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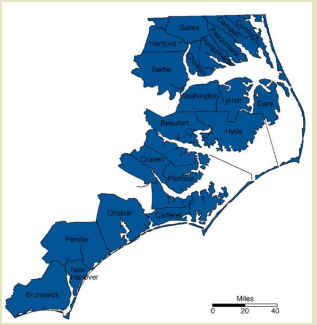
The CAMA and Barrier Island Development

Tara MacPherson
District Manager
North Carolina Division Of Coastal Management (DCM)
Wilmington




DCM Aerial
Surveillance
Figure 8 Island
April 2021

Division of Coastal Management (DCM)

The DCM carries out:

- The State's Coastal Area Management Act (CAMA) of 1974
- State's Dredge and Fill Law of 1969
- Coastal Zone Management Act of 1972

…in the 20 coastal counties, using rules and policies of the N.C. Coastal Resources Commission, known as the CRC. The division serves as staff to the CRC.

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North Carolina Coast

- Covers 320 miles of ocean beaches and more than 12,000 miles of shoreline
- Encompasses 2.3 million acres. Albemarle-Pamlico estuarine system (2nd largest estuarine system in the nation & 3rd largest in the world)
- 5.1 million acres of wetlands
- Populated by more than 900,000 residents

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CAMA …

Balances competing coastal pressures through **development permitting** under the rules of the CRC.

When does development on a Barrier Island trigger a CAMA Permit??

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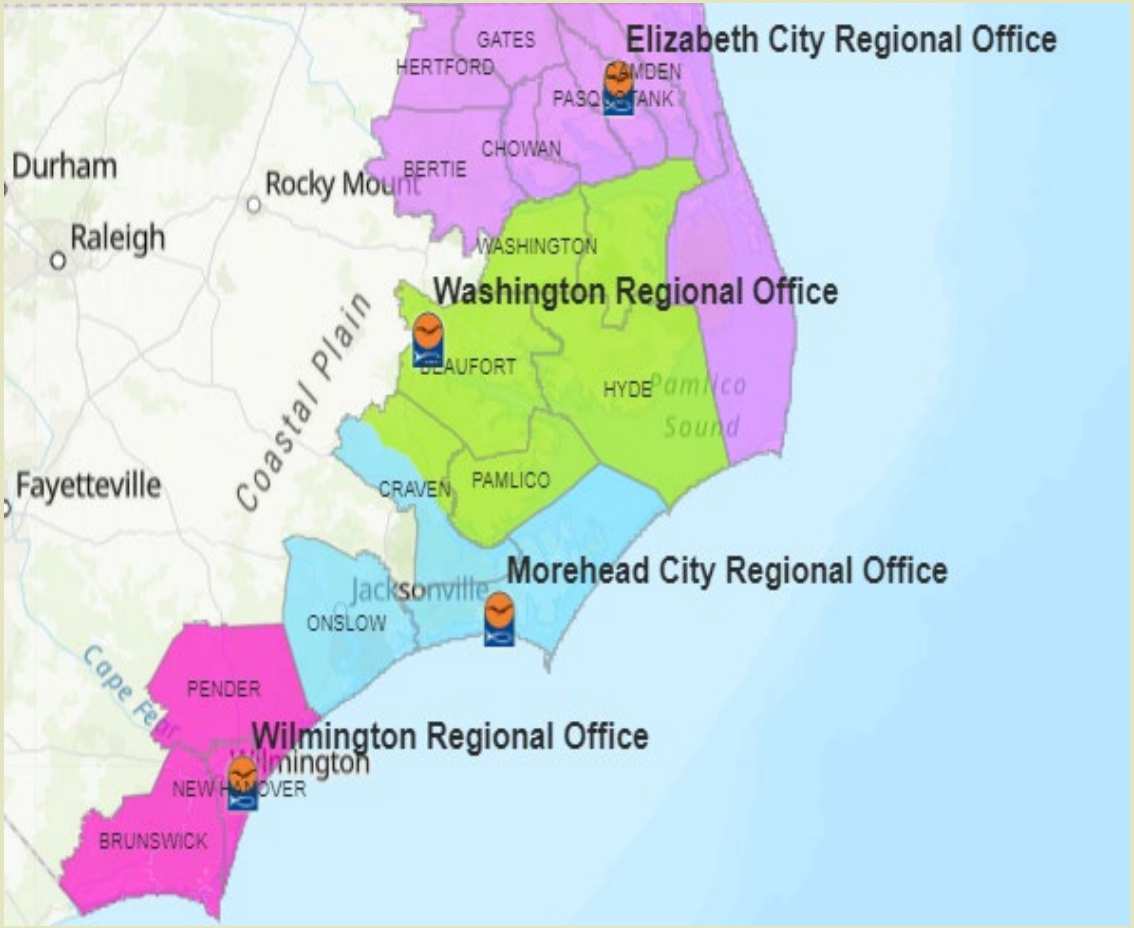
CAMA Counties

DCM has four different field offices



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Areas of Environmental Concern (AECs)

Ocean Hazard Areas

-Ocean Erodible Area

-Inlet Hazard Area

-Unvegetated Beach Area

Estuarine System

-Public trust waters and submerged lands, estuarine waters, coastal wetlands, and coastal (non-ocean) shorelines

- Estuarine Shoreline Areas

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CAMA Permits are required if you are undertaking **development** in an AEC:

Any activity in an AEC involving, requiring, consisting of the construction or enlargement of a structure; **excavation; dredging; filling; dumping; removal of clay,silt, sand, gravel or minerals; bulkheading, driving of pilings; clearing or alteration of land as an adjunct of construction; alteration or removal of sand dunes; alteration of the shore, bank, or bottom** of the Atlantic Ocean or any sound, bay, river, creek, stream, lake, or canal.

