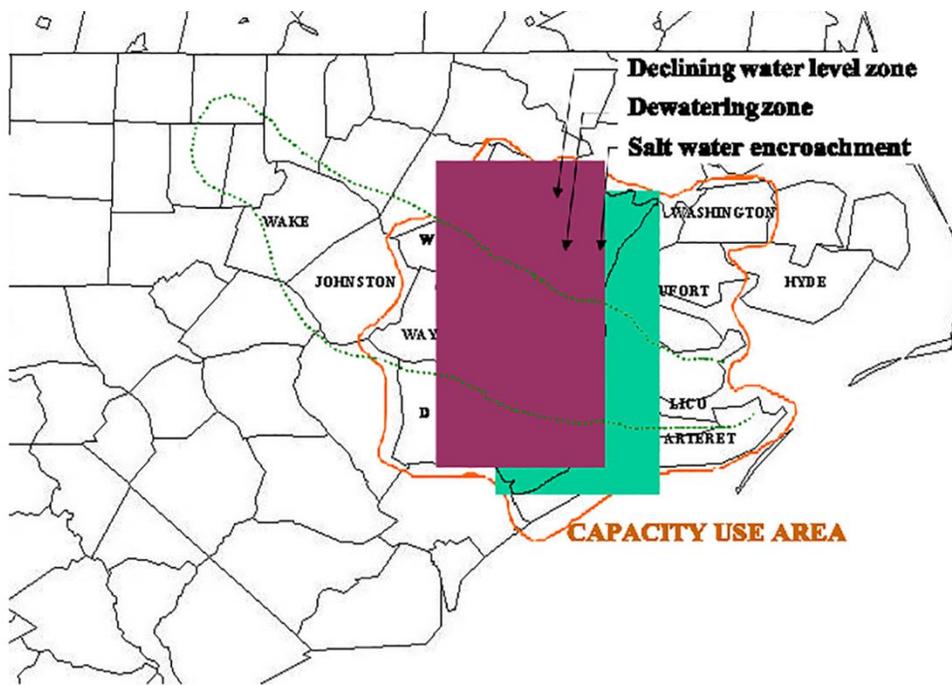
As mentioned in the previous section on topography and geology, the Town relies on groundwater for its water supply (see text box for discussion of groundwater). \*The primarily limestone Castle Hayne aquifer lies under Atlantic Beach and serves as the source of its water supply.\*

The Castle Hayne aquifer, underlying the eastern half of the coastal plain, is the most productive aquifer in the state and the primary water source for the Town. It is primarily limestone and sand. The Castle Hayne aquifer is noted for its thickness (more than 300 feet in places) and the ease of water movement within it, both of which contribute to high well yields. It lies fairly close to the surface toward the south and west, deepening rapidly toward the east. Chloride content exceeds 250 parts per million east of a line between Gates and Carteret counties. Water in the Castle Hayne aquifer ranges from hard to very hard because of its limestone composition. Iron concentrations tend to be high near recharge areas but decrease as the water moves further through the limestone.

At Atlantic Beach, the Castle Hayne aquifer is subject to saltwater intrusion. Because of the potential for salt water intrusion, approximately 2,500 square miles of the Castle Hayne aquifer, including the portion underlying Carteret County, have been designated as a capacity use area by the NC Groundwater Section due to large groundwater

in the Central Coastal Plain. As mentioned previously, a capacity use area is defined as an area where the use of water resources threatens to exceed the replenishment ability to the extent that regulation may be required. Therefore, wells are not permitted to pump more than 2.018 million gallons per day as permitted under CCPCUA.

Exacerbating the risk of salt water intrusion are declining water levels in the Castle Hayne aquifer. These declining water levels are due to dewatering activities attributable to industrial activities, particularly mining, and urbanization in areas that overlay the aquifer, particularly those areas west and north of Atlantic Beach such as Kinston, Goldsboro, Greenville, and New Bern. Water levels in the Cretaceous and Upper Aquifers, aquifers above and adjacent to the Castle Hayne, are declining between 1 and 9 feet per year on average as illustrated in the image below.



Capacity Use Area and Areas of Declining Water Quantity and/or Quality in the Central Coastal Plain of North Carolina

Source: NC Division of Water Resources.

As the above graphic indicates, salt water encroachment, dewatering and declining water levels are not, at the present time, a significant concern to the Town, but could become so over time without vigilant monitoring and regulation of groundwater supplies, particularly from the Castle Hayne aquifer. This is particularly true since the August, 2004, report from the NC Division of Water Resources entitled “Central Coastal Plain Capacity Use Area Status Report” encourages urbanizing communities in the Coastal Plain to consider developing “alternate aquifers,” especially the Castle Hayne, and reducing reliance on the Cretaceous and Upper (surficial) aquifers referenced above. Any such efforts should be carefully monitored and evaluated for their potential impact on the available water supply in the Town of Atlantic Beach.

\*The Town of Atlantic Beach is not located in a water supply watershed and there are no wellhead protection areas within the Town’s jurisdiction.\*

### 2.6.1.G Fragile Areas and Areas of Environmental Concern (AEC)

CAMA establishes “Areas of Environmental Concern” (AECs) as the foundation of the Coastal Resources Commission’s permitting program for coastal development. An AEC is an area of natural importance: it may be easily destroyed by erosion or flooding; or it may have environmental, social, economic, or aesthetic values that make it valuable.

The Coastal Resources Commission designates areas as AECs to protect them from uncontrolled development that may cause irreversible damage to property, public health or the environment, thereby diminishing their value to the entire State. Statewide, AECs cover almost all coastal waters and less than 3% of the land in the 20 coastal counties.

Fragile areas are those areas that are not explicitly defined as AECs but that could cause significant environmental damage or other diminution of quality of life if not managed. These include wetlands, natural heritage areas, areas containing endangered species, prime wildlife habitats, or maritime forests. These areas must be evaluated pursuant to State regulations at 15A NCAC 7H for the CAMA Land Use Planning process.

This section evaluates the following AECs and fragile areas in the Town: estuarine waters and shorelines, public trust areas, coastal wetlands, noncoastal wetlands, ocean beaches and shorelines, areas of excessive erosion,

protected lands and significant natural heritage areas, outstanding resource waters, endangered species, and prime wildlife habitats.

## Estuarine Waters and Estuarine Shorelines (AEC)

An “estuary” can be defined as "a semi-enclosed coastal body of water which has a free connection to the open sea and within which sea water is measurably diluted with fresh water derived from land drainage." Estuaries basically serve as transition zones between fresh and salt water and are protected from the full force of ocean wind and waves by barrier islands, mudflats, and/or sand. As illustrated in the text box below, estuaries provide significant environmental and economic benefits to the Town.

All waters of Bogue Sound north of Town qualify as an estuarine water AEC under CAMA regulations (NC Division of Water Resources Stream Index #20-36- (8.5), White Oak Basin).

For regulatory purposes, the inland, or upstream, boundary of estuarine waters is the same line used to separate the jurisdictions of the Division of Marine Fisheries and the Wildlife Resources Commission. However, many of the fish and shellfish that spend parts of their lives in estuaries move between the "official" estuarine and inland waters.

Estuarine shorelines are land areas leeward of mean high tide that are immediately adjacent to or bordering estuarine waters. These areas support the ecological function of estuaries and are highly vulnerable to erosion caused by wind or water and to damage caused by development. \*Most of the estuarine shoreline in Atlantic Beach is stabilized by bulkheads, so erosion is typically seen as structural failure of bulkheads when they're undermined or overtopped.\*

Under CAMA rules, all lands 75 feet leeward from the mean high tide are classified as estuarine shorelines and are subject to CAMA development regulations at 15A NCAC 7H.0205-.0208, as follows:

- The location, design and construction of a development project must give highest priority to conserving the biological, economic and social values of coastal wetlands, estuarine waters and public trust areas, and protect public rights of navigation and recreation in public trust areas.
- Development projects should be designed and located to cause the least possible damage to the productivity and integrity of:
  - Coastal wetlands; shellfish beds; submerged grass beds;
  - Spawning and nursery areas;
  - Important nesting and wintering areas for waterfowl and other wildlife; and
  - Important natural barriers to erosion, such as marshes, cypress fringes, and clay soils.

### Why are estuaries important?

The lands and waters of the estuarine system are home to fish nursery areas, spawning areas, shellfish beds, and other habitats essential to North Carolina's commercial and recreational fishing industries.

More than 90% of North Carolina's commercial and recreational seafood species (such as shrimp, flounder, and crabs) depend on the protective habitat and nutrients found in coastal wetlands and estuarine waters for much of their lives.

The stems, roots, and seeds of many coastal wetland plants provide food and nesting materials for waterfowl and other wildlife.

Marsh plants guard against erosion and flood damage: Their leaves and stems dissipate wave energy, and their root systems bind soil. The nutrients and decayed plant material the marsh plants produce also contribute to the productivity of the estuarine system.

Estuarine plants trap debris and excess nutrients and help regulate the flow of fresh water into the estuary, maintaining the system's balance.

Estuarine shorelines act as natural barriers to erosion and flooding. Certain soil formations and plant communities along estuarine shorelines also help slow erosion.

Natural buffers along the shoreline protect the water from excess sediment and pollutants, and they protect nearby developments from flooding and erosion.

Estuarine waters and public trust areas are important for tourism, because they support commercial and recreational fishing, boating, swimming, and other recreational activities.

- Development projects must follow the air and water quality standards set by the NC Environmental Management Commission. Generally, development will not be permitted if it lowers water quality for any existing uses of the water (such as shellfishing, swimming or drinking).
- Development projects must not significantly increase siltation or erosion, which can smother important habitats, block sunlight from aquatic plants, and choke fish and shellfish.
- Development projects must not create a stagnant body of water, which can affect oxygen levels and accumulate sediments and pollutants that threaten fish and shellfish habitats and public health.
- The construction of development projects must be timed to have the least impact on the life cycles and migration patterns of fish, shellfish, waterfowl and other wildlife. The life cycles of animals that depend on the estuarine system are especially sensitive during certain times of the year.
- Development projects must not cause major or irreversible damage to valuable archaeological or historic resources. Archaeological resources, such as the remains of Native and Early American settlements, shipwrecks, and Civil or Revolutionary War artifacts provide valuable information about the history of the coastal region and its people. Information on the location of these sites is available from the NC Division of Archives and History in the Department of Cultural Resources.
- Development projects must not reduce or prevent the use of, and public access to, estuarine waters and public trust lands and waters.
- Development projects must comply with the Town’s adopted and certified CAMA land use plan.

The waters of Bogue Sound adjacent to the Town are rated “Class SA” by the NC Division of Water Resources (DWR). This means that they are high quality waters suitable for shellfishing and recreational use. This means that stormwater controls are required under CAMA. No domestic discharges are permitted in these waters.

### Public Trust Areas

The North Carolina Division of Coastal Management (DCM) defines “Public Trust Areas” as the coastal waters and submerged lands that every North Carolinian has the right to use for activities such as boating, swimming, or fishing. These areas often overlap with estuarine waters, but they also include many inland fishing waters. The following lands and waters are considered public trust areas:

- All waters of the Atlantic Ocean and the lands underneath, from the normal high water mark on shore to the state's official boundary three miles offshore;
- All navigable natural water bodies and the lands underneath, to the normal high watermark on shore (a body of water is considered navigable if you can float a canoe in it). This does not include privately owned lakes where the public doesn't have access rights;
- All water in artificially created water bodies that have significant public fishing resources and are accessible to the public from other waters; and
- All waters in artificially created water bodies where the public has acquired rights by prescription, custom, usage, dedication, or any other means.

Although public trust areas must be delineated by on-site analysis, all submerged lands adjacent to Atlantic Beach along Bogue Sound and the Atlantic Ocean should be considered public trust areas.

### Coastal Wetlands

Coastal Resources Commission rules define “Coastal Wetlands” as any marsh in the 20 coastal counties (including Carteret County and Atlantic Beach) that regularly or occasionally floods by lunar or wind tides, and that includes one or more of the following 10 plant species:

- *Spartina alterniflora*: Salt Marsh (Smooth) Cord Grass
- *Juncus roemerianus*: Black Needlerush
- *Salicornia* spp.: Glasswort

- *Distichlis spicata*: Salt (or Spike) Grass
- *Limonium* spp.: Sea Lavender
- *Scirpus* spp.: Bulrush
- *Cladium jamaicense*: Saw Grass
- *Typha* spp.: Cattail
- *Spartina patens*: Salt Meadow Grass
- *Spartina cynosuroides*: Salt Reed or Giant Cord Grass

Coastal wetlands provide significant environmental and economic benefits to Atlantic Beach. They protect against flooding, help maintain water quality, provide habitat to wildlife, and serve as part of the estuarine system.

In 2003, DCM classified and mapped coastal wetlands based on an analysis of several existing data sets, including aerial photographs and satellite images of coastal areas in North Carolina, including Atlantic Beach. Even though the presence of wetlands must be established by an on-site delineation and investigation of plants, DCM produced an excellent representation of wetlands in the Town, which is shown in the map below.



Map of Coastal Wetlands

Source: Town of Atlantic Beach 2008 CAMA Land Use Plan

See Appendix 3.1.1 for a larger version of this map.

According to NCDCM’s 2003 Coastal Wetlands Inventory, approximately 26.1% of the Town’s land area, or 430.841 acres, are coastal wetlands as shown in the table below.

Town of Atlantic Beach Coastal Wetlands by Type and Extent		
Wetlands	Acres	% of Total Town Acreage
Cleared Estuarine Shrub/Scrub	6.417	0.4%
Cutover Estuarine Shrub/Scrub	4.881	0.3%
Cutover Maritime Forest	13.046	0.8%
Estuarine Shrub/Scrub	129.983	7.9%
Maritime Forest	34.059	2.1%
Salt/Brackish/Marsh	242.455	14.7%
<b>TOTAL</b>	<b>430.841</b>	<b>26.1%</b>

Source: NCDCM Wetlands Inventory, 2003.

The following provides the DCM descriptions of the various wetland areas found in Town:

Areas identified as coastal wetlands are subject to CAMA regulations for estuarine shoreline areas.

Freshwater swamps and inland, non-tidal wetlands are not in the CAMA permit jurisdiction, unless the CRC specifically designates them as AECs. However, these wetlands are protected by Section 404 of the federal Clean Water Act. An Army Corps of Engineers "Section 404" permit (USACE 404) may be required for projects taking place in these wetlands. Site-specific delineation of potential wetlands, under USACE wetland delineation guidelines, in order to determine whether a specific proposed development project requires a USACE 404 permit. In general, however, the basic premise of the USACE 404 program is that no discharge of dredge or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded.

It should be noted that for purposes of this Plan we have relied exclusively on State-collected and analyzed data. The Town encourages the State to review and update its Coastal Wetlands inventory and to include areas such as the Hoop Pole Creek property on Fort Macon Road, as designated Coastal Wetlands. This will help the Town, citizens, and developers know which areas will require special consideration in future development and which areas should be preserved and protected if possible.

### Noncoastal Wetlands

\*There are no noncoastal wetlands in Atlantic Beach's jurisdiction.\*

### Ocean Beaches/Shorelines and Areas of Excessive Erosion

Ocean beaches and shorelines are lands consisting of unconsolidated soil materials (i.e., sand) that extend from the mean low water line landward to a point where either (a) the growth of vegetation occurs, or (b) a distinct change in slope or elevation alters the configuration of the land form, whichever is farther landward.

The entire southern boundary of the Town - approximately 4.62 miles of shoreline - is an ocean beach. This entire area constitutes an Ocean Hazard AEC as defined by CAMA. The Ocean Hazard AEC covers North Carolina's beaches and any other oceanfront lands that are subject to long-term erosion and significant shoreline changes. The seaward boundary of this AEC is the mean low water line.

The landward limit of the AEC is measured from the first line of stable natural vegetation and is determined by adding a distance equal to 60 times the long-term, average annual erosion rate for that stretch of shoreline to the distance of erosion expected during a major storm.

Whereas the NC Coastal Resources Commission (CRC) has determined the average annual erosion rate in the Town to be 2.0 feet per year, the approximate width of the AEC in Atlantic Beach is about 145 feet from the first line of stable, natural vegetation leeward of the shoreline. The specific location of the Ocean Hazard AEC must be determined by a CAMA permitting official.

#### Salt/Brackish Marsh

Any salt marsh or other marsh subject to regular or occasional flooding by tides, including wind tides (whether or not the tide waters reach the marshland areas through natural or artificial watercourses), as long as this flooding does not include hurricane or tropical storm waters. Coastal wetland plant species include: smooth cordgrass, black needlerush, glasswort, salt grass, sea lavender, salt marsh bullrush, saw grass, cattail, salt meadow cordgrass, and big cordgrass.

