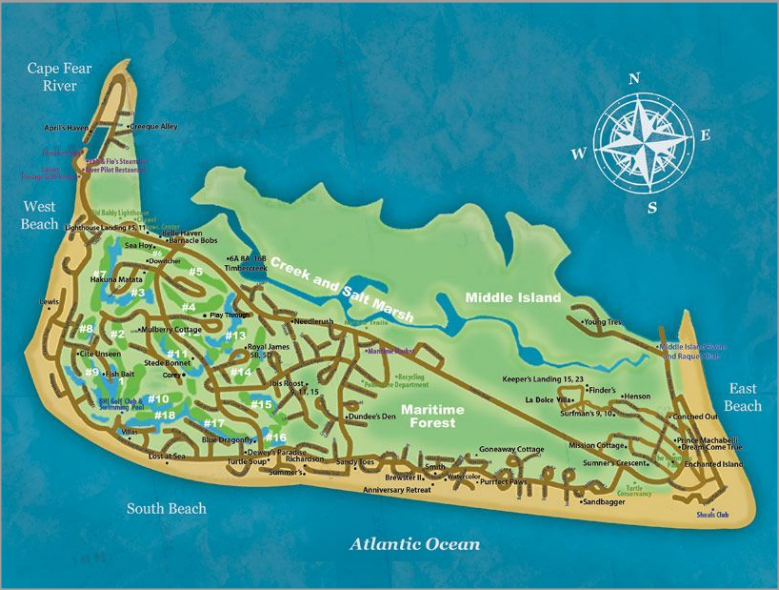


An Era of Change: Bald Head Island



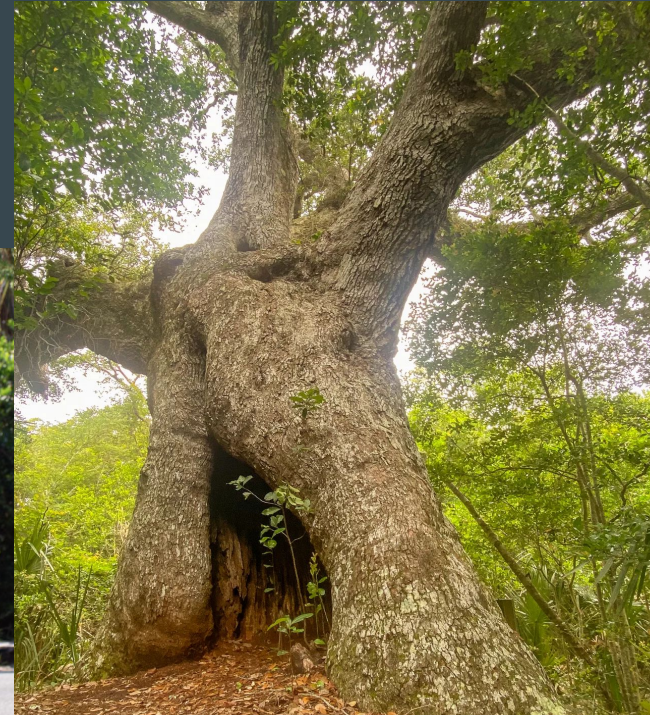
A look into the vulnerability of coastal communities as they combat the waves of climate change and rising development

Background



Background

- BHI is approximately 4 square miles
- Contains the second-largest Maritime Forest in the state of North Carolina
- Bald Head Woods Reserve is nearly 200 acres of undevelopable maritime forest that is protected by the North Carolina Coastal Preserve.
- Only golf carts are driven on the island



Background

A scenic view of a coastal landscape. In the foreground, a large, leafy tree branch hangs down from the top left corner. Below it, a body of water is visible, surrounded by lush green grass and vegetation. The background shows a clear blue sky with a few wispy clouds. The overall scene is bright and sunny.