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Ocean Hazard AECs

Ocean Erodible Area

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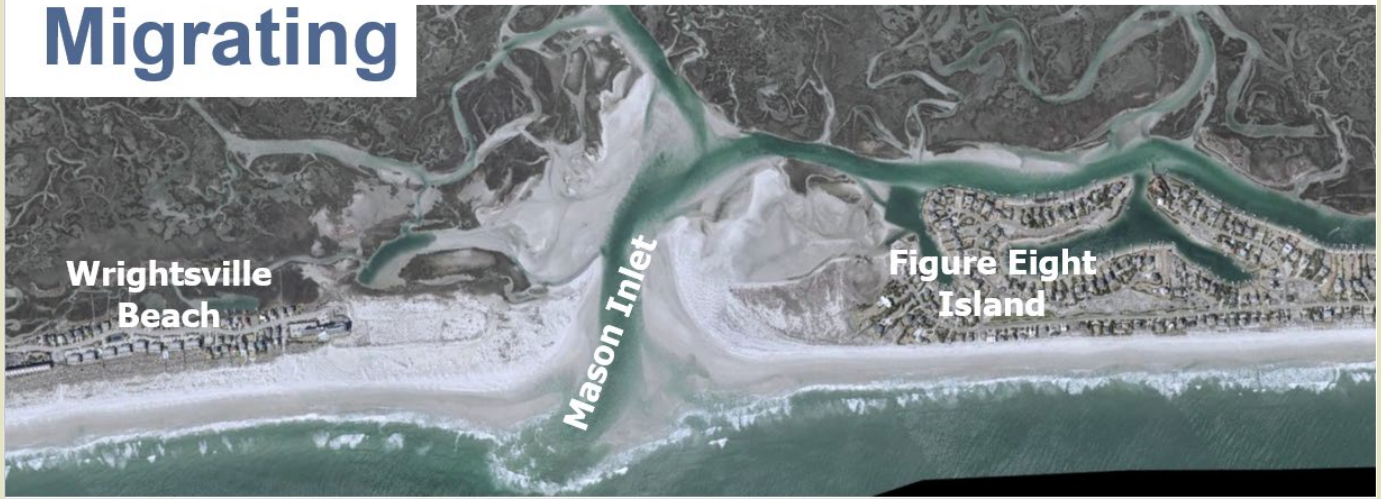
Inlet Hazard Areas



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Inlet Hazard Areas (IHA)

Areas especially vulnerable to erosion and flooding due to proximity to ocean inlets

- **Allows no more than one commercial or residential unit per 15,000 sq. ft. of land on lots subdivided or created after July 23, 1981.**

- **Only residential structures of four units or less and non-residential structures of less than 5,000 sq. ft. of total floor area shall be allowed.**

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Unvegetated Beach Area

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Ocean Erodible AEC:

***How to determine the AEC**: Long term annual erosion rate X 90.*
-With a 2 ft. erosion rate the AEC extends 180 ft. from the FLSNV.
****Example: 2 ft. erosion rate 2 ft./yr. x 90 – 180 ft. AEC from FLSNV**

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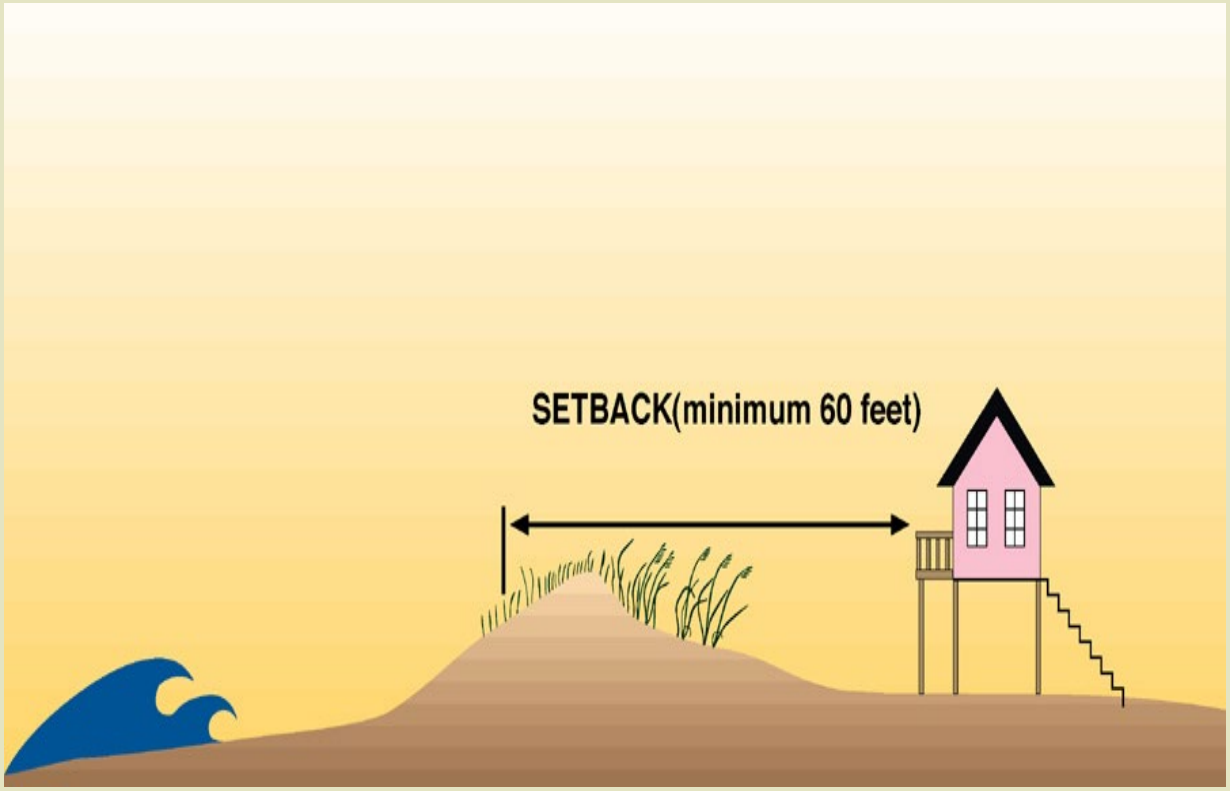
Ocean Erodible Area Setbacks & Frontal Dune Systems