#### Maritime Forest

A forested community characterized by its stunted growth due to the stresses imposed by its proximity to salt spray from the ocean. Typical vegetation includes live oak, red maple, and swamp tupelo.

#### Estuarine Shrub/Scrub

Any shrub/scrub dominated community subject to occasional flooding by tides, including wind tides (whether or not the tide waters reach these areas through natural or artificial watercourses). Typical species include wax myrtle and eastern red cedar.

#### Cutover Wetland

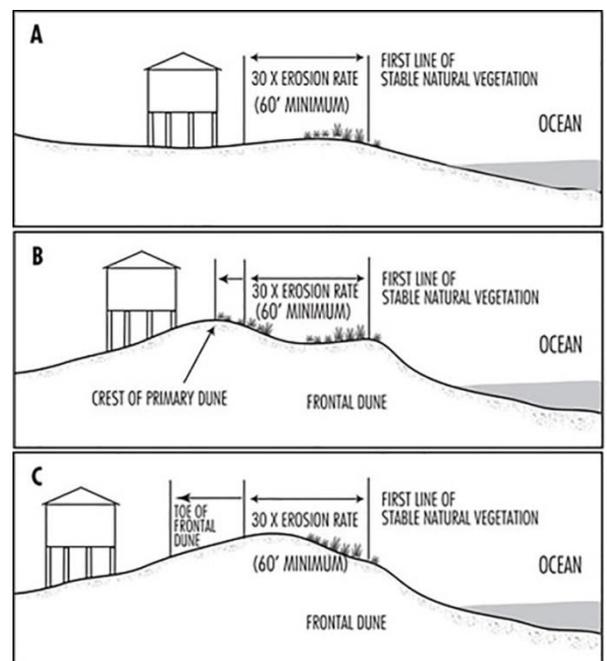
Areas for which satellite imagery indicates a lack of vegetation. These areas are likely to still be wetlands; however, they have been recently cut over. Vegetation in these areas may be regenerating naturally, or the area may be in use for silvicultural activities. Note that marshes cannot be considered cutover.

#### Cleared Wetland

Areas of hydric soils for which satellite imagery indicates a lack of vegetation. These areas are likely to no longer be wetlands.

The following requirements apply to all development in the Ocean Hazard AEC (15A NCAC 7H .0306):

- Development must be located and designed to protect human lives and property from storms and erosion, to prevent permanent structures from encroaching on public beaches and reduce the public costs (such as disaster relief aid) that can result from poorly located development.
- Development must incorporate all reasonable means and methods to avoid damage to the natural environment or public beach accessways. Reasonable means and methods include: limiting the scale of the project and the damage it causes; restoring a damaged site; or providing substitute resources to compensate for damage.
- No growth-inducing development paid for (in any part) by public funds will be permitted if it is likely to require more public funds for maintenance and continued use – unless the benefits of the project will outweigh the required public expenditures.
- Development projects should be set as far back from the ocean as possible. At minimum, all buildings must be located behind the crest of the primary dune, the landward toe of the frontal dune, or the erosion setback line - whichever is the farthest from the first line of stable natural vegetation.
- Development projects must not remove or relocate sands or vegetation from primary or frontal dunes.
- Moving a building that is in an ocean hazard area, requires a CAMA permit. Buildings relocated entirely with private funds should be relocated as far landward as possible. Buildings relocated with public funds must meet all AEC standards, including the setback requirement.
- Development projects must meet all local minimum lot-size and setback requirements.
- Development projects must comply with the Town’s CAMA Land Use Plan.
- A mobile home may not be placed within the high hazard flood area unless it is in a mobile home park that existed before June 1, 1979.
- Development not interfere with or block the public's ability to reach, use, and enjoy the resources that belong to all the people of the State. These resources include the wet sand beaches and waters. No development is allowed seaward of the vegetation line, because the public has a right to use the sandy beach. Development may not block established pathways to the beach.
- Development projects must not cause major or irreversible damage to valuable archaeological or historic resources.
- The construction of publicly funded projects, such as sewers, water lines, roads, bridges and erosion control works, will be permitted only if they:
  - Greatly benefit the public, nation or State;
  - Don't promote additional development in ocean hazard AECs;
  - Won't damage natural buffers to erosion, wave wash and flooding; and
  - Won't otherwise increase existing hazards.
- Development must meet all setback requirements for all development in the Ocean Hazard AEC (see the schematic diagram).



Ocean Hazard AEC Setback Requirement Schematic

Source: North Carolina Department of Environmental Quality

The CRC updates long-term erosion rates about every five years, using aerial photographs to examine shoreline changes. General maps of erosion rates are available free from the Division of Coastal Management; detailed erosion rate maps are available for inspection at all Coastal Management field and local permitting offices and online at <https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=f5e463a929ed430095e0a17ff803e156>.

\*In the CRC Erosion Rate Study from 2017, the authors note that the 2.0 foot per year average erosion rate is “artificially low” due to the influence of beach renourishment in Atlantic Beach. In other words, without ongoing beach renourishment, the erosion rate of the ocean beach at Atlantic Beach could be much higher. This has resulted in no wave action landward of the dunes, even during the biggest storms, which protects oceanfront structures and public facilities from shoreline erosion. No significant shoreline erosion is currently occurring. The significance of this fact for the future economic well-being and safety of the Town can hardly be understated.\*

### **Why should we Protect Ocean Beaches and Shorelines?**

At the edge of the ocean, ocean hazard AECs get the full force of any storm. Waves, wind and water can quickly change the shape of a shoreline, creating or filling inlets, flattening nearby dunes, eroding beaches and battering nearby structures. No oceanfront development can be absolutely safe from destructive natural forces, but development in ocean hazard areas can be carefully designed and located to minimize the risk to life and property, as well as to reduce the cost of relief aid.

Oceanfront beaches and dunes help protect buildings and environments behind them by absorbing the force of wind and waves, while the dense root networks of dune plants trap and anchor sand. Left uncontrolled, development can destroy these dunes and their vegetation, increasing the risk of damage to structures from erosion, flooding and waves.

In 1961, the outer channel of Beaufort Inlet was deepened to 35 feet from its natural depth of 15 to 18 feet. Twice since 1961, the channel has been further deepened and lengthened. It is now maintained at a 45-foot depth. Sand that otherwise would have flowed westward along Bogue Banks fills in this channel. Each year the U.S. Army Corps of Engineers (USACE) removes 700,000 to 1,000,000 cubic yards of this sand and deposits it at its off-shore site on Brandt Island. Conservative estimates placed the total amount of sand dumped at this site to be at least 33 million cubic yards of sand.

The USACE has determined that the eastern end of Bogue Banks (i.e., Fort Macon State Park) and the ocean shoreline along Atlantic Beach is the least cost locale for disposal of the dredge sand from Beaufort Inlet and USACE has therefore used this sand to renourish Atlantic Beach approximately every 8 to 10 years since 1973.

This program operates at no direct cost to North Carolina or Town taxpayers. As of the writing of this Plan, a new renourishment project is underway. Since November 2004, USACE contractors have placed 2.2 million cubic yards of sand on about 2.25 miles of beach between the Triple S Pier and the west end of the Ocean Ridge subdivision under this program.

\*The Town has also established a “Beach and Waterway Fund” to build reserves of local matches for CAMA beach access grants, future funding toward beach nourishment projects, and Channel Dredging Projects. This fund will be used specifically to fund future beach nourishment projects for the western portions of oceanfront that do not receive the no-cost nourishment as a result of Beaufort Inlet dredging. Notably, Atlantic Beach views the beach and waterways as Town infrastructure which serves as an asset for all residents and property owners, so the funding for the nourishment, access, and dredging needed is accrued through a Town-wide tax rather than a targeted oceanfront/beachfront property tax as in many other beach towns.\*

### **Protected Lands and Significant Natural Heritage Areas**

“Protected Lands” are areas dedicated to conservation and open space based uses that are protected from development by regulation or by ownership by governments or non-profit organizations. NCDCM has identified these areas through the assistance of the NC Center for Geographic Information and Analysis (NCGIA).

In 1998, the North Carolina Coastal Federation (NCCF) used a \$2.52 million grant from the NC Clean Water Management Trust Fund (CWMTF) for the acquisition and preservation of a 35.85-acre site near Hoop Pole Creek. The maritime forest, wetlands, and saltwater marshes at this site are an effective riparian buffer between



- Special ecological or scientific significance (rare or endangered species habitat, research or educational areas).

No new or expanded wastewater discharges are allowed although there are no restrictions on the types of discharges to these waters. There are also associated stormwater runoff, building density, best agricultural practices, and landfill siting controls enforced by the Division of Water Resources.

Atlantic Beach is not adjacent to any waters classified as ORW by the Division of Water Resources. However, it should be noted that the Town is adjacent to the high quality waters (HQW) and shellfish harvesting waters of Bogue Sound.

### Endangered Species

\*Carteret County is home to a number of endangered, threatened, and at-risk animals (17 species) and plants (4 species):\*

*Carteret County Endangered Species List			
Common Name	Scientific Name	Federal Status (see notes)	Record Status
<b>ANIMALS:</b>			
American alligator	<i>Alligator mississippiensis</i>	T (S/A)	Current
Bald eagle	<i>Haliaeetus leucocephalus</i>	BGPA	Current
Black rail	<i>Laterallus jamaicensis</i>	T	Current
Carolina gopher frog	<i>Rana capito capito</i>	ARS	Current
Green sea turtle	<i>Chelonia mydas</i>	T	Current
Hawksbill (=carey) sea turtle	<i>Eretmochelys imbricata</i>	E	Historical
Kemp's (=Atlantic) ridley sea turtle	<i>Lepidochelys kempii</i>	E	Current
Leatherback sea turtle	<i>Dermochelys coriacea</i>	E	Current
Loggerhead sea turtle	<i>Caretta caretta</i>	T	Current
Northern long-eared bat	<i>Myotis septentrionalis</i>	T	Current
Piping plover	<i>Charadrius melodus</i>	T	Current
Red-cockaded woodpecker	<i>Picoides borealis</i>	E	Current
Red knot	<i>Calidris canutus rufa</i>	T	Current
Roseate tern	<i>Sterna dougallii dougallii</i>	T	Current
Shortnose sturgeon	<i>Acipenser brevirostrum</i>	E	Current
Southern hognose snake	<i>Heterodon simus</i>	ARS	Obscure
West Indian manatee	<i>Trichechus manatus</i>	E	Current
<b>PLANTS:</b>			
Raven's seedbox	<i>Ludwigia ravenii</i>	ARS	Current
Rough-leaved loosestrife	<i>Lysimachia asperulaefolia</i>	E	Current
Seabeach amaranth	<i>Amaranthus pumilus</i>	T	Current
Venus' fly-trap	<i>Dionaea muscipula</i>	ARS	Current
Source: US Fish & Wildlife Service			
NOTES:			
<b>Definitions of Federal Status Codes:</b>			
E = endangered. A taxon "in danger of extinction throughout all or a significant portion of its range."			
T = threatened. A taxon "likely to become endangered within the foreseeable future throughout all or a significant portion of its range."			
C = candidate. A taxon under consideration for official listing for which there is sufficient information to support listing. (Formerly "C1" candidate species.)			
BGPA =Bald and Golden Eagle Protection Act. See below.			

## \*Carteret County Endangered Species List

Common Name	Scientific Name	Federal Status (see notes)	Record Status
<p>ARS = At Risk Species. Species that are Petitioned, Candidates or Proposed for Listing under the Endangered Species Act. Consultation under Section 7(a)(2) of the ESA is not required for Candidate or Proposed species; although a Conference, as described under Section 7(a)(4) of the ESA is recommended for actions affecting species proposed for listing.</p> <p>T(S/A) = threatened due to similarity of appearance. A taxon that is threatened due to similarity of appearance with another listed species and is listed for its protection. Taxa listed as T(S/A) are not biologically endangered or threatened and are not subject to Section 7 consultation. See below.</p> <p>EXP = experimental population. A taxon listed as experimental (either essential or nonessential). Experimental, nonessential populations of endangered species (e.g., red wolf) are treated as threatened species on public land, for consultation purposes, and as species proposed for listing on private land.</p> <p>P = proposed. Taxa proposed for official listing as endangered or threatened will be noted as "PE" or "PT", respectively.</p> <p><b>Bald and Golden Eagle Protection Act (BGPA):</b>                      In the July 9, 2007 Federal Register( 72:37346-37372), the bald eagle was declared recovered, and removed (de-listed) from the Federal List of Threatened and Endangered wildlife. This delisting took effect August 8,2007. After delisting, the Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. 668-668d) becomes the primary law protecting bald eagles. The Eagle Act prohibits take of bald and golden eagles and provides a statutory definition of "take" that includes "disturb". The USFWS has developed National Bald Eagle Management Guidelines to provide guidance to land managers, landowners, and others as to how to avoid disturbing bald eagles. For mor information, visit <a href="http://www.fws.gov/migratorybirds/baldeagle.htm">http://www.fws.gov/migratorybirds/baldeagle.htm</a></p> <p><b>Threatened due to similarity of appearance(T(S/A)):</b>                      In the November 4, 1997 Federal Register (55822-55825), the northern population of the bog turtle (from New York south to Maryland) was listed as T (threatened), and the southern population (from Virginia south to Georgia) was listed as T(S/A) (threatened due to similarity of appearance). The T(S/A) designation bans the collection and interstate and international commercial trade of bog turtles from the southern population. The T(S/A) designation has no effect on land management activities by private landowners in North Carolina, part of the southern population of the species. In addition to its official status as T(S/A), the U.S. Fish and Wildlife Service considers the southern population of the bog turtle as a Federal species of concern due to habitat loss.</p> <p><b>Definitions of Record Status:</b>                      Current - Based on NC Natural Heritage Program information, this taxon is considered to be extant in the county.                      Historical - Based on NC Natural Heritage Program information, this taxon is considered to be historical in the county, meaning that all recorded occurrences are either extirpated, have not been found in recent surveys, or have not been surveyed recently enough to be confident they are still present.                      Obscure - the date and/or location of observation is uncertain.                      Incidental/migrant - the species was observed outside of its normal range or habitat.                      Probable/potential - the species is considered likely to occur in this county based on the proximity of known records (in adjacent counties), the presence of potentially suitable habitat, or both.</p>			

## Prime Wildlife Habitats

\*Carteret County, and the Town of Atlantic Beach, offer prime wildlife habitat for two threatened species: the piping plover, a small bird that uses its stout bill to forage for food on shorelines and mudflats; and the loggerhead sea turtle. Female loggerheads return yearly to the same beach where they hatched to lay their eggs in underground nests.\*



An adult Piping Plover.  
Source: Allaboutbirds.com, a resource of the Cornell Lab.



Nesting loggerhead turtles.  
Source: Spacecoastdaily.com

## 2.6.1.H Areas of Resource Potential

### Regionally Significant Parks

There are no parks of regional or statewide significance within the corporate limits of Atlantic Beach. There are, however, three regional beach access sites within the Town. Regional beach access sites are defined by the NC Division of Coastal Management as public beach access sites that are generally the largest of the access sites and that have clear signage, ample parking, and often have other facilities such as restrooms, showers and picnic tables.

Town of Atlantic Beach Regional Beach Access Sites		
Location	Parking Spaces Available	Other Amenities
NC Highway 58 at New Bern Avenue	50	Restroom and Showers
West Drive at Central Boulevard	303	No restroom or showers
West Drive at Atlantic Boulevard	64	No restroom or showers

*Source: NC Division of Coastal Management.*

Fort Macon State Park should also be mentioned as a significant regional park. Even though it is not technically in the corporate limits of the Town, the park has approximately 1.4 million visitors per year and was determined to be one of the top 25 vacation destinations in North Carolina by the NC Department of Commerce in 2004. This environmentally and historically significant facility provides tremendous economic benefit to the Town by attracting these visitors.

### Marinas and Mooring Fields

“Marinas” are defined as any publicly or privately owned dock, basin, or wet boat storage facility constructed to accommodate more than ten boats and providing any of the following services: permanent or transient docking spaces, dry storage, fueling facilities, haulout facilities, and repair service. Not included in this definition are facilities that only allow boat access or temporary docking and that do not include the services provided by marinas specified above.