- Research has shown that the relative sustainability of Bald Head Island (BHI) has depended upon the health and survival of the maritime forest (Ocean Forest).
- This section of forestry acts as a buffer during storms to prevent wind erosion along the coastline and provides a home to a unique ecosystem of plants and wildlife.
- As a barrier island, BHI experiences a higher level of vulnerability than other locations due to factors such as climate change and intense tropical storms

Wildlife

White-tailed Deer



Coyote



Photo by Jerry Waits

Orb-Weaver

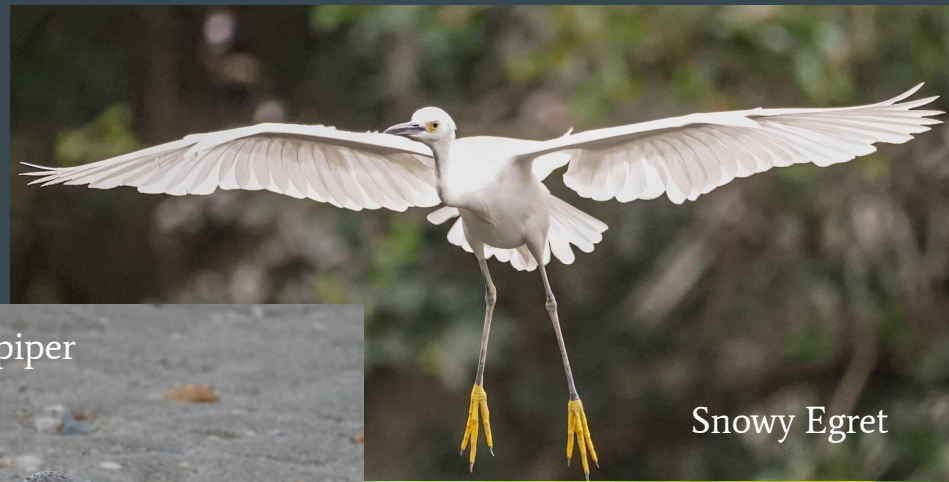


American Alligator



Wildlife

- BHI has been designated as a “globally important bird area” by the National Audubon Society
- Home to a vast variety of shorebirds, songbirds, wading birds, and birds of prey, and provides refuge for many migratory birds in the fall to late-winter



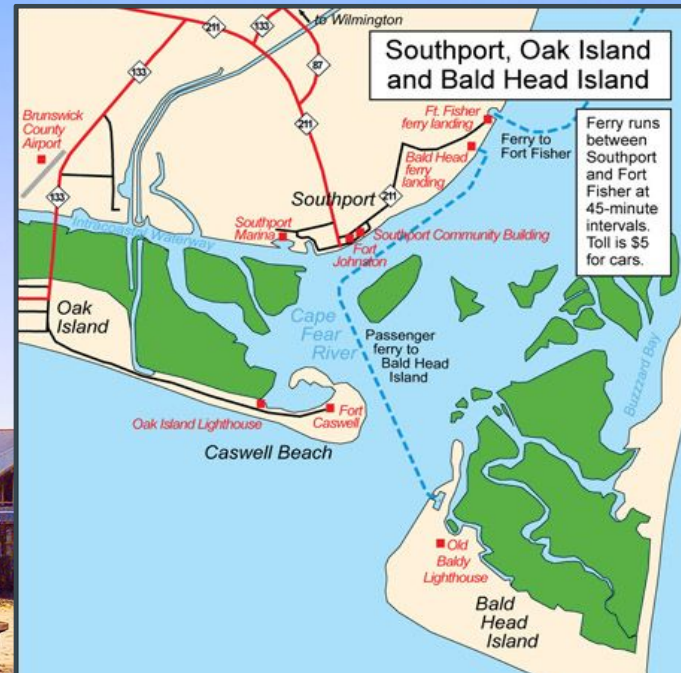
Wildlife

\$100,000 fine if you
disturb a nest!

- BHIC has a nationally recognized Sea Turtle Protection Program
- 13,157 sea turtle hatchlings made it to sea in the summer of 2022 but only 1% (13) of those hatchlings will make it to adulthood
- As of early October 2023, 120 of 122 nests have hatched on the island