How to determine building setbacks:

Multiply the Long Term annual erosion rate x 30.

Example:

Erosion rate is 2 ft. / yr. x 30 = 60 ft. building setback for a home <5000 sq. ft.



Pulled from FLSNV or static line! -

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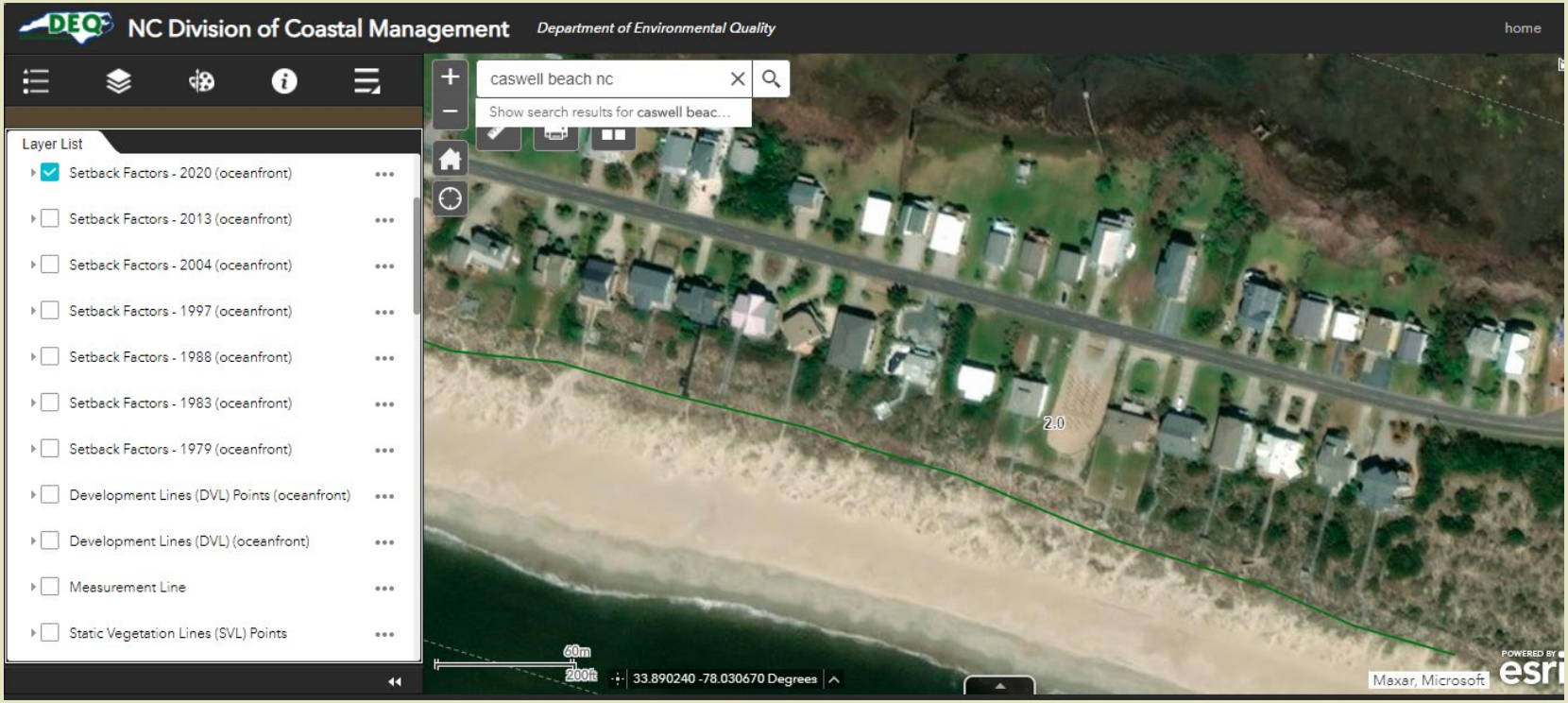
DCM MAP VIEWER

NC DCM setback and erosion rates are online!



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"Oceanfront Construction Setbacks – 101"

Rules: 15A NCAC 07H .0306(

Static Vegetation Lines: How do you get one?