To receive a CAMA permit to construct a marina, a marina must meet the general CAMA rules for coastal wetlands, estuarine waters, and public trust areas specified above as well as the specific rules below:

- Marinas should be built in non-wetland sites or in deep waters that do not require dredging. They must not disturb valuable shallow-water or wetland habitats, except for dredging necessary for access to high-ground sites. Marinas should be designed to protect the environment as much as possible. The following are four alternatives for siting marinas, ranked in order of Coastal Resources Commission preference:
  1. An upland site that requires no alteration of wetlands or other estuarine habitats and has adequate water circulation to prevent the accumulation of sediment and pollutants in boat basins and channels;
  2. An upland site that causes no significant damage to fisheries or wetlands and requires dredging for access only;
  3. An open water site that does not require dredging or wetland alteration and is not a primary nursery area; and
  4. An open water site that requires dredging in less productive habitat, but not deeper than any connecting channels.
- Marinas that require dredging may not be in primary nursery areas or in areas that require dredging a channel through nearby primary nursery areas to deeper waters. DCM will consider maintenance dredging in primary nursery areas for existing marinas on a case-by-case basis.
- Marinas that require dredging must provide acceptable disposal areas to accommodate future maintenance dredging.
- Marinas may not be enclosed within breakwaters that hinder the water circulation needed to maintain water quality.
- Marinas serving residential developments and built in public trust waters must be limited to 27 square feet of public trust area for every one linear foot of adjacent shoreline. The square-footage limit shall not apply to fairways between parallel piers or any portion of the pier used only for access from land to the docking spaces.
- Marinas may not be located within areas where shellfish harvest for human consumption is a significant use, or in adjacent areas if the proposed marina will cause closure of the harvest areas. Construction or enlargement of a marina must not lead to the closure of an open shellfishing area.
- Marinas should minimize interference with public waters by using a mixture of dry storage areas, public launching facilities, and docking spaces.
- Marinas may not be built without written confirmation that the proposed location is not subject to a submerged lands lease or deed. (State law requires that marina owners receive an easement from the State Property Office.)
- Marina basins must be designed to promote flushing: basin and channel depths should gradually increase toward open water and must not be deeper than connecting waters. When possible, an opening shall be provided at opposite ends of the basin to promote flow-through circulation.
- Marinas must be designed to minimize adverse effects on boat traffic, federally maintained channels, and public rights to use and enjoy state waters.
- Marinas must meet all applicable requirements for stormwater management.
- Boat maintenance areas must be designed so that all scraping, sandblasting, and painting is over dry land and so that pollutants such as grease, oil, paint and sediments do not flush into estuarine waters. Grease and sediment traps can protect water quality at the marina and throughout the estuarine system.

- Marinas shall post a notice prohibiting the discharge of waste from boat toilets and explaining the availability of information on pumpout services.
- Marinas must comply with all other applicable standards for docks and piers, bulkheading, dredging, and spoil disposal.
- Marina replacement may be allowed if all rules are met to the maximum extent practicable.
- New marinas over public trust bottoms are subject to the North Carolina Environmental Policy Act and must undergo a NCEPA review.
- Upland development associated with marinas must comply with coastal shoreline rules, which require that structures with non-water-dependent uses be located at least 30 feet from the water, unless the structures are located in a designated urban waterfront.

A “freestanding mooring” is any means to attach a ship, boat or other water craft to a stationary underwater device, mooring buoy, buoyed anchor, or piling not associated with an existing or proposed pier, dock, or boathouse. When more than one freestanding mooring is used in the same general vicinity, it is known as a “mooring field”. CAMA has regulations for the safe siting and operation of moorings and mooring fields at 15A NCAC 7H.0208 (b) (10) or 7H.2200.

Because of its waterfront location, there are a number of marinas and mooring sites in the Town of Atlantic Beach. Public and private marina and mooring field sites in or around Atlantic Beach are listed in the table below. According to the NC Division of Marine Fisheries - Shellfish Sanitation and Recreational Water Quality Section, there are approximately 1,019 marina slips in and near the Town.

Town of Atlantic Beach Marina Sites			
Name	# of Slips*	Name	# of Slips*
Spooners Creek Yacht Harbor	85	Island Marina	88
70 West Marina	24	Morehead Sports Marina	20
Spooners Creek North	29	Crows Nest Marina**	63
Miami Street Docks (formerly Daniels Marina)	35	Fort Macon Marina**	15
Taylor Boat Works	15	Anchorage Marina**	125
Harbor Master Marina	31	8½ Marina**	118
Morehead City Docks/Geer Oil Docks	23	Triple S Marina (Market and Marina Village)**	65
Dockside Marina	77	Seawater Marina	30
Leeward Harbor	33	Causeway Marina**	12
Portside Marina	27	Mud Bucket/Divocean Docks**	10
Russell Yachts	6	Capt. Stacy Fishing Center**	12
Radio Island Yacht and Boating Club	43	Sand Spur Marina	12
Radio Island Marina	80	Bluffs Condominium Marina/Docks	29
<b>TOTAL 1,107</b>			
*Estimate of slips is approximate    **Marinas located within Atlantic Beach Source: Shannon Jenkins, NC Division of Marine Fisheries - Shellfish Sanitation and Recreational Water Quality Section			

\*The Town of Atlantic Beach does not have any primary nursery areas.\*

### Floating Homes or Structures

A floating home or structure is any structure, not a boat, supported by means of floatation and designed to be used without a permanent foundation which is used for human habitation or commerce. A structure is considered a floating home or structure if it is inhabited or used for commercial purposes for more than 30 days in any one location. A boat may be deemed a floating structure if its means of propulsion has been removed or rendered inoperative and it contains at least 200 square feet of living area. There are several floating homes located on the

west side of the Atlantic Beach Causeway. These homes pre-date the CAMA permitting process. These types of uses/structures conflict with Town policy and would not be permitted under current Town and CAMA regulations. These structures, if destroyed, cannot be rebuilt.

### Channel Maintenance

The Atlantic Intracoastal Waterway (AIWW) passes through Bogue Sound north of the Town. The AIWW is a series of federally (i.e., USACE) maintained navigation channels that extend from Norfolk, VA to Miami, FL. For much of its length, the system consists of naturally deep estuaries, rivers, and sounds. These natural stretches are connected by man-made cuts through land areas and shallows, many of which require periodic dredging to maintain their depths. The authorized project depth of the AIWW is 12 feet (at low tide) from Norfolk, VA to Ft. Pierce, FL (Source: Atlantic Intracoastal Waterway Association).

Two channels striking south and west, respectively, from the AIWW at unlighted can buoy #3 serve the Atlantic Beach area. The easternmost of these channels is subject to shoaling; as of mid-2004, it carried 6-foot depths at low water. Recent cutbacks in the USACE budget for channel maintenance of the AIWW threaten the safe navigability of the AIWW and should be carefully monitored.

There are numerous navigable channels maintained within Atlantic Beach with access to the AIWW. At low tide, navigation into and out of Atlantic Beach must go through these marked channels. The waters of Bogue Sound are generally very shallow even at high tide. Therefore, maintenance of these marked channels is essential for recreational and commercial boaters.

A general CAMA permit can be obtained from the regional CAMA office for maintenance dredging of channels, canals, boat basins, and ditches in estuarine waters, public trust areas, and estuarine shorelines, as long as the maintenance doesn't remove more than 1,000 cubic yards of material.

### Marine Resources (Water Quality)

In North Carolina, the water quality of each stream mile of water is evaluated and rated by the NC Division of Water Resources (DWR) (see text box below). DWR categorizes Bogue Sound north of Atlantic Beach (DWR Stream Index # 20- 36-(8.5)) as "HQW" or "high quality water." HQW is a supplemental classification intended to protect waters with quality higher than typical state water quality standards. This is because the waters of Bogue Sound north of Atlantic Beach are also rated "SA" which means that the Sound has salty or brackish waters of excellent quality that contain active shellfish beds and other commercial fishing. "SA" waters are also suitable for all recreational uses, such as boating or swimming.

\*While all waters of Bogue Sound north of Atlantic Beach (including Tar Landing Bay, Allen Slough, and Money Island Slough) are designated SA and HQW, not all waters are currently supporting commercial shellfishing use. There are six areas within Atlantic Beach that are identified as SA waters but are prohibited shellfish areas: the Moonlight Bay area, the Money Island Bay area, the Hoop Pole Creek area, the McClamrock Slough area, the Fish-N-Lake area (locally referred to as "The Pond"), and the Bogue Sound/Atlantic Beach area east of the Causeway.

These prohibited areas are identified as impacted by non-point source pollution in the 2017 Report of Sanitary Survey Area E-3. Sources of non-point pollution include wastewater treatment systems, stormwater, subdivisions, and marinas/dockage. There is an area classified as Conditionally Approved – Closed at Hoop Pole Creek (north of sampling station #6 in the report) which is identified as impacted by dockage, wastewater, stormwater, and subdivision sources of pollution.

Non-point source pollution can negatively affect local surface water quality, and subsequently public health. There are 17 testing sites monitoring shellfish water quality and five monitoring recreational water quality by the Shellfish Sanitation and Recreational Water Quality Section of the Division of Marine Fisheries within Atlantic Beach's planning jurisdiction. There have been temporary swimming advisories issued for some of these locations, as well as testing sites similarly situated and located nearby. This occurs following bacteria testing that indicates levels of contamination that may be hazardous to human health due to increased risk of illness.

Under section 303(d) of the Clean Water Act, lists of impaired waters (too polluted to meet water quality standards) are submitted by states to the US Environmental Protection Agency. According to the 2018 NC Category 5 Assessments "303(d) List", there are eight water bodies on the 303(d) list of impaired waters within

Atlantic Beach’s planning jurisdiction (name or description followed by Assessment Unit Number): Hoop Pole Creek {20-36-(8.5)i}, the canals between the streets west of Old Causeway Road {20-36-(8.5)j}, Fish-N-Lake (locally referred to as “The Pond”) {20-36-(8.5)a1a}, the canals between the east side of Atlantic Beach Causeway and west side of Bayview Boulevard {20-36-(8.5)a5}, Money Island Slough {20-36-13-1}, the western and eastern portions of Money Island Bay {20-36-13a and 20-36-13b2}, and Triple S Marina {20-36-(8.5)a7}.\*

Because of the HQW and SA designations, several development restrictions exist, as follows:

1. Stormwater best management practices and lower density uses are required under CAMA for projects that may affect Bogue Sound (approximately 1 dwelling unit per acre unless specific stormwater controls allow higher density as approved by CAMA).
2. No domestic or industrial wastewater discharges are permitted into these waters.

The local CAMA permitting official should be consulted for specific requirements, as they may vary based on the specific development proposal.

The Atlantic Ocean south of Atlantic Beach (Stream Index # 99-(4)) is also rated by DWR, and has been designated “SB” for water quality. This means that salt surface waters exist and are used for, and suitable for, recreation, including frequent or organized swimming. More limited stormwater controls are required under CAMA than the stormwater controls required under SA/HQW and there are no categorical restrictions on wastewater discharges.

### **North Carolina Water Quality Basics**

*What are surface water classifications?*

Surface Water Classifications are designations applied to surface water bodies, such as streams, rivers and lakes, which define the best uses to be protected within these waters (for example swimming, fishing, drinking water supply) and carry with them an associated set of water quality standards to protect those uses. Surface water classifications are one tool that state and federal agencies use to manage and protect all streams, rivers, lakes, and other surface waters in North Carolina. Classifications and their associated protection rules may be designed to protect water quality, fish and wildlife, the free flowing nature of a stream or river, or other special characteristics.

*How do they affect me?*

Before you buy property, plan a new development project, construct a new road or undertake other land use activities, you should check with local, state, and federal agencies about the assigned surface water classification for the waterbody on your property. Many of the newer classifications, especially those designed to protect drinking water supplies and certain high quality waters, have protection rules which regulate some land or disturbance other human activities.

*Why do they sometimes overlap?*

Many streams, rivers, and lakes may have several classifications applied to the same area. This is because surface waters are classified to protect different uses or special characteristics of the waterbody. For example, a stream or specific stream segment may be classified as Class WS-III Tr HQW by the NC Division of Water Resources (DWR). This protects it as a drinking water supply (WS-III), as Trout Waters (Tr), and as High Quality Waters (HQW). The stream segments upstream or downstream may have different classifications based on other water uses or stream characteristics.

*Can a stream's classification change?*

DWR classifies all surface waters. A waterbody's classification may change at the request of a local government or citizen. DWR reviews each request for a reclassification and conducts an assessment of the waterbody to determine the appropriateness of the reclassification. DWR also conducts periodic waterbody assessments which may result in a recommendation to reclassify the waterbody. In order for a waterbody to be reclassified it must proceed through the rule-making process.

## **Primary Nursery Areas, Anadromous Fish Spawning Areas, Submerged Aquatic Vegetation**

“Anadromous” fish are those that migrate up rivers (or into estuaries) from the sea to breed in fresh water. The North Carolina Marine Fisheries Commission (MFC) defines anadromous fish spawning areas as those where evidence of spawning of anadromous fish has been documented by direct observation of spawning, capture of running ripe females, or capture of eggs or early larvae as established under NCAC 15A 31.0101 (20)C.

Anadromous fish nursery areas are those areas in the riverine and estuarine systems used by juvenile anadromous fish as established at NCAC 15A 31.0101 (20)D.

In terms of primary fish nursery areas and anadromous fish spawning areas near the Town of Atlantic Beach, the two primary nursery areas near the Town are across Bogue Sound within Broad Creek and Gales Creek, and the only nearby spawning areas are within the White Oak River, Pettiford Creek, and the Newport River.

Under provisions of the North Carolina Fisheries Reform Act of 1997, the North Carolina Marine Fisheries Commission disallowed trawling in approximately 200,000 acres of submerged areas designated as Submerged Aquatic Vegetation (SAV). These vast grassbeds provide protection and also serve as nursery areas for fish, scallops, crabs, and shrimp.

None of this restricted SAV is within close proximity to Atlantic Beach.

### Incompatible Development

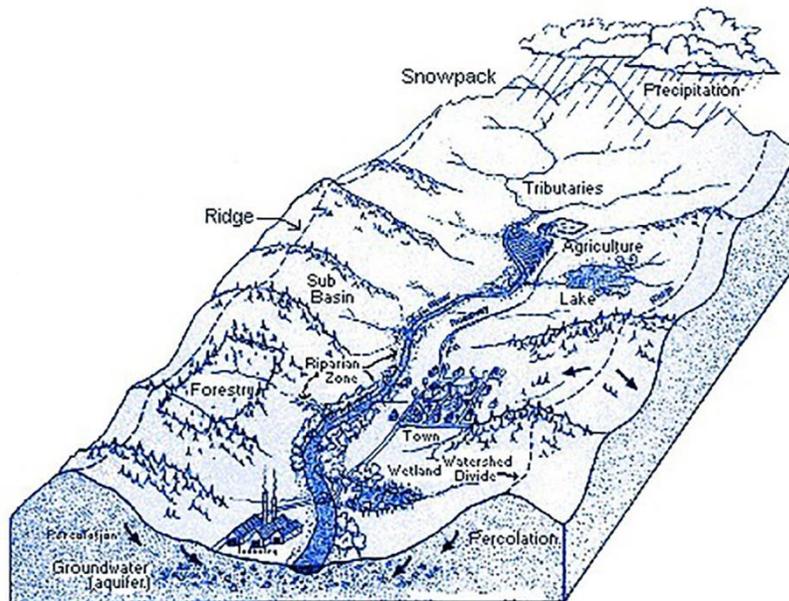
\*There are no natural resource areas being impacted or lost in Atlantic Beach as a result of incompatible development.\*

## 2.6.2: WATER QUALITY

Water quality in and near the Town is considered in many portions of this Plan. However, because of the significant relationship between land use and water quality, a section focusing specifically on local and regional water quality is included here. This section will primarily analyze water quality on the watershed and subbasin level.

A watershed is the area of land where all of the water that is under it or drains off of it goes into the same place. Geographer John Wesley Powell put it best when he said that a watershed is:

"that area of land, a bounded hydrologic system, within which all living things are inextricably linked by their common water course and where, as humans settled, simple logic demanded that they become part of a community." (Source: U.S. Environmental Protection Agency).



Pictorial Representation of a Watershed

Source: Lane County, Oregon, Council of Governments

The Town of Atlantic Beach is located wholly in the White Oak River watershed and (significantly) at the outfall of the watershed.

Subbasins are geographic areas that represent part of a watershed, made up of a combination of drainage areas and/or distinct hydroponic features, all draining to the primary watershed. The Town is located in the Newport River subbasin, also known by its USGS designation, subbasin number 03-05-03 (see map below).

In North Carolina, water quality is assessed primarily at the watershed or river basin (i.e., "basinwide") level, due to the interconnectedness of watersheds described above. Basinwide water quality plans are prepared by the North Carolina Division of Water Resources (DWR) for each of the seventeen major river basins in the State and updated at five-year intervals. The basinwide plan for the White Oak River Basin was developed by DWR in February, 1997 and updated in May 2007. This document will be referred to as "BWP" in this Plan.