Island Transportation

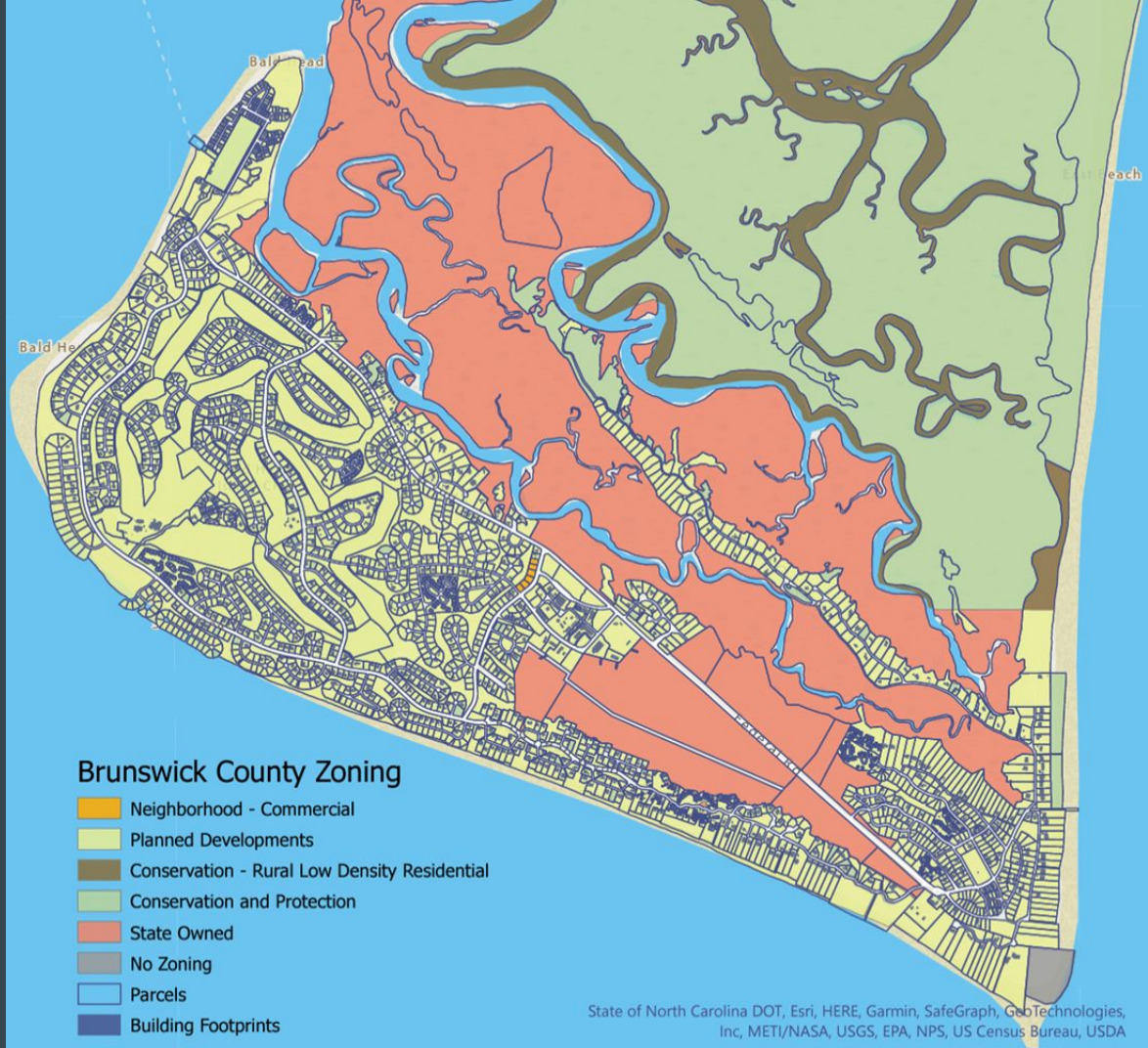


- 20 min ferry ride
- Bald Head Island Limited recently tried to sell the ferry system to a private company called SharpVue
- When storms rise it can be hard evacuate the island

Current Zoning Map

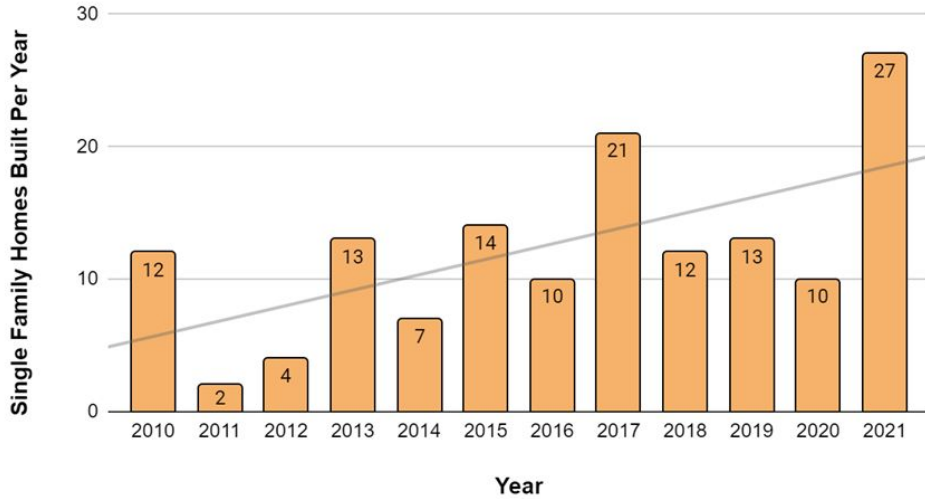
Research Questions:

1. What is the current rate of new development on buildable lots on BHI?
2. Will the rate of development change the structure of the maritime forest in the future if zoning ordinances remain the same versus if they are changed?
3. What perceptions do stakeholders have of current and future tree mitigation policies?

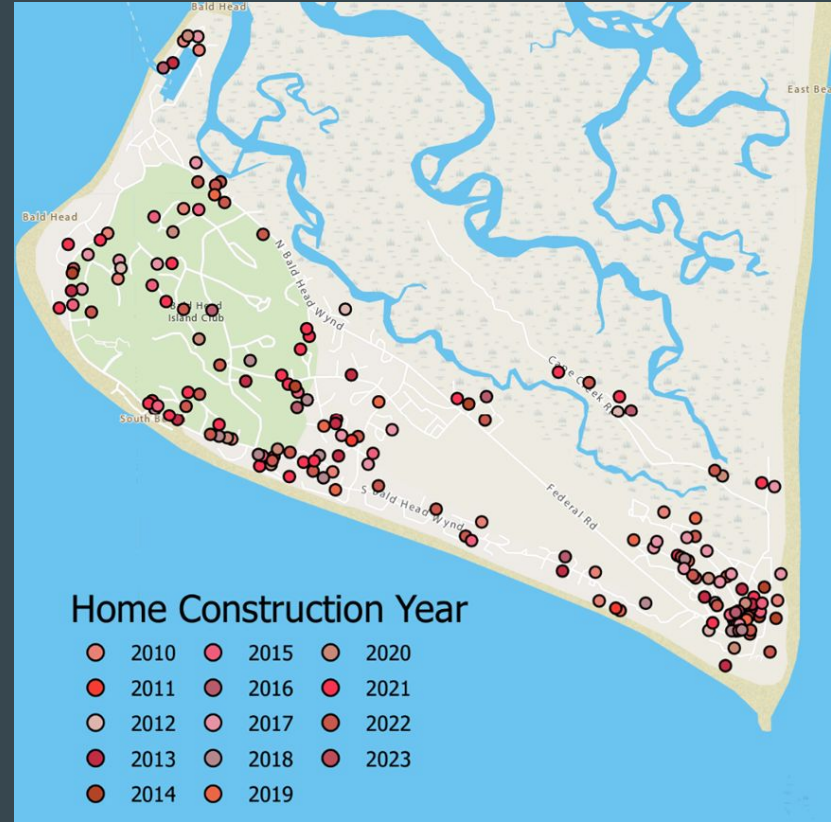


Development Rates

New Construction on BHI



30 homes were built in 2022



Growth on the Coast

- Many coastal communities struggle with finite growth
- The only place to retreat when hazards occur are inland
- Currently there are about 850 unimproved or undeveloped lots on BHI
- BHI is about 60% built out
- How do you care for growing communities with limited resources









Impact of Climate Change

- The maritime forests act as a buffer against strong winds, salt spray and the strong root systems help prevent soil erosion
- The roots also help purify and contain groundwater



There are 1,839 properties in Bald Head Island that have greater than a 26% chance of being severely affected by flooding over the next 30 years. This represents 90% of all properties in Bald Head Island.



Conclusion

When the forest thrives, the island thrives!

- How can we incentivize the public to establish further tree protection policies or ordinances?
- Establish penalties for disturbing trees
- Gather stakeholder input to understand the needs and expectations of property owners on the island

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Photo Credit: Jess Abel - UNC Public Communications Specialist

Photo Credit: “Positively Bald Head Island” - Facebook Group

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