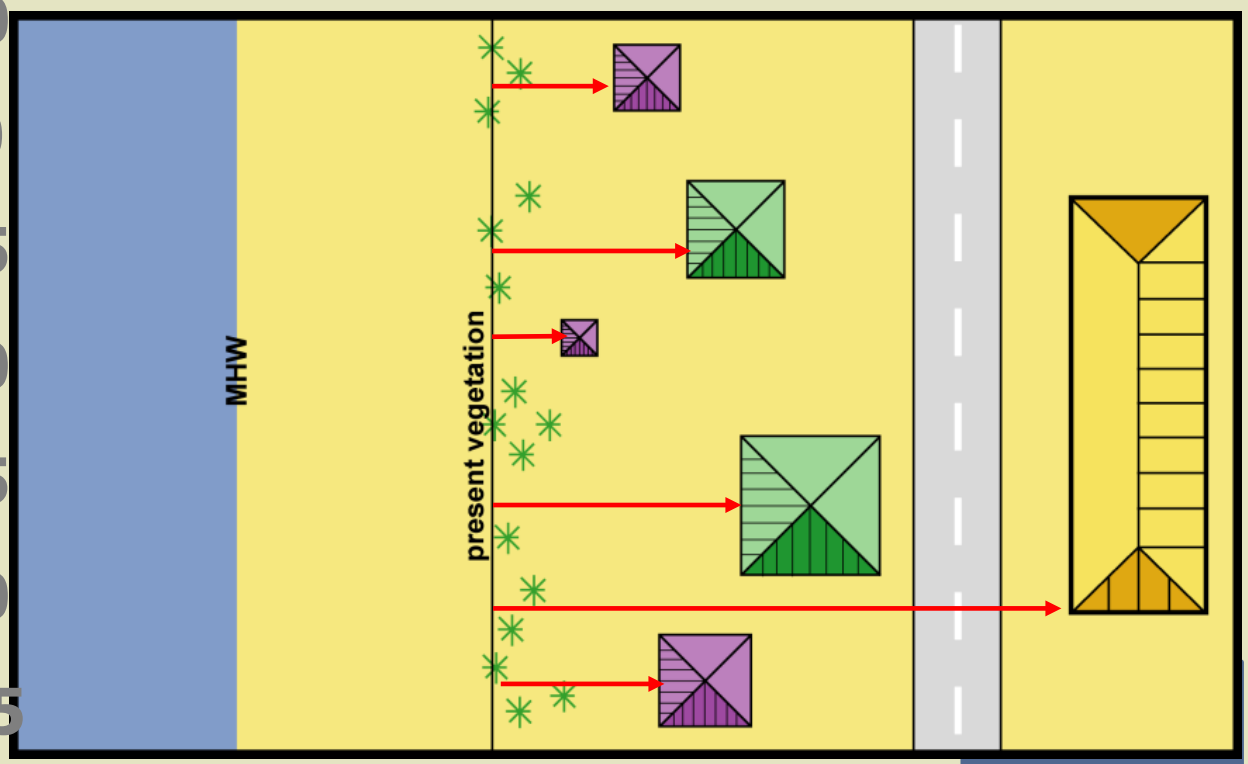

180 Ft. AEC
60 ft.
setback
60 ft.
setback
Static Line
FLSNV
© 2016 Google
Google earth
33°54'52.94" N 78°09'48.78" W elev 0 ft eye alt 466 ft

Graduated Oceanfront Construction Setbacks

Graduated erosion-based setbacks based on size of structures and long-term erosion rates

Minimum Setback Factor ("erosion rate") = 2 feet/year

- <5,000 sqft… x30
- 5-10K sqft…. x60
- 10-20K sqft… x65
- 20-40K sqft… x70
- 40-60K sqft… x75
- 60-80K sqft… x80
- 80-100K sqft . x85
- >100K sqft… x90



15A NCAC 07H .0306(a)(5) effective: August 11, 2

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Total Floor Area

(A)The total sq. ft. area of heated or air-conditioned space;

(B)The total sq. ft. of parking elevated above ground level; and

(C)The total sq. ft. of non-heated or non-air-conditioned areas elevated above ground level, excluding attic space that is not designated to be load bearing.

***Decks, roof covered porches and walkways shall not be included in total floor area unless they are enclosed with material other than screen mesh or are being converted into an enclosed space.**

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Why have setbacks?

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Hurricane FLORENCE September 2018

Topsail Island
9. 27.18

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15A NCAC 07H .0303
MANAGEMENT OBJECTIVE OF OCEAN HAZARD AREAS

~ Minimizing losses to life and property resulting from storms and long-term erosion,

~ Preventing encroachment of permanent structures on public beach areas,

~ Preserving the natural ecological conditions of the barrier dune and beach systems, and

~ Reducing the public costs of inappropriately sited development

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AEC HAZARD NOTICE

Project Is In An: _____ Ocean Erodible Area _____ High Hazard Flood Area _____ Inlet Hazard Area

Property Owner: _____

Property Address: _____

Date Lot Was Platted: _____

This notice is intended to make you, the applicant, aware of the special risks and conditions associated with development in this area, which is subject to natural hazards such as storms, erosion and currents. The rules of the Coastal Resources Commission require that you receive an AEC Hazard Notice and acknowledge that notice in writing before a permit for development can be issued.

The Commission's rules on building standards, oceanfront setbacks and dune alterations are designed to minimize, but not eliminate, property loss from hazards. By granting permits, the Coastal Resources Commission does not guarantee the safety of the development and assumes no liability for future damage to the development. Permits issued in the Ocean Hazard Area of Environmental Concern include the condition that structures be relocated or dismantled if they become imminently threatened by changes in shoreline configuration. The structure(s) must be relocated or dismantled within two (2) years of becoming imminently threatened, and in any case upon its collapse or subsidence.

The best available information, as accepted by the Coastal Resources Commission, indicates that the annual long-term average ocean erosion rate for the area where your property is located is _____ feet per year.

The rate was established by careful analysis of aerial photographs of the coastline taken over the past 50 years.