The goals of the BWP are as follows:

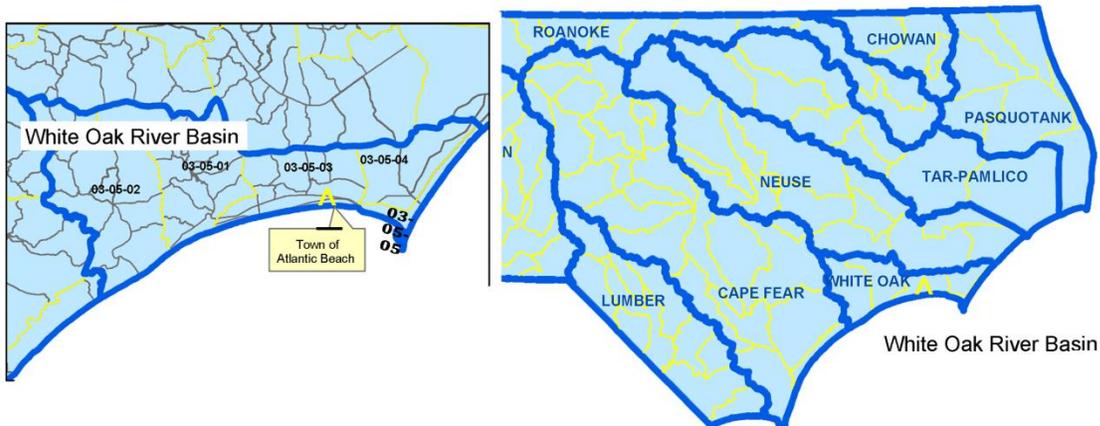
- Identify water quality problems and restore full use to impaired waters;
- Identify and protect high value resource waters;
- Protect unimpaired waters while allowing for reasonable economic growth;

- Develop appropriate management strategies to protect and restore water quality;
- Assure equitable distribution of waste assimilative capacity for dischargers; and
- Improve public awareness and involvement in the management of the state’s surface waters.

The North Carolina Wetlands Restoration Program (NCWRP), in conjunction with the BWP, developed a Basinwide Wetlands and Riparian Restoration Plan (BWRRP) in 1998 to identify the need and opportunity for stream, riparian and buffer restoration in the White Oak Basin where water quality has been or likely could be degraded. This document will be referenced as the NCWRP.

### 2.6.2.A White Oak River Basin Watershed

The White Oak River Basin is a 1,264-square mile watershed area that drains four separate river systems and their tributaries: the New River, the White Oak River, the Newport River, and the North River. It also drains the entirety of Core, Back, and Bogue Sounds, the latter being the location of Atlantic Beach.



White Oak River Basin  
 Source: Town of Atlantic Beach 2008 CAMA Land Use Plan

\*DWR released the third edition of its 5-year basin plan for the White Oak River Basin in May 2007.\* The basin contains much of Onslow and Carteret Counties and small portions of Craven and Jones Counties, and includes a total of 16 municipalities, including the larger and fast-growing City of Jacksonville, as well as the Towns of Beaufort, Morehead City, Emerald Isle, and Newport. It also contains five subbasins, 417 miles of streams, over 130,000 acres of estuarine waters and 91 miles of Atlantic Coastline.

### 2.6.2.B Subbasin 03-05-03

Subbasin 03-05-03 is comprised of central Carteret County from the Croatan National Forest to Beaufort and Beaufort Inlet and contains the Town of Atlantic Beach, all of Bogue Banks, and Cape Carteret, Newport, and Morehead City. The table on the following page provides an overview of the population and land use present throughout the subbasin in 2007.

Subbasin 03-05-03 Area, Population, and Land Cover			
Land and Water Area (square miles)		Land Cover (%)	
Total area	228	Forest/Wetland	59
Land area:	168	Surface Water	26
Water area:	60	Urban	4
		Cultivated Crops	6.5
		Pasture	4
Population Statistics			
2000 Est. Population	14,848 persons		
Pop. Density	65 persons per sq mile		
Monitored Water Body Statistics			
Aquatic Life		Recreation	
Total:	15.1 mi./ 5,788.1 ac.	Total:	11.2 mi./ 17,912.9 ac.
Total Supported:	5,847.9 mi.	Total Supported:	11.2 mi./ 17,764.7 ac
Total Impaired:	140.2 ac.	Total Impaired:	148.1 ac.
Total Not Rated:	15.1 mi.		
Shellfish Harvesting			
Total:	5.2 mi./ 23,867.4 ac.		
Total Supported:	19,357.1 ac.		
Total Impaired:	5.2 mi./ 14,410.3 ac		

As the table indicates, the subbasin is heavily forested and only contains one developed area north of Morehead City - the Town of Newport. Although there are indications of nutrient inputs in the upper Newport River, as well as elevated levels of fecal coliform bacteria, the water quality in the subbasin is generally good, with 11,236 of 34,146 acres of estuarine waters being classified by DWR as Outstanding Resource Waters (ORW).

\*There are nine facilities permitted to discharge wastewater into the subbasin under the National Pollutant Discharge Elimination System (NPDES) with a total permitted flow of approximately 4.75 million gallons per day (MGD), but none of these facilities are located within Atlantic Beach. There is one NPDES site in Atlantic Beach – the Town of Atlantic Beach Water Treatment Plant.

There are two water bodies declared as impaired in the 2007 White Oak River Basinwide Water Quality Plan: Money Island Slough and Money Island Bay. These are both also classified as prohibited from shellfishing as discussed in Section 2.6.1.H.\*

### 2.6.2.C Registered Animal Operations in the White Oak River Basin

The presence of animal operations is significant to water quality, since these operations typically produce large amounts of waste that can negatively affect water quality. This is particularly true in subbasin 03-05-03 where fecal coliform contamination has been a significant concern, due to the impact on shellfishing and recreation described above.

According to the BWP, there are two swine operations with a total of 951 animals within Subbasin 03-05-03. These operations are located near Newport on the mainland of Carteret County. While the number of operations remained constant between 1998 and 2004, the number of animals decreased significantly from 3,375 animals in 1998 to the 951 cited above.

## 2.6.2.D Population, Densities, & Growth Trends in the Subbasin

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According to the BWP, the 2000 population of the basin was estimated to be 311,680, or approximately 3.9% of the State's 2000 population. The majority of this population resides in Onslow County. The current density of the basin is 131 persons per square mile.

For subbasin 03-05-03, the total estimated 2000 population was 14,846, an increase of approximately 30.2% over the estimated 1990 population of 11,404. This number reflects only the permanent population and does not reflect the huge seasonal populations in Morehead City and the towns along Bogue Banks, including Atlantic Beach.

This population increase is reflected in the increase in urban land cover in the White Oak River Basin watershed from approximately 52 acres in 1982 (4% of land area) to 95 acres in 1997 (8% of land area) - an 81% increase. The vast majority of this increase comes from the mainland, since Atlantic Beach is very nearly built out to its maximum urbanized land cover, although densities could increase in the future. During this same period, forested lands shrunk by 9.7% from 379 acres to 342 acres.

# PART 3: APPENDICES

This portion of the Plan provides large-size maps and details on the public engagement activities associated with the Plan's preparation and adoption



## 3.1.1: MAPS

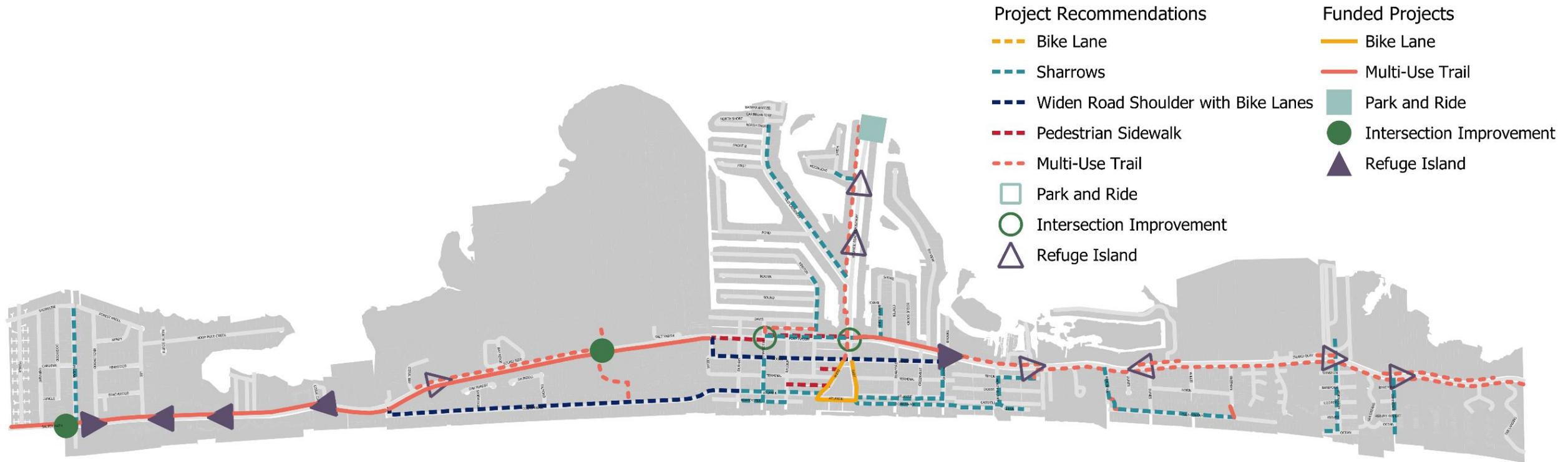
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This appendix contains larger-sized reproductions of each map found in this Plan, in the same order they appear in the main plan text:

1. Stormwater Infrastructure Projects (Section 1.3.5)
2. Bicycle Plan Implementation (Section 1.3.6)
3. Beach Access Points (Section 1.3.6)
4. Future Land Use (Section 1.4.2)
5. Roadways by Maintenance Responsibility (Section 2.2.5)
6. Existing Land Use (Section 2.3.2)
7. National Register of Historic Places Study List Sites (Section 2.3.4)
8. Town of Atlantic Beach Water Supply Infrastructure (Section 2.5.6)
9. Wastewater Treatment Plant Service Areas (Section 2.5.7)
10. Recreational Water Quality Testing Sites (Section 2.5.7)
11. Areas of Drainage/Stormwater Management Concern (Section 2.5.16)
12. Flood Hazard Areas (Section 2.6.1.C)
13. Hurricane Storm Surge Inundation (SLOSH) Map (Section 2.6.1.C)
14. Underground Storage Tank Leaks (Section 2.6.1.C)
15. Soil Types (Section 2.6.1.E)
16. Coastal Wetlands (Section 2.6.1.G)
17. Protected Lands (Section 2.6.1.G)

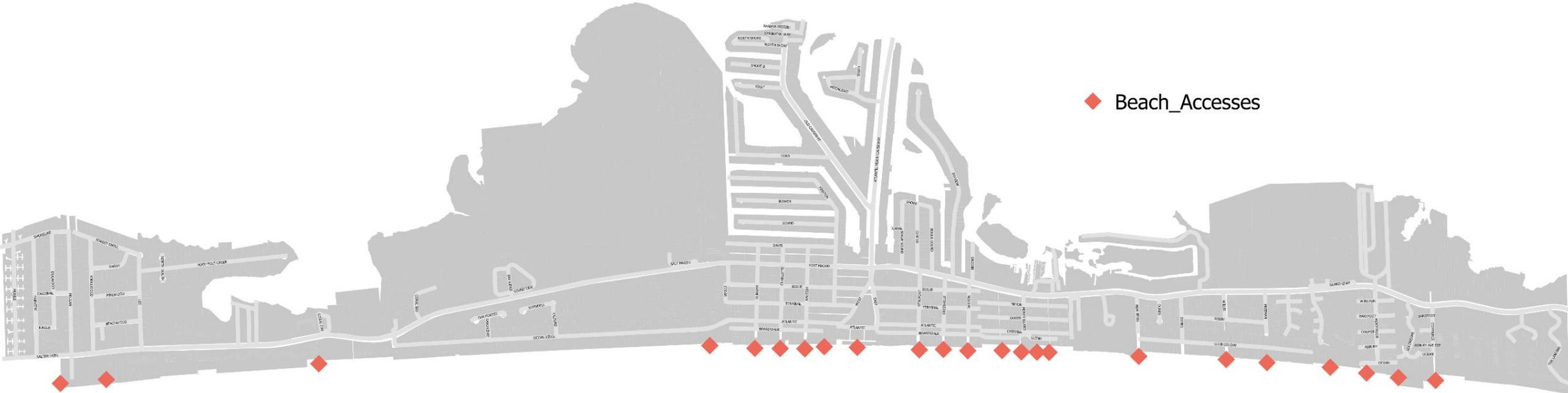


### Section 1.3.6: Bicycle Plan Implementation



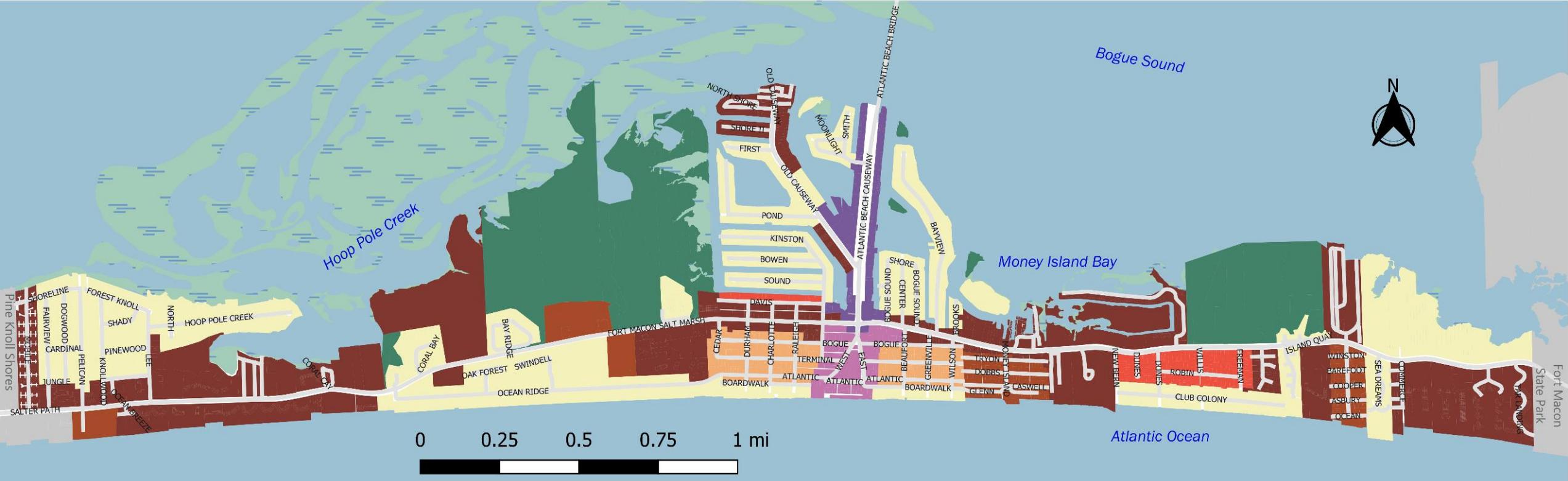
Source: Atlantic Beach Town Staff

### Section I.3.6: Beach Access Points



Source: Atlantic Beach Town Staff

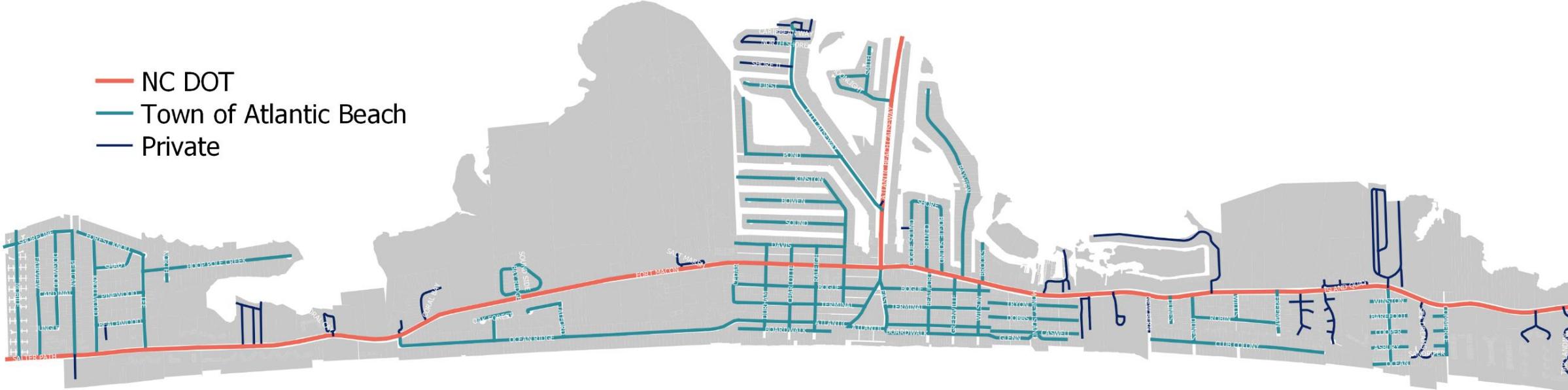
# Section I.4.2: Future Land Use Map



- |   |  |
|---|--|
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #ADD8E6; border: 1px solid black;"></span> Bodies of Water               | <b>Future Land Use Classifications</b>   |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #90EE90; border: 1px solid black;"></span> Estuarine and Marine Wetlands | <span style="display: inline-block; width: 15px; height: 10px; background-color: #228B22; border: 1px solid black;"></span> Conservation       |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #A9A9A9; border: 1px solid black;"></span> Lands Outside AB Jurisdiction | <span style="display: inline-block; width: 15px; height: 10px; background-color: #FFFFE0; border: 1px solid black;"></span> Residential-Low    |
|   | <span style="display: inline-block; width: 15px; height: 10px; background-color: #FFDAB9; border: 1px solid black;"></span> Residential-Medium |
|   | <span style="display: inline-block; width: 15px; height: 10px; background-color: #FF6347; border: 1px solid black;"></span> Residential-High   |
|   | <span style="display: inline-block; width: 15px; height: 10px; background-color: #8B4513; border: 1px solid black;"></span> Mixed-Low          |
|   | <span style="display: inline-block; width: 15px; height: 10px; background-color: #654321; border: 1px solid black;"></span> Mixed-High         |
|   | <span style="display: inline-block; width: 15px; height: 10px; background-color: #483D8B; border: 1px solid black;"></span> Causeway           |
|   | <span style="display: inline-block; width: 15px; height: 10px; background-color: #800080; border: 1px solid black;"></span> Circle             |

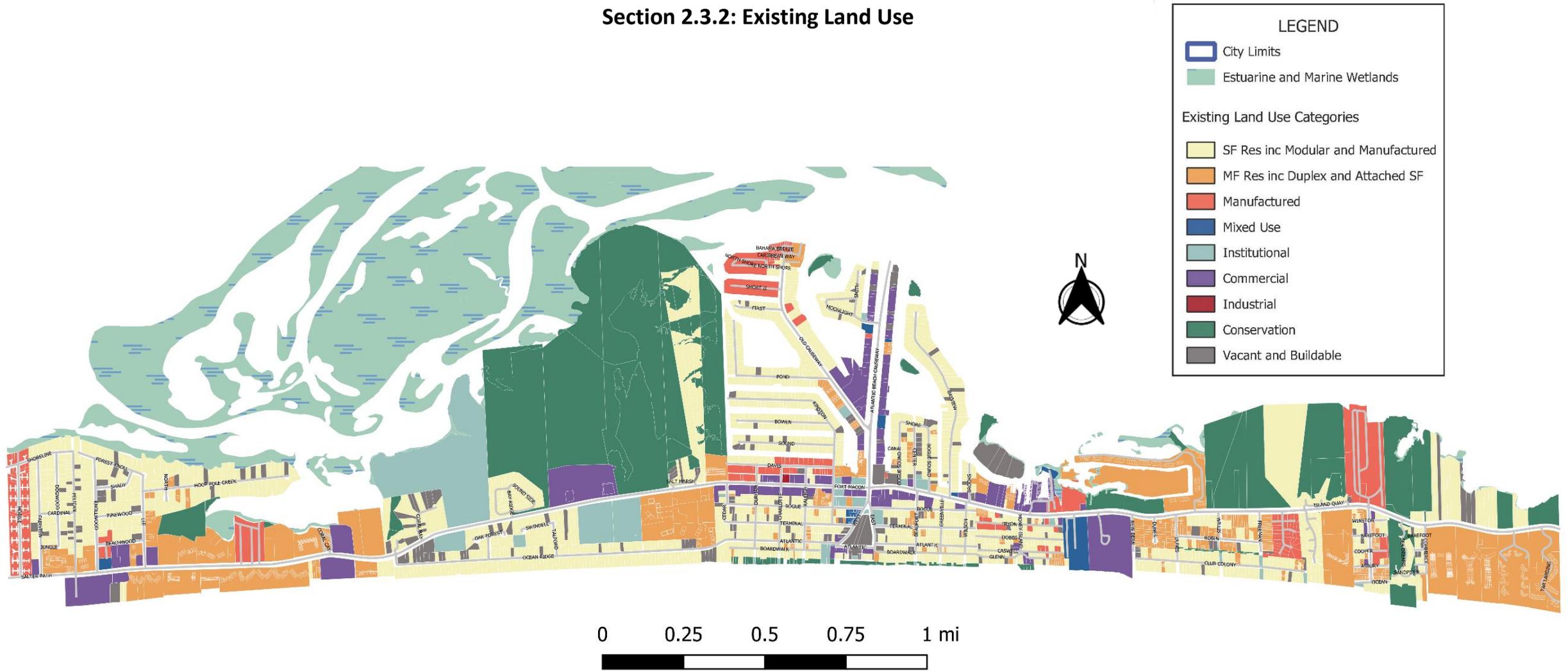
Copyright 2020, Town of Atlantic Beach.  
 DISCLAIMER: This map is for illustrative purposes in the Town of Atlantic Beach CAMA Land Use Plan only and is subject to change. It should not be used to establish legal title, boundary lines, locations of improvements or utilities, or land use for purposes other than planning.

Section 2.2.5: Atlantic Beach Roadways by Maintenance Responsibility

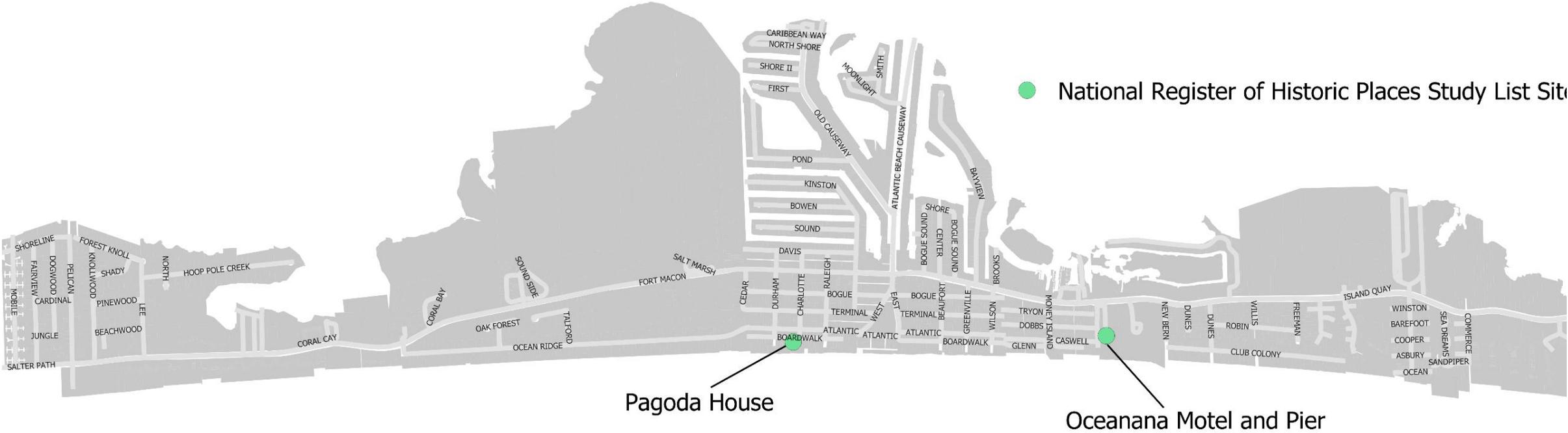


Source: NCDOT and Carteret County GIS

## Section 2.3.2: Existing Land Use



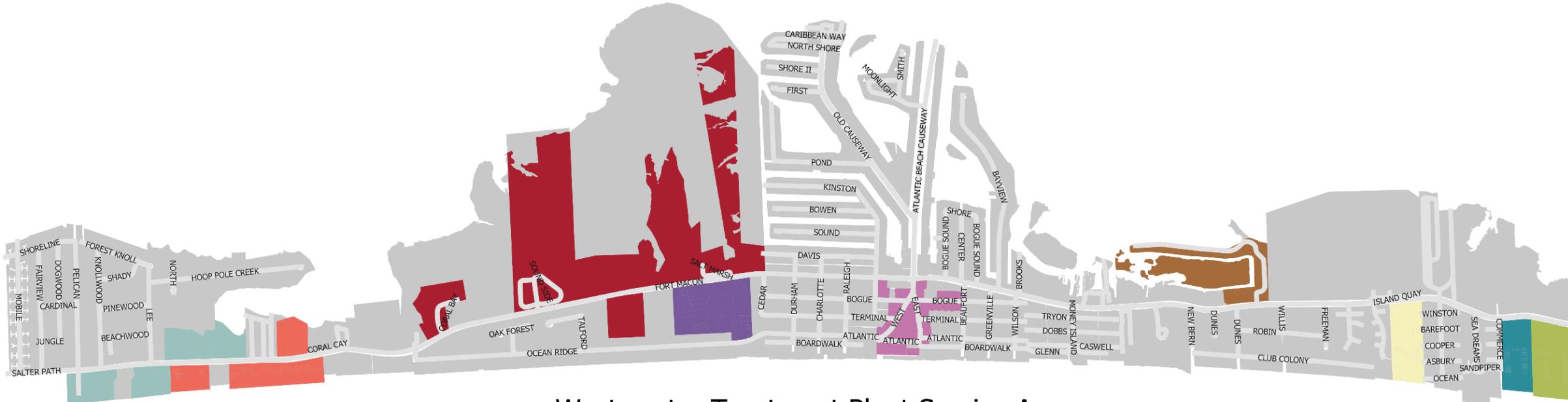
**Section 2.3.4: National Register of Historic Places Study List Sites**



Source: National Register of Historic Places



### Section 2.5.7: Wastewater Treatment Plant Service Areas

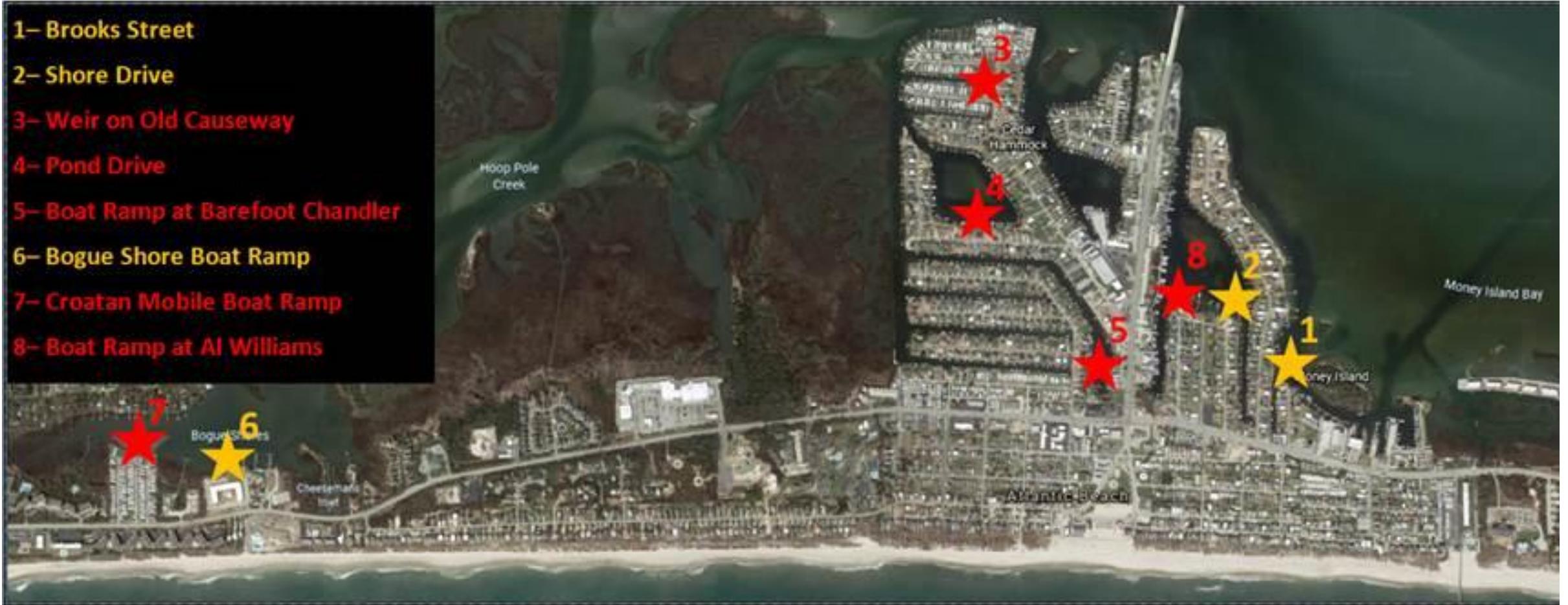


Wastewater Treatment Plant Service Areas

- 8 1/2 Marina Village
- Island Beach & Racquet/Doubletree
- Southwinds
- A Place at the Beach
- Peppertree
- Sugarloaf
- Circle/Grove
- Sands Villa
- Tar Landing
- Dunescape
- Seaspray
- Not served by wastewater treatment plant (on s

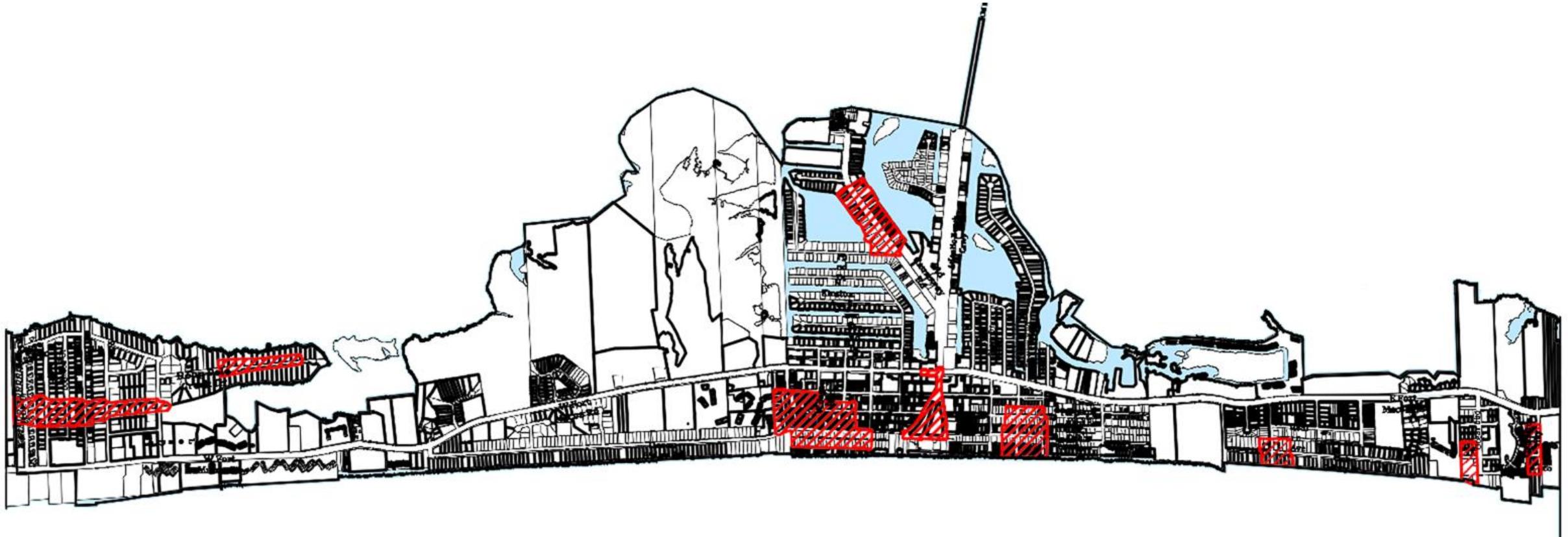
Source: Atlantic Beach Town Staff

### Section 2.5.7: Recreational Water Quality Testing Sites



Source: Town of Atlantic Beach

Section 2.5.16: Areas of Drainage/Stormwater Management Concern



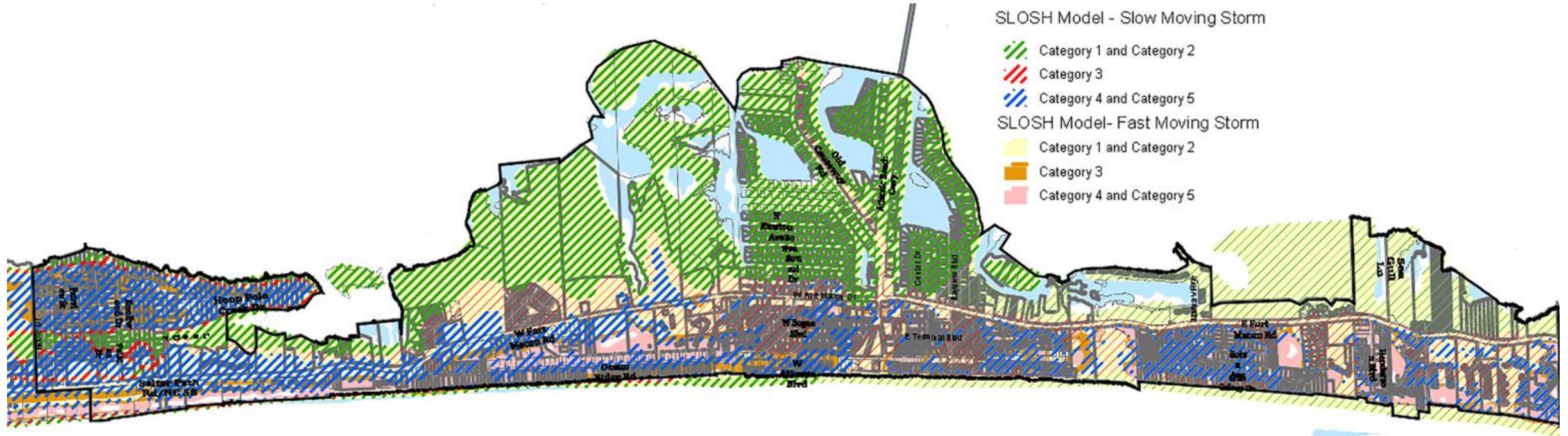
Source: Atlantic Beach 2008 CAMA Land Use Plan