Studies also indicate that the shoreline could move as much as _____ feet landward in a major storm.

The flood waters in a major storm are predicted to be about _____ feet deep in this area.

Preferred oceanfront protection measures are beach nourishment and relocation of threatened structures. Hard erosion control structures such as bulkheads, seawalls, revetments, groins, jetties and breakwaters are prohibited. Temporary sand bags may be authorized under certain conditions.

The applicant must acknowledge this information and requirements by signing this notice in the space below. Without the proper signature, the application will not be complete.

_____

Applicant Signature *Date*

SPECIAL NOTE: This hazard notice is required for development in areas subject to sudden and massive storms and erosion. Permits issued for development in this area expire on December 31 of the third year following the year in which the permit was issued. Shortly before work begins on the project site, the Local Permit Officer must be contacted to determine the vegetation line and setback distance at your site. If the property has seen little change since the time of permit issuance, and the proposed development can still meet the setback requirement, the LPO will inform you that you may begin work. Substantial progress on the project must be made within 60 days of this setback determination, or the setback must be remeasured. Also, the occurrence of a major shoreline change as the result of a storm within the 60-day period will necessitate remeasurement of the setback. It is important that you check with the LPO before the permit expires for official approval to continue the work after the permit has expired. Generally, if foundation pilings have been placed and substantial progress is continuing, permit renewal can be authorized. It is unlawful to continue work after permit expiration.

For more information, contact:

_____

Local Permit Officer

_____

Address

_____

Locality

_____

Phone Number

Revised 2/07

BEFORE YOU BUILD

Setting Back for Safety: A Guide to Wise Development Along the Oceanfront

When you build along the oceanfront, you take a calculated risk. Natural forces of water and wind collide with tons of force, even on calm days.

Man-made structures cannot be guaranteed to survive the force of a hurricane. Long-term erosion (or barrier island migration) may take from two to ten feet of the beach each year, and, sooner or later, will threaten oceanfront structures. These are the facts of life for oceanfront property owners.

The Coastal Resources Commission (CRC) has adopted rules for building along the oceanfront. The rules are intended to avoid an unreasonable risk to life and property, and to limit public and private losses from storm and long-term erosion. These rules lessen but do not eliminate the element of risk in oceanfront development.

As you consider building along the oceanfront, the CRC wants you to understand the rules and the risks. With this knowledge, you can make a more informed decision about where and how to build in the coastal area.

The Rules

When you build along the oceanfront, coastal management rules require that the structure be sited to fit safely into the beach environment.

Structures along the oceanfront, less than 5,000 square feet in size, must be behind the frontal dune, landward of the crest of the primary dune, and set back from the first line of stable natural vegetation a distance equal to 30 times the annual erosion rate (a minimum of 60 feet). The setback calculation increases as the size of the structure increases [15A NCAC 7H.0306(a)(2)]. For example: A structure between 5,000 and 10,000 square feet would require a setback from the first line of stable , natural vegetation to a distance equal to 60 times the annual erosion rate (a minimum of 120 feet). The graduated setback continues to increase through structure sizes greater than 100,000 square feet.

The Reasons

The beachfront is an ever-changing landform. The beach and the dunes are natural "shock absorbers," taking the beating of the wind and waves and protection the inland areas. By incorporating building setbacks into the regulations, you have a good chance of enjoying the full life of the structure. At first, it seems very inviting to build your dream house as close to the beach as possible, but in five years you could find the dream has become a nightmare as high tides and storm tides threaten your investment.

The Exception

The Coastal Resources Commission recognized that these rules, initially passed in June 1979, might prove a hardship for some property owners. Therefore, they established an exception for lots that cannot meet the setback requirement. The exception allows buildings in front of the current setback, if the following conditions apply:

(1) the lot must have been platted as of June 1, 1979, and is not capable of being enlarged by combining with adjoining land under the same ownership;
(2) development must be constructed as far back on the property as possible and in no case less than 60 feet landward of the vegetation line;
(3) no development can take place on the frontal dune;
(4) special construction standards on piling depth and square footage must be met; and
(5) all other CAMA, state and local regulations must be met.

The exception is not available in the Inlet Hazard Area.

To determine eligibility for the exception the Local Permit Officer will make these measurements and observations:

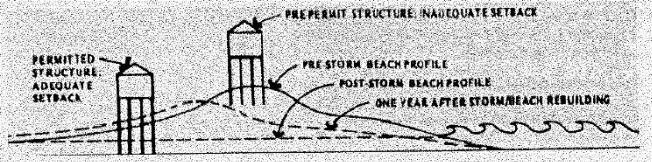
_____ required setback from vegetation line

_____ exception setback (maximum feasible)

_____ rear property line setback

_____ max. allowable square footage on lowest floor

_____ piling length needed to extend 4 feet below MSL



After the storm, the house on the dune will be gone. The other house has a much better chance of survival.

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Exceptions to the Setback

- Campsites
- Parking areas w/clay, packed sand, gravel
- Elevated decks- 500 sf (structurally detached)
- Beach accessways
- Unenclosed, uninhabitable gazebos- up to 200sf
- Single story sheds <200sf
- Temp. amusement stands
- Sand fencing
- Swimming pools

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Question:

“I have an oceanfront property under contract and I need to know if it is re-buildable”

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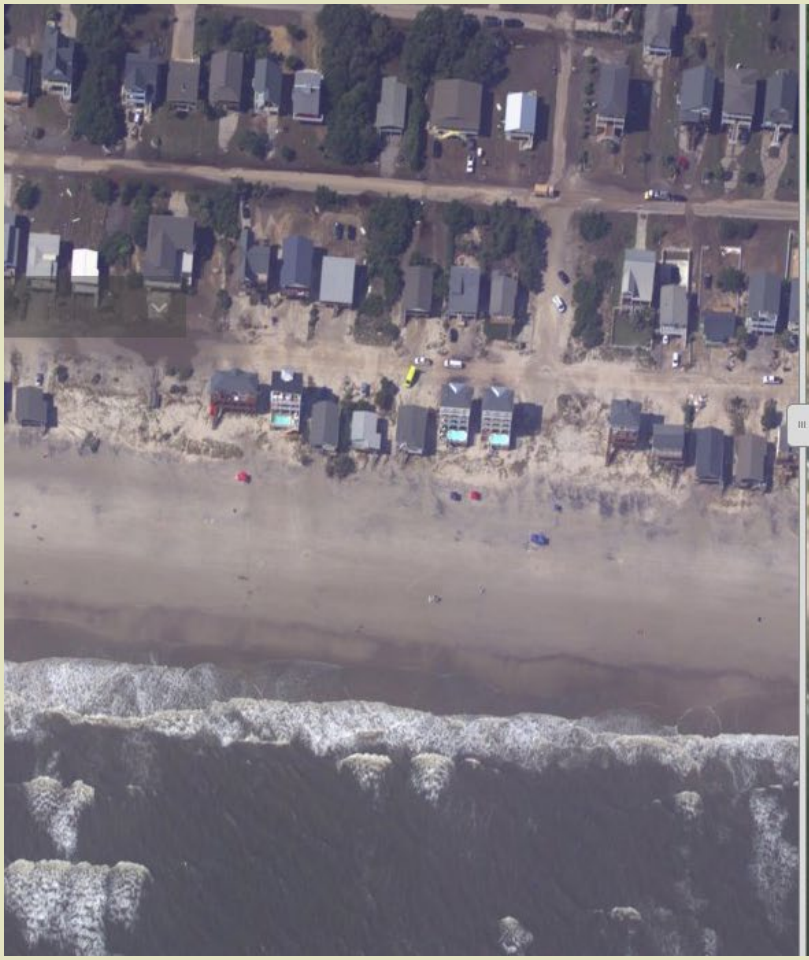
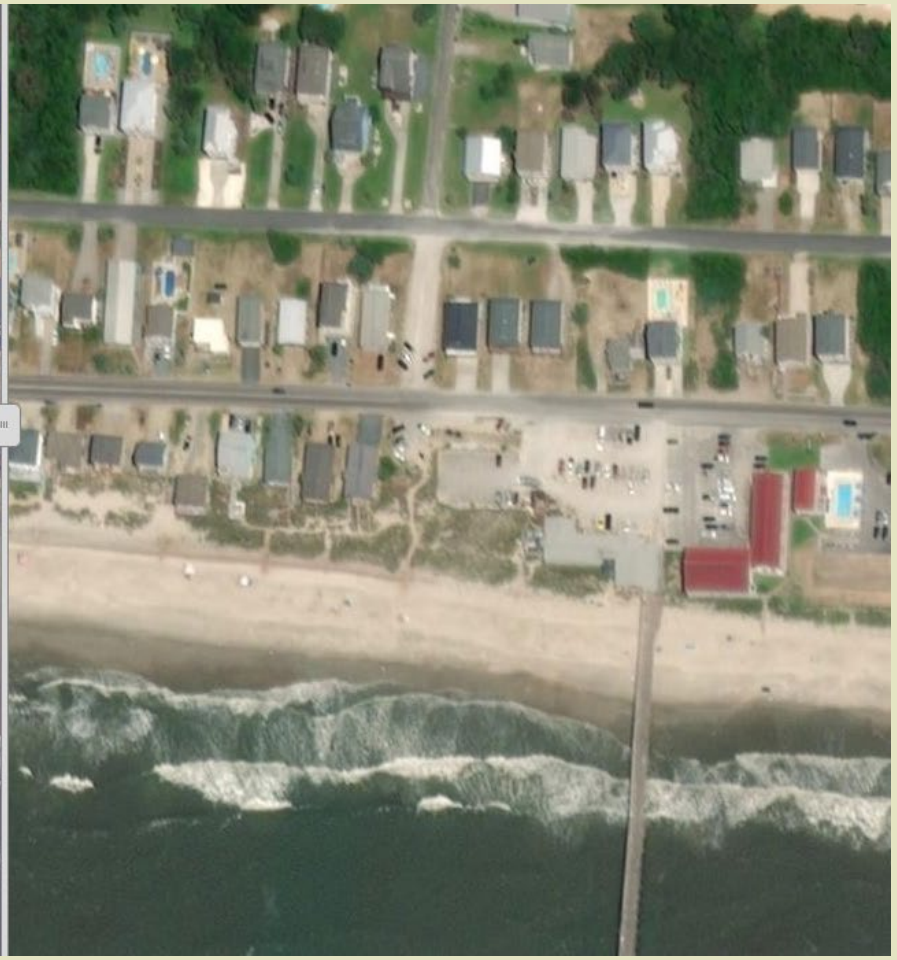
Vegetation lines can change overnight…





AECs in the Estuarine System

- Coastal Shoreline (above NHW)
  - ✓Estuarine Shoreline
  - ✓Public Trust Shoreline
- Coastal Wetlands
- Public Trust Areas
- Estuarine Waters