### Section 2.6.1.C: Flood Hazard Areas



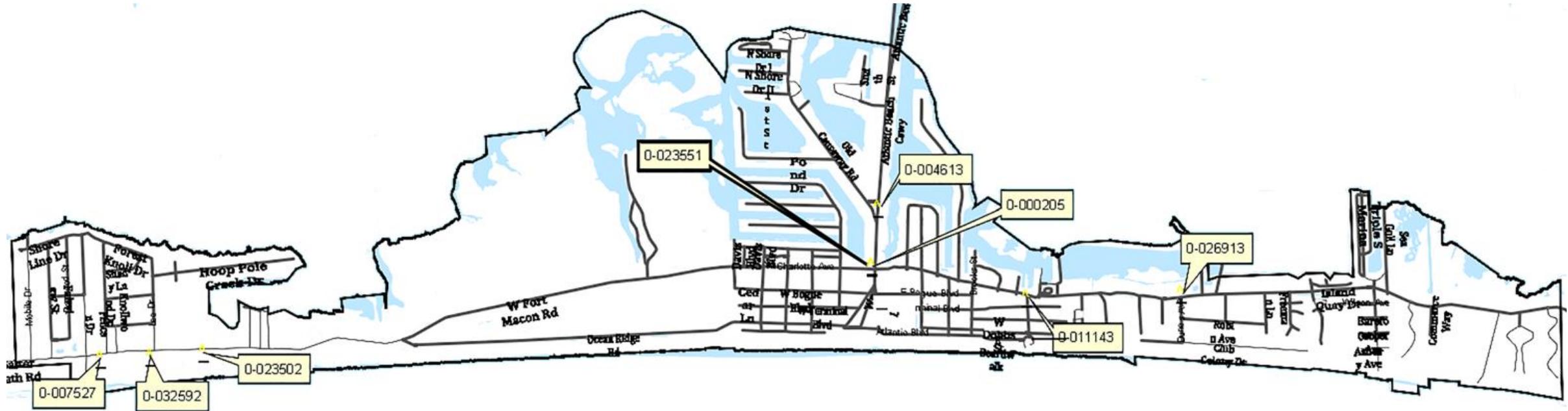
Source: Town of Atlantic Beach 2008 CAMA Land Use Plan

### Section 2.6.1.C: Hurricane Storm Surge Inundation (SLOSH) Map



Source: Town of Atlantic Beach 2008 CAMA Land Use Plan

### Section 2.6.1.C: Underground Storage Tank Leaks



Source: Town of Atlantic Beach 2008 CAMA Land Use Plan

### Section 2.6.1.E: Soil Types



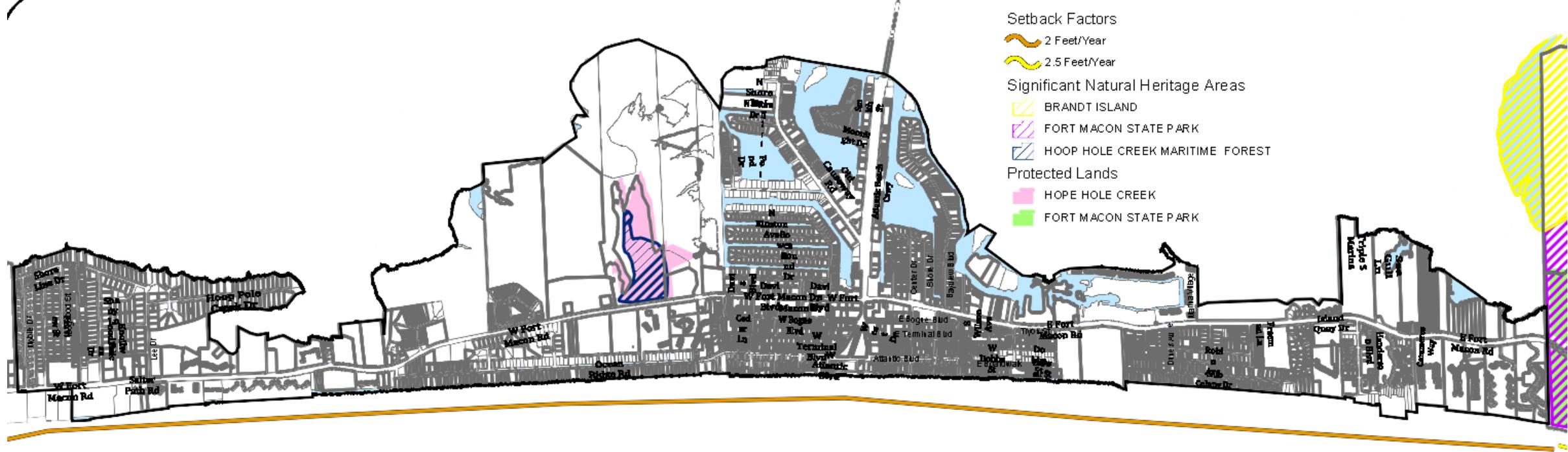
Source: Town of Atlantic Beach 2008 CAMA Land Use Plan

2.6.1.G: Coastal Wetlands



Source: Town of Atlantic Beach 2008 CAMA Land Use Plan

### Section 2.6.1.G: Protected Lands

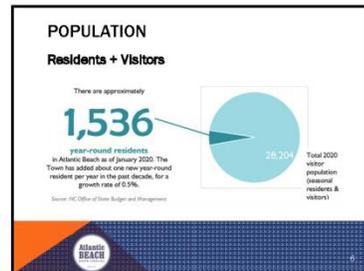
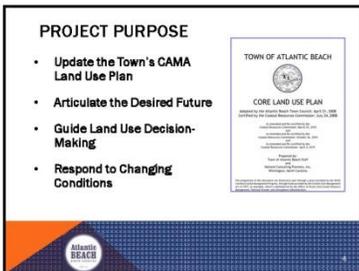
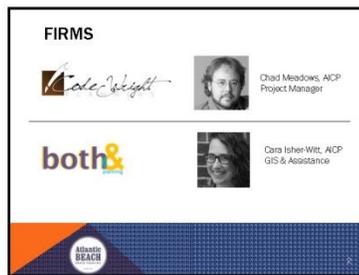


Source: Town of Atlantic Beach 2008 CAMA Land Use Plan

# 3.1.2: PUBLIC FORUM ONE

**Location:** Town Hall Meeting Room, 125 West Fort Macon Road  
**Date:** February 5, 2020  
**Public Forum Session Times:** 3:00PM and 6:00 PM  
**Number of Attendees:** 3:00 PM Session – 17 attendees  
 6:00 PM Session – 14 attendees  
**Overview:** Each session included a summary presentation of the existing conditions report prepared as part of the plan update and a series of 10 stations for participants to provide input on existing conditions data and comments about their desired future for the Town. Town staff and consultants were available to answer questions throughout each session.

## Presentation Slides (1-9):



# Presentation Slides (10-21):

### HOUSING

Only 1 out of 5 housing units in Atlantic Beach is occupied by a year-round resident.

Atlantic Beach has very little vacant housing - only about 4% of the units in town, or about 200 units, are vacant.

Of these, most are available for rental. Less than 50 homes on average are up for sale.

Median value of owner-occupied housing in 2018: **\$357,800**

Median value of owner-occupied housing in 2000: **\$160,200**

Source: American Community Survey, U.S. Census Bureau, 2018

**Assumption: Housing Demand Remains Strong; Rentals Will Continue to Dominate**

### ECONOMY

As of October 2018, there were:

**193** Salaries establishments in Atlantic Beach

**94** are businesses that serve both year-round residents and tourists, including most of the restaurants and retail in town.

**74** are businesses that primarily serve year-round residents, the schools, banks, healthcare agencies, medical, and construction companies.

**25** are tourism-focused businesses, including water tubing, specialty retail, and charter fishing operations.

Source: Annual of Salaries Establishments, Department of Economic Development

**Assumption: Tourism Will Remain Dominate**

**795** Work in Atlantic Beach (Countywide %)

**58** Live and Work in Atlantic Beach

**390** Live in Atlantic Beach and work outside (Countywide %)

### DEVELOPMENT

Building Permits Issued, 2000-2018

In times when the housing market is strong, there is more still activity compared to new builds. After a decade of new build homes, manufacturing jobs in 2017 still gained again, indicating a strong market in Atlantic Beach.

**Assumption: Growth is Likely to Continue**

### TRANSPORTATION

**Assumption: Streets will Continue to be an Important Part of the Town's Budgetary Picture**

### LAND USE

### LAND USE

**Assumption: Most New Development will be Redevelopment**

SINGLE-FAMILY RESIDENTIAL	33%	431 ACRES	Highly desirable homes and single family detached homes. Development includes these land as residential.
CONSERVATION (Unbuilt and not included)	28%	386 ACRES	Includes wetland and protected areas.
MULTI-FAMILY RESIDENTIAL	16%	247 ACRES	Apartments, duplexes, townhomes, and condominiums.
COMMERCIAL	7%	95 ACRES	Restaurants, retail stores, and entertainment.
INSTITUTIONAL	7%	95 ACRES	Government, churches, schools, offices.
MANUFACTURING HOLDING	6%	80 ACRES	Mobile and manufactured homes.
VACANT AND BULLETPROOF	6%	80 ACRES	Land held for future development.
MIXED-USE	6%	80 ACRES	Land for mixed-use development.

### LAND USE

**Assumption: Redevelopment is Most Likely to Occur on Small Lots**

### ENVIRONMENT

Days with Over 2 Inches of Rainfall, 2009-2019

Days with over 2 inches of precipitation have been increasing, as have the overall rainfall amounts per day. The concern that Atlantic Beach is facing higher flood threats.

**Assumption: Rainfall Intensity is Increasing**

### ENVIRONMENT

Flood Exposure Map

This map shows the places where the increased rainfall shown above will have the most impact in terms of flooding. Areas shown in higher colors have lower flood exposure, and areas in darker orange and red have higher flood exposure, meaning they are more likely to flood first and more severely.

Areas on the sound side of Atlantic Beach have significantly higher flood threats than desirable properties.

Source: NOAA Coastal Flood Exposure Website: <https://coastal.noaa.gov/development>

### PUBLIC FORUM 1

An Opportunity to Provide Suggestions and Guidance...

- Existing Conditions
- Basic Assumptions
- Main Issues of Concern
- What We Want by 2050
- What We Don't Want by 2050
- Existing Land Use Map
- Redevelopment Potential
- Good Places
- Areas Needing Attention
- What Else?

### SURVEY

- On Friday, Feb. 7, 2020, we will launch an on-line survey
- The survey will ask around 20 questions
- Please complete the survey
- Ask your neighbors to complete one too
- <http://atlanticbeach-nc.com/land-use-plan/>
- <https://www.facebook.com/atlanticbeachnc/>
- Paper copies available at Town Hall

### NEXT STEPS

On-Line Survey Opens	Feb 7, 2020
On-Line Survey Closes	Feb 28, 2020
Public Forum #2	Mid-March
Initial Plan Drafted	May
Project Completion	August 2020

## Input Summary:

The image on the left side of the page is a reproduction of the display board provided at each input station. The text beside the image is a copy of the input provided (in no order). Display Board I reproduces pages in the Existing Conditions Report and is not included here. This information will be used to help identify project goals and priorities.

**2. BASIC ASSUMPTIONS:**

- ✓ Population growth continues
- ✓ No central sewer
- ✓ Housing market remains strong
- ✓ More redevelopment & infill
- ✓ More impervious surfaces
- ✓ Rainfall intensity continues

Do you agree? Anything missing?  
(please post notes here)



- No central sewer.
- Enforce impervious surface rules.
- Create impervious surface for old property – don't constrain development.
- Increased rain and water table.
- Make sewer unattainable.
- Restrict even more the percentage of property to reduce stormwater pollution.
- Impervious concrete should not count as 100% impervious but should be encouraged (perhaps this attendee meant "pervious concrete).
- Decrease housing area on lots.
- Existing drainage is poor in some areas – there is flooding from stormwater runoff even before new construction.
- New construction not the whole issue with runoff – low areas have been low for years & need to address stormwater system first.

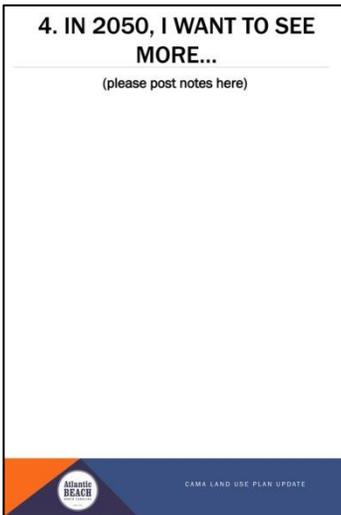
**3. MAIN ISSUES OF CONCERN:**

- Need for better quality development
- Growing the tourism industry
- Increased stormwater runoff
- Septic system functionality

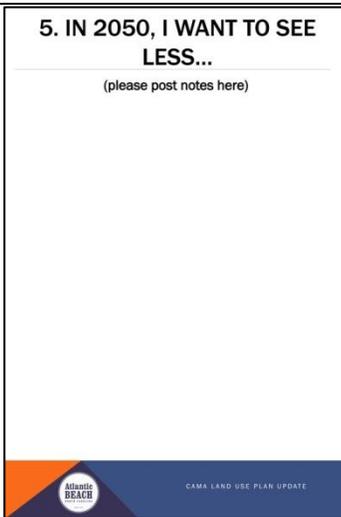
Do you agree? Anything missing?  
(please post notes here)



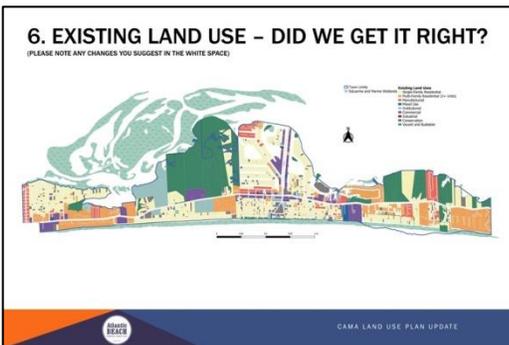
- Agree with issues of concern.
- If business sewer attaching to "Bun" (?) or peppertree after helping with infrastructure AB should not be involved in maintenance.
- Causeway redevelopment is vital to get right.
- Nothing to do here...no waterslide, no entertainment – more and more houses no quality of stuff to do.
- Land is too expensive for commercial.
- Causeway development is key.
- Work to improve neglected/run down properties across town.
- Town needs to control the issue of public sewer before circumstances require action – it is inevitable.
- Reduce traffic.
- Development of causeway is vital to our growth.
- Small homes being replaced by oversized homes (height/size)
- Causeway redevelopment.
- Work towards controlling run down & neglected properties.
- Monitor and check existing systems are functioning.
- Enforcement of land use rules/laws.
- Work to increase tourism demand year round – develop a plan to increase tourism in the off season.
- No getting involved with sewer on causeway.
- When redeveloping keep in mind the unique history & culture of AB – develop the boardwalk circle area with this in mind.



- I would like more open spaces; less development – not another Myrtle Beach.
- Happy medium of: things to with controlling development – want to enjoy where I live.
- More walking routes.
- Centralization of manufactured homes to only specific areas.
- Good retail & dining.
- More visitor attractions and entertainment.
- Waterfront restaurants/bars within a centralized walkable area
- Septic alternative – be creative.
- Maintain small coastal town feel.
- Walkability.
- Walkability – the slanted sidewalks in the center of town need to be addressed.
- Ecotourism.
- Public kayak launch, marsh walkways, etc.
- Third bridge to eliminate Highway 58 traffic.
- Less traffic.
- More facilities for residents & visitors using the beach; dining/picnic areas at circle.



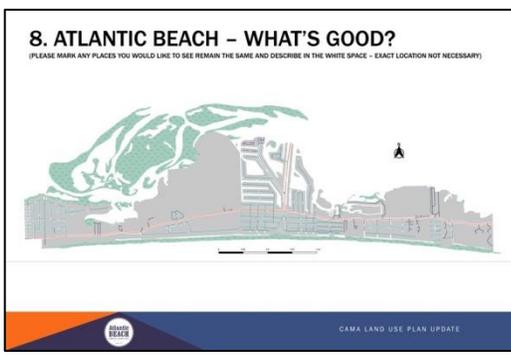
- High density development.
- Flooding.
- No high density development.
- Don't over commercialize.
- Neglected buildings; high-rise buildings.
- Run down buildings.
- Less billboards, especially on causeway and circle.



There were four notes on this map, but they all related to Image # 8, Atlantic Beach – What's Good? Those notes are listed there.



No input provided.



Great Town Park.  
 Love the Town Park.  
 Sidewalks along Fort Macon [Road].  
 Love Fort Macon [the State Park].  
 Town Park ♥

(Comments in Blue were posted on the Existing Land Use Map (#6))



Causeway needs improvement.  
 Entry into AB needs to be more inviting.  
 Flooding.  
 Fred Bun misrepresented what the circle was to be.  
 Causeway needs improvement.  
 Circle; needs development.  
 Vacant/neglected buildings need improvement.

## 10. WHAT ELSE SHOULD WE CONSIDER?

(please post notes here)

- Aging population will increase permanent residents.
- Quality of life of residents.
- How do we attract more year-round residents.
- Mitigating the impacts of larger and stronger storms (hurricanes).
- In todays world people want protected environment and less development – and are travelling to places less traveled.
- Improve causeway appearance.
- Quality of life for residents.
- Population is aging – let’s attract younger residents and year-round.
- Community events and involvement.
- More volunteer committees/opportunities.
- Impact of I-42 on projections.



### Forum Photos:

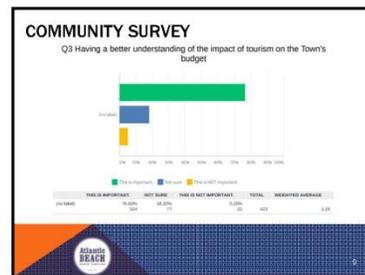
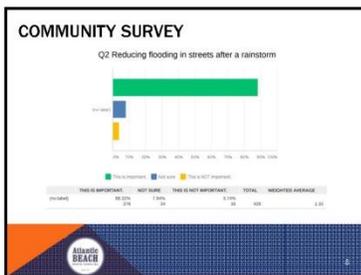
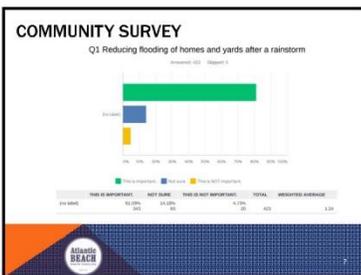
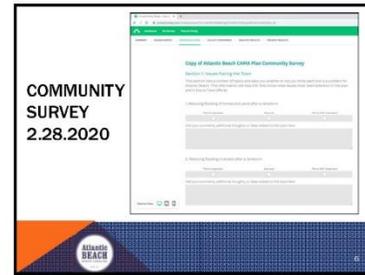
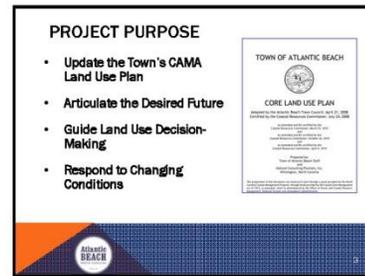


# 3.1.3: PUBLIC FORUM TWO

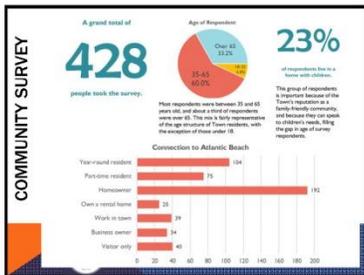
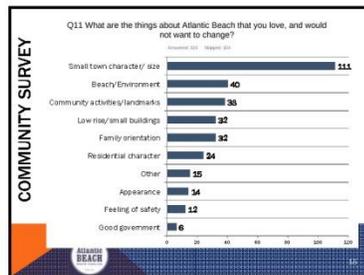
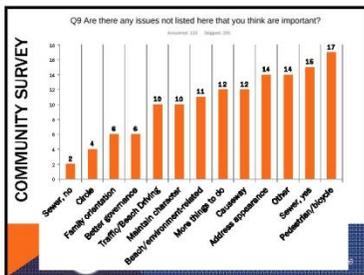
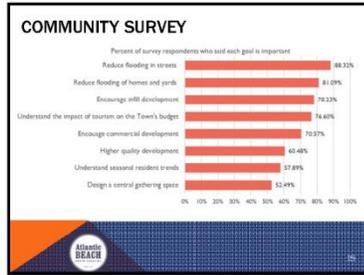
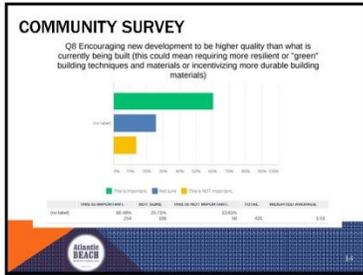
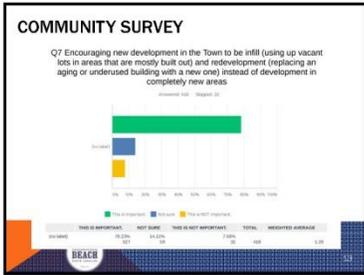
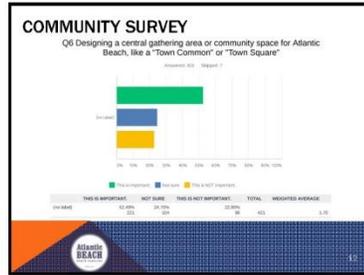
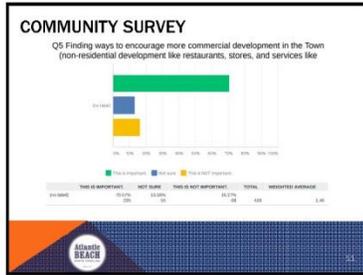
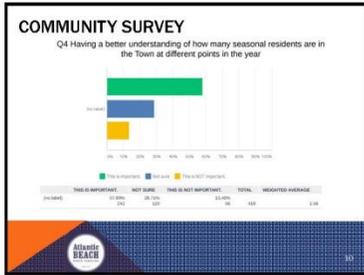
**Location:** Town Hall Meeting Room, 125 West Fort Macon Road  
**Date:** March 11, 2020  
**Public Forum Session Times:** 3:00PM and 6:00 PM  
**Number of Attendees:** 3:00 PM Session – 7 attendees  
 6:00 PM Session – 5 attendees

**Overview:** Each session included a summary presentation of the community on-line survey results and a series of 4 stations for participants to provide input on project priorities, the meaning of “small-town” and “family-oriented” as well as copies of the Causeway Master Plan and Circle area master plans. Town staff and consultants were available to answer questions throughout each session.

## Presentation Slides (1-9):



# Presentation Slides (10-23):



- ### SUMMARY OF ISSUES
- Maintaining 'small-town' character
  - Promoting family orientation
  - Encouraging local businesses
  - Controlling building size
  - Better property maintenance
  - Community appearance
  - Understanding 'the Circle'
  - Fostering causeway redevelopment
  - Addressing lot flooding
  - Addressing street flooding
  - Promoting walking and bicycling

- ### PUBLIC FORUM 2
- An Opportunity to Provide Suggestions and Guidance...
- Project Issue Ranking
  - What Are the Components of Small-Town Character?
  - What Does 'Family-Friendly' Mean?

### NEXT STEPS

Another Public Forum (?) ?

Initial Plan Drafted May 2020

Project Completion August 2020



**Input Summary:**

The image below sets out the 11 key project issues identified in the community survey (plus an “other” category). Attendees were each given three blue dots and asked to place dots next to the issues they thought were the most important. Respondents could place up to 3 dots next to any of the issues.

**PROJECT ISSUE RANKING**

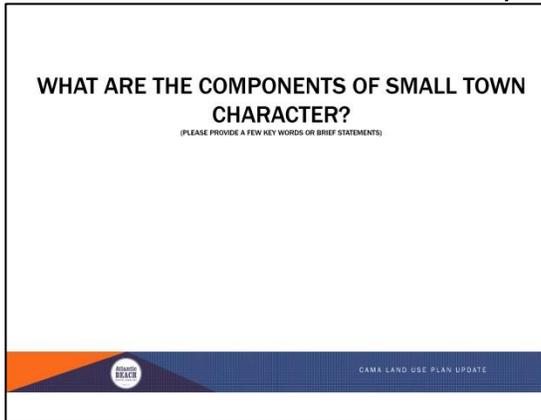
(PLACE YOUR DOTS NEXT TO THE MOST IMPORTANT ISSUES TO ADDRESS)

Maintaining small-town character		6
Promoting family orientation		1
Encouraging local businesses		3
Controlling building size		1
Better property maintenance		3
Community appearance		3
Understanding the Circle		3
Fostering causeway redevelopment		4
Addressing lot flooding		
Addressing street flooding		
Promoting walking and bicycling		4
Other (please specify with a sticky note)		

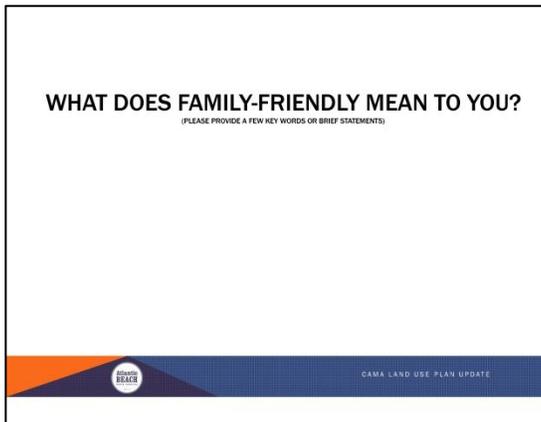


**Input Summary:**

The following two boards asks attendees to help refine the definitions of “small town character” and “family-friendly” since these two phrases were used so frequently to describe the Town in the written response portions of the community survey.



- Walking & shopping area like Beaufort
- Safety (listed 3 times)
- Centralized Town area surrounded by single-family homes, not condos or big hotels
- Consistency in housing development
- Cottage look
- No high-rese development
- Limited commercial development
- Sense of community (listed twice)
- Limiting condos
- Safe, friendly environment



- A crosswalk over Fort Macon Ave from the [Town] park to Atlantic Station for safety
- Food trucks
- Food courts
- Family arcade
- Family activities, less adult activity – no fun for those with no kids
- Something for all ages
- Safe environment for my kids
- Affordability
- Indoor/outdoor water park
- Extend the [tourist] season
- Pull people from Newport, Morehead, Beaufort, New Bern
- Things family[ies] enjoy; i.e., waterslide!
- Good for the oldest and young among us
- A lot to be done in nature
- Small walking area in park with different talking points

**Forum Photos:**

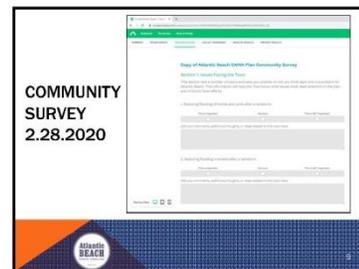
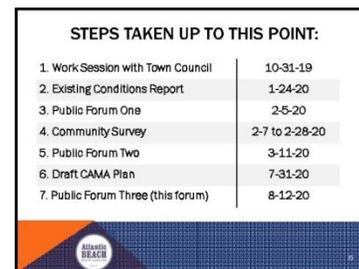
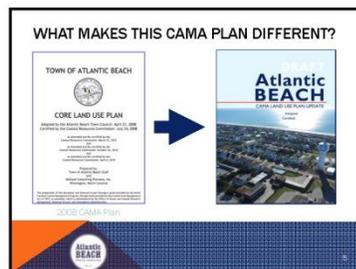
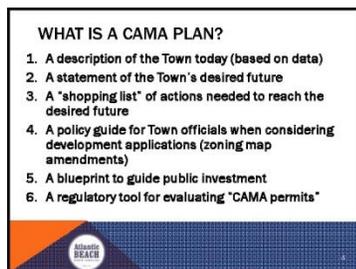
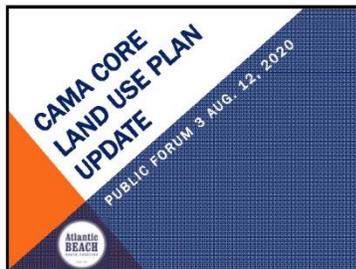


# 3.1.4: PUBLIC FORUM THREE

**Location:** Town Hall Meeting Room, 125 West Fort Macon Road  
**Date:** August 12, 2020  
**Public Forum Session Times:** 10:00AM and 4:00PM in-person & 1:00PM Video presentation  
**Number of Attendees:** 10A Session – 5 attendees (incl. 4 Town officials)  
 IP Video Session – 4 attendees (incl. 1 Town official)  
 4P Session – 2 attendees (2 public)

**Overview:** The morning session involved a general discussion of the Grove development and discussions with Town officials regarding minor edits to the draft plan document related to the Vision statement and the section on Wastewater. The other two sessions included a summary presentation of the draft CAMA plan with a focus on *Part I. Desired Future*. Town staff and consultants were available to answer questions throughout each session. One member of the public asked questions about the current fill regulations and another provided some written comments which are attached here.

## Presentation Slides (1-9):





**Citizen Comments:**

The following comments were provided by a citizen following the video conference conducted at 1:00 PM. These comments are under consideration by the Town.

---

**CAMA Land Use Plan**

1 message

Susan [REDACTED]

Wed, Aug 12, 2020 at 4:37 PM

To: "planner2@atlanticbeach-nc.com" <planner2@atlanticbeach-nc.com>, "chad@codewrightplanners.com" <chad@codewrightplanners.com>

Cc:

All –

I was unable to log onto your remote public meeting for the CAMA Land Use Plan this afternoon. I wanted to let you know that I think it is a good plan, overall.

A few comments/suggestions:

1. Maps are often difficult to read due to size, line type and selection of colors. Maps could be placed on “facing” pages with match lines to be larger. Don’t use three close shades of red for zoning map – too hard to distinguish when they aren’t next to each other.
2. The Town’s Vision Statement is too long. It should be something every town council member and employee could (SHOULD?) memorize and recite. It lists what you already doing along with what you hope to do. One paragraph of “visionary” thought would do. If it is going to be a page long, and even if it isn’t, it would be nice if it addressed equity for all ages, incomes, races, and abilities.
3. AB has a large population of elderly people. Mobility and access need much more attention. With the loss of piers, elderly and those with mobility impairments are not getting access to the ocean. Other beach towns are doing a much better job of providing access to the beach for people with mobility restrictions. The public walkways at the Circle are lumpy, missing pavers, too narrow (in front of the Tackle Box), and the boardwalk is buckled and covered with sand, and there is no mat to help visitors onto the beach. Sunset Beach is a great example of a beach town with good mobility. People with walkers, canes and wheelchairs gather on the beach together easily from their public parking lot.
4. The document states the desire to retain “small town” and “cottage” and “small-scale” development, which is in keeping with the town resident’s and homeowners wishes. I believe that the UDO and Land Development guidelines for the Town are written in direct opposition to these goals. If the entire town was redeveloped with the current UDO, Atlantic Beach would be filled with monstrously large, looming buildings, set too close to the street and too close to each other in every district. Building setbacks need to be increased to address the pedestrian scale at the street, as well as to take storm drainage between lots into consideration. These huge structures increase stormwater run-off, which is not adequately addressed now. Huge cottages are routinely accommodating far more guests than their septic permits are designed for, since people are sleeping in the top floor “great rooms.” Restricting a town owned sewer system as a means of limiting development is not working – buildings are going in far too large for the lot they are on. It appears that all the zoning districts allow 8 units per acre, 45’ tall, 40% lot coverage. Why have so many classifications, if it’s all just about the same?
5. There is a section about the history of AB, and it is important to the citizens and visitors of the area, yet there is no mention of the history or culture of the place in the future plans, or if there are structures or places that need preservation.
6. There are a few typos and cut off sentences, formatting issues.