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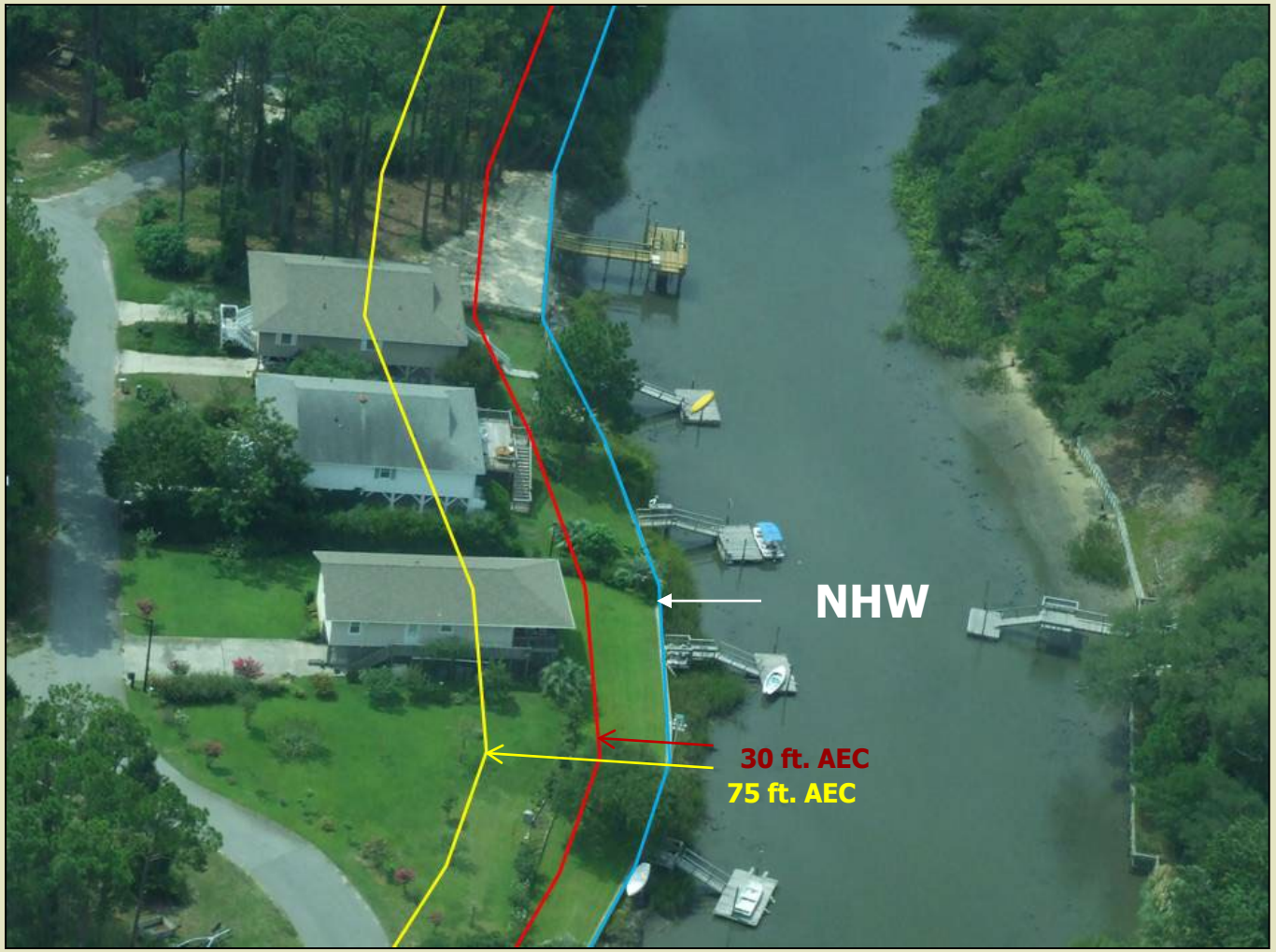
Coastal Shoreline AEC