Thanks for the opportunity to comment, and all the effort that has gone into this document.

Susan

**Forum Photos:**



Attendees		Done
	<b>Julian</b> Me	
	<b>Chad Meadows</b> Organizer, Presenter	
	<b>Elise Clouser (News-Times)</b> Web Viewer	
	<b>Hall</b> Web Viewer	
	<b>Norm McCullough</b> Web Viewer	
	<b>Trace Cooper</b>	

## 3.1.5: COMMUNITY SURVEY REPORT

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As part of the community engagement for the Atlantic Beach CAMA Plan Update, the project team conducted a community survey. The survey ran from February 7 – February 28, and was available online and on paper copies available at Town Hall. A total of 428 people took the survey, including one paper copy that staff entered into the online software.

The survey was made up of three sections, each with a different type of question.



The first section asked about the importance of several specific topics that the project team had identified as possibly important for inclusion in the plan.



The second section asked respondents to think broadly about the future of the Town.



The final section collected information about the respondents.

The following pages give an overview of the key findings from each section. The full results, including the text of all comments, will be included in the appendix of the plan.



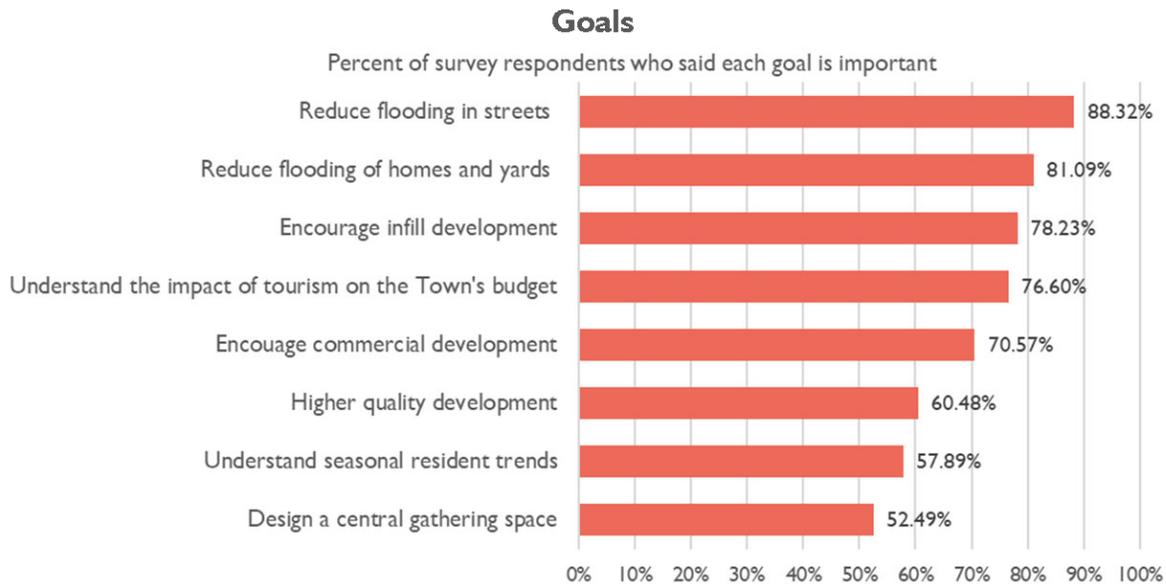
# SPECIFIC GOALS



The first section presented respondents with eight topics and asked whether the respondent thought each was important for Atlantic Beach to consider, not important, or that they weren't sure. These questions were designed to help the Town know what issues most need attention in the plan and in future Town efforts. Each question also included a place for respondents to leave any comments related to that topic.

This chart shows the number of respondents who said that a goal was important, and ranks the issues with the one that most people said was important at the top. Note that even the goal with the least number of "important" votes still had over 52% of respondents agreeing that it is important.

The two top-ranked goals both have to do with flooding after storms. After that come some development-related topics and having a better understanding of the impacts of tourism on the Town's budget. Understanding trends in seasonal residency and designing a central gathering space for the Town were the lowest-ranked.



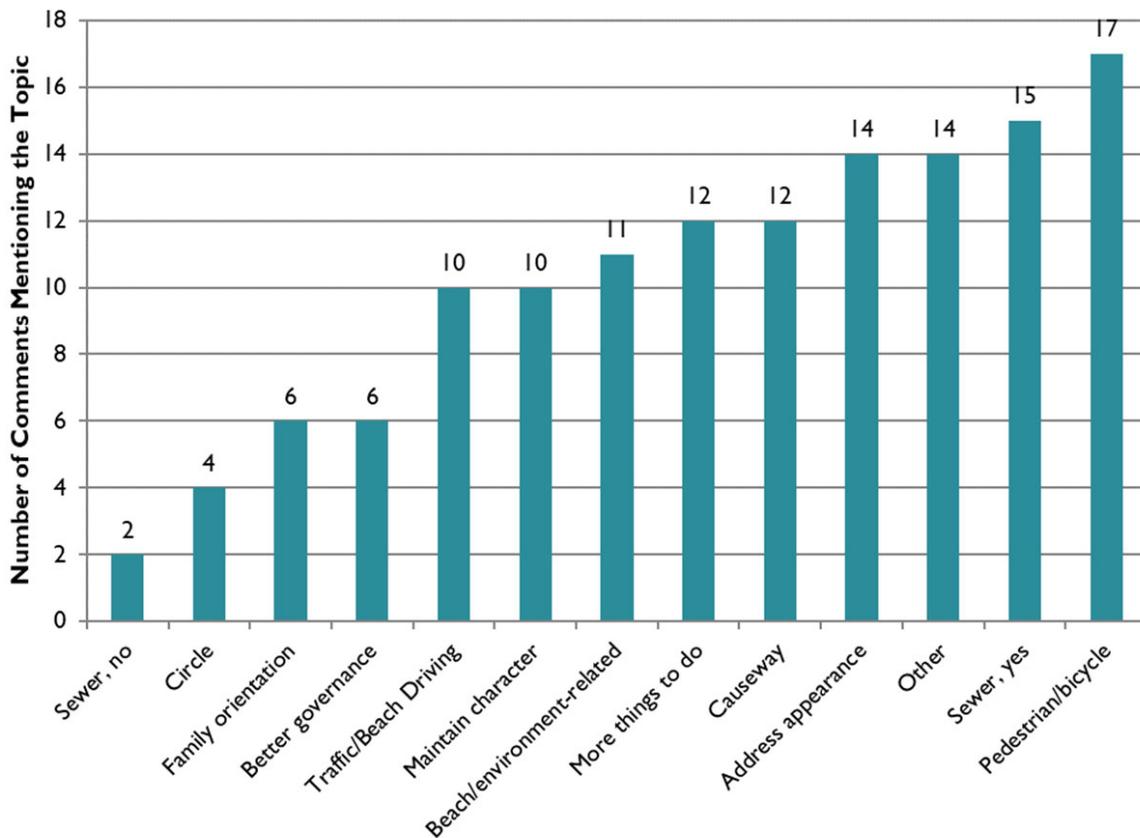
133 respondents wrote something on the question asking about other goals not listed in the survey.

Some common themes emerged from these responses:

- Improve the Causeway with more diverse businesses and development on empty lots;
- Install and improve sidewalks and bike infrastructure around town;
- Need for cleanup and better maintenance of both public and private spaces, including everyday garbage, dog waste, and after-storm cleanup;
- Need to increase the number of activities for families with children;
- Consider banning or reducing driving on beaches; and
- Public sewer—comments were of two types, with some calling for the Town to invest in public sewer infrastructure, and others strongly discouraging it.

The following chart summarizes the number of comments received on each of the most-mentioned topics:

**Other Important Topics Identified in the Comments**





# BROAD VISIONING



The next section asked respondents to “think big” about the future of the Town. It asked three open-ended questions aimed at understanding the broader vision for the Town. These responses will be used to update the Vision Statement in the plan, which serves as the “North Star” that guides the community’s choices over the next 20 years.



Imagine...

The first question asked respondents to imagine they travelled to the future and saw Atlantic Beach in 20 years, and asked, “What do you hope you see as you look around?”

The responses showed consensus on most points, and many people’s answers spoke to one of three key topic areas:

## The overall image and feel of the Town:

- A small, quaint beach town;
- A town that is safe, clean, and well-maintained;
- More family-oriented activities and businesses; and
- More restaurants and retail businesses, but a focus on local “mom and pop” small businesses, rather than becoming a “commercialized” area.

## Development and the built environment:

- Infill in vacant lots;
- Higher quality and attractive construction and redevelopment;
- Small-scale development/redevelopment – many people mentioned “no more high rises;” and
- Development of the Circle (as planned).

## Public infrastructure and government:

- Walkable and bikeable town with infrastructure improvements, including sidewalks, bike paths, bike parking;
- Environmental focus, including dark skies, green construction, landscaping and trees;
- Improvements to public parks and the boardwalk area; and
- Overall “good government” including responsive officials and staff.

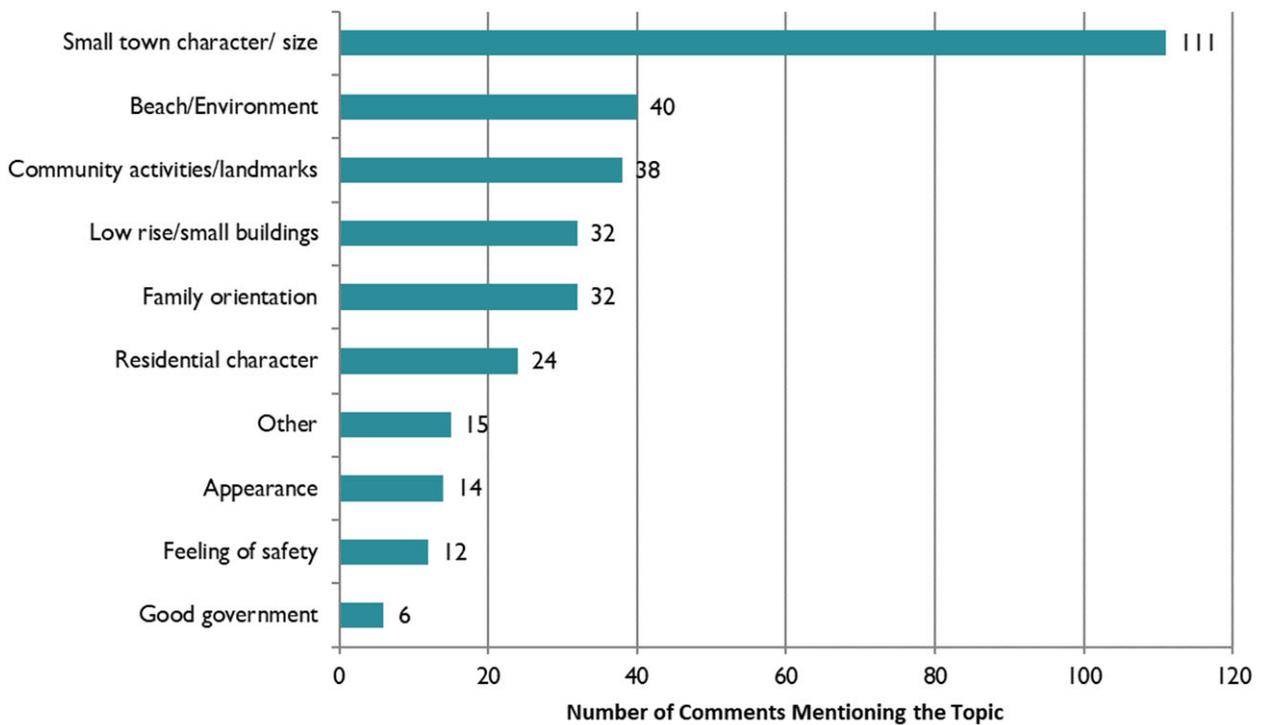


As reflected in the word cloud, many respondents said they want to prioritize preserving:

- The Town's family-friendly atmosphere;
- The small-town, not overly-commercialized character of the Town;
- The sense of safety residents feel;
- The small size of most cottages and developments (in contrast with other beach towns dominated by large homes and high rises);
- The views of the ocean that are unobstructed by commercial development;
- The area's accessible beaches that are well-maintained;
- The peaceful nature area at Fort Macon State Park; and
- The Town's landmarks, including Oceanana Pier.

The chart below captures this information in another way, showing the number of comments that mentioned the most common responses.

### Answers to “What do you hope to see in Atlantic Beach in 20 years?”



The final question in the visioning section asked:

## What would you change about Atlantic Beach to make it a better place to live?

Perhaps unsurprisingly, this question drew some of the most diverse responses, with many people giving highly specific ideas. Still, the common themes were in line with the results of the rest of the survey. This page offers a sampling of these responses, and highlights common responses shared by multiple respondents.

Utilize natural areas with more trails.

It's currently too spread out. I would focus on making the circle and causeway a central location for shopping/dining and make it walkable and friendly to bikes/carts.

More beach access points, including handicap accessible accesses and bathroom facilities, and a public boat ramp.

Focus less on condos for folks that have money for 2nd homes, have places for families to be able to stay

Clean up some of the under kept businesses and homes.

More community events and opportunities for locals to get together.

A few more service oriented businesses (pharmacy, medical office, fast food).

A dog park!

More year-round businesses, restaurants and shops.

Continue the plans that are in progress and to update AB, the oldest community on the island, we don't want to be we don't want to be perceived as "tired."

Renovate and rejuvenate the empty commercial properties. If this isn't possible then remove or convert them to another use.

More community events and opportunities for locals to get together.



# WHO RESPONDED?



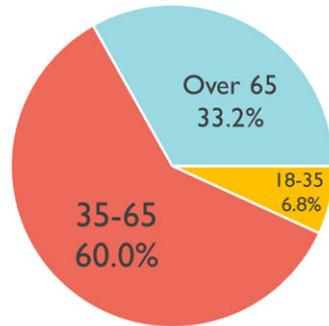
In order to understand who responded to the survey and ensure that a wide variety of perspectives were included, the survey asked three questions aimed at getting to know the respondent.

A grand total of

# 428

people took the survey.

Age of Respondent



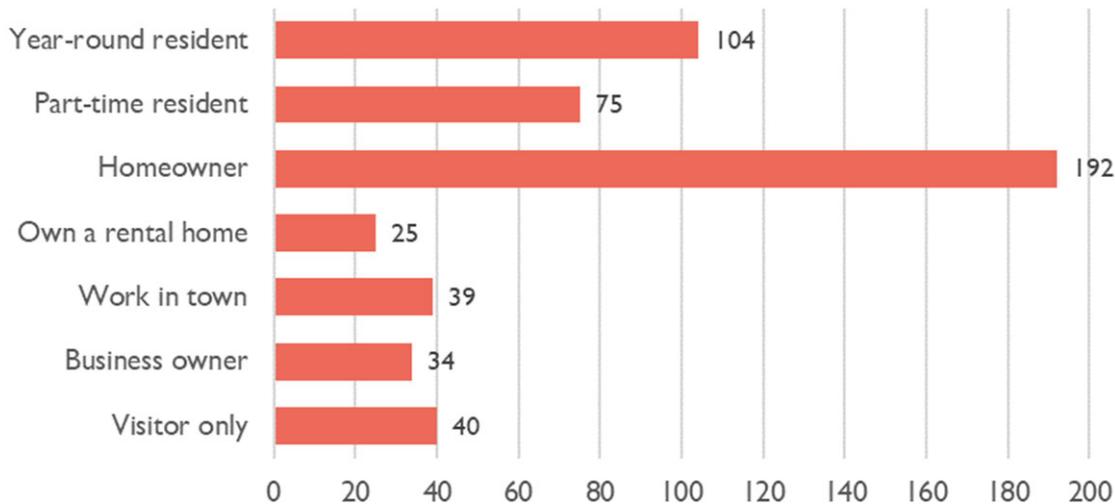
Most respondents were between 35 and 65 years old, and about a third of respondents were over 65. This mix is fairly representative of the age structure of Town residents, with the exception of those under 18.

# 23%

of respondents live in a home with children.

This group of respondents is important because of the Town's reputation as a family-friendly community, and because they can speak to children's needs, filling the gap in age of survey respondents.

Connection to Atlantic Beach



The survey drew responses from a wide range of people connected to Atlantic Beach, including more than 100 year-round residents and 75 part-time residents. 192 people who own and live in a home in Town at least part-time responded. 40 visitors also took the survey, providing an important perspective, but importantly not overshadowing the responses from year-round or part-time residents.