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Water Classifications

Estuarine Shoreline

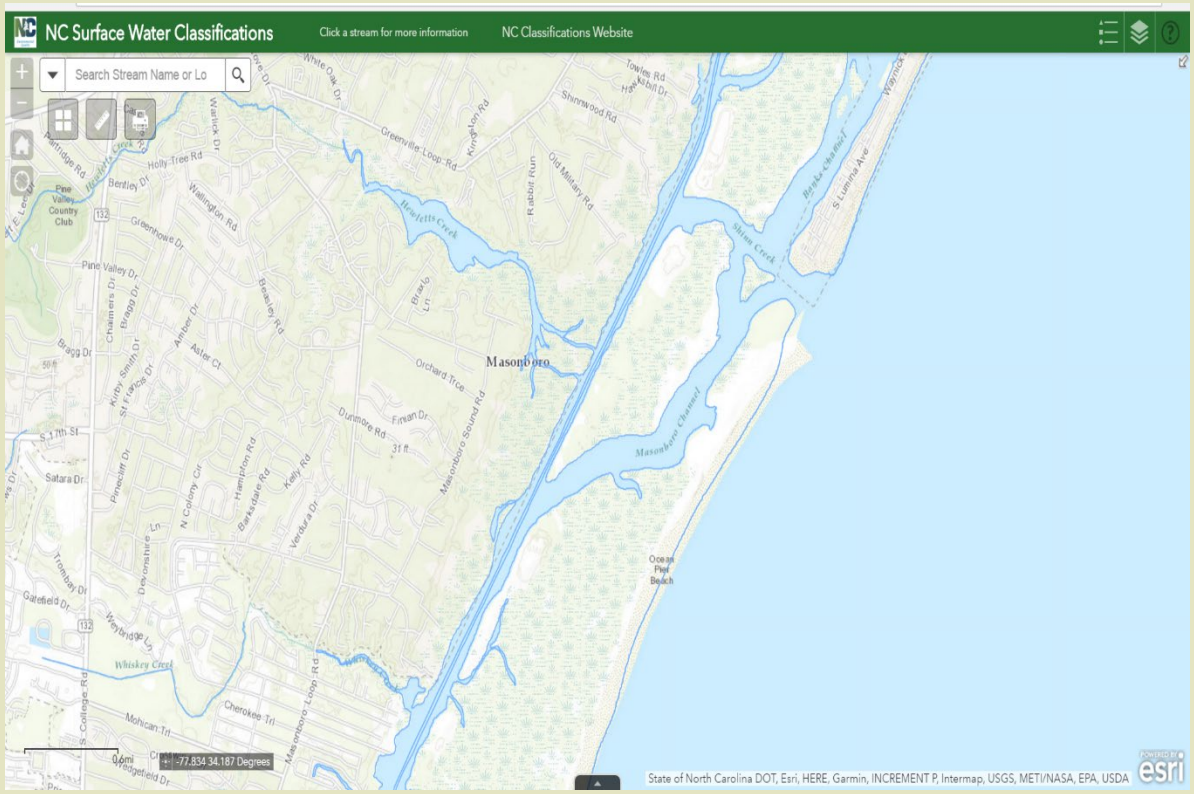
AEC extends 75 ft. from NHW

-Max Allowed 30% impervious surface

ORW Estuarine Shoreline AEC

extends 575 ft. from NHW

-Max Allowed 25% impervious surface



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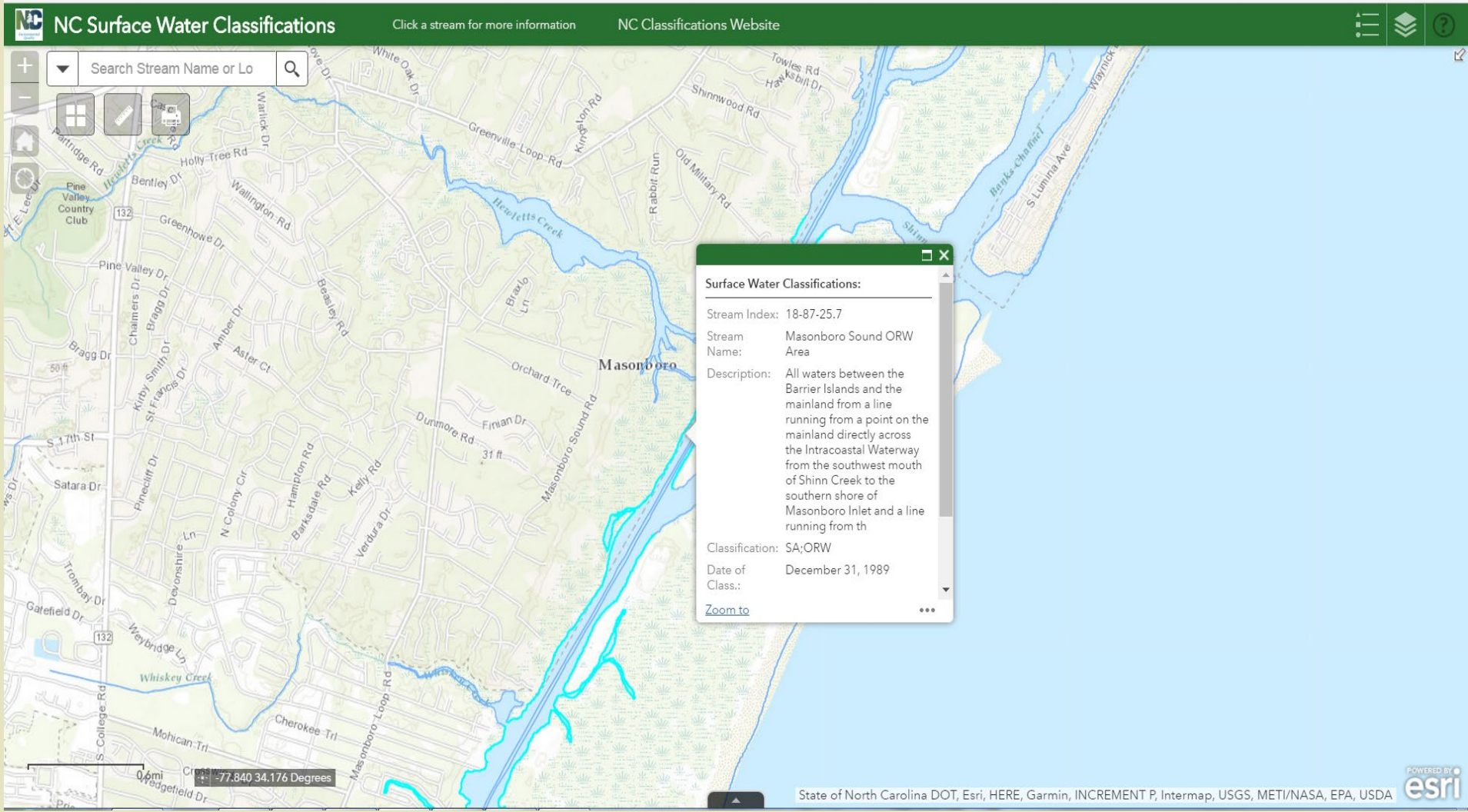
ORW-Outstanding Resource Waters



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Property along the AIWW may have USACE Easements

~ No development in these areas without USACE Consent. Contact USACE Real Estate Office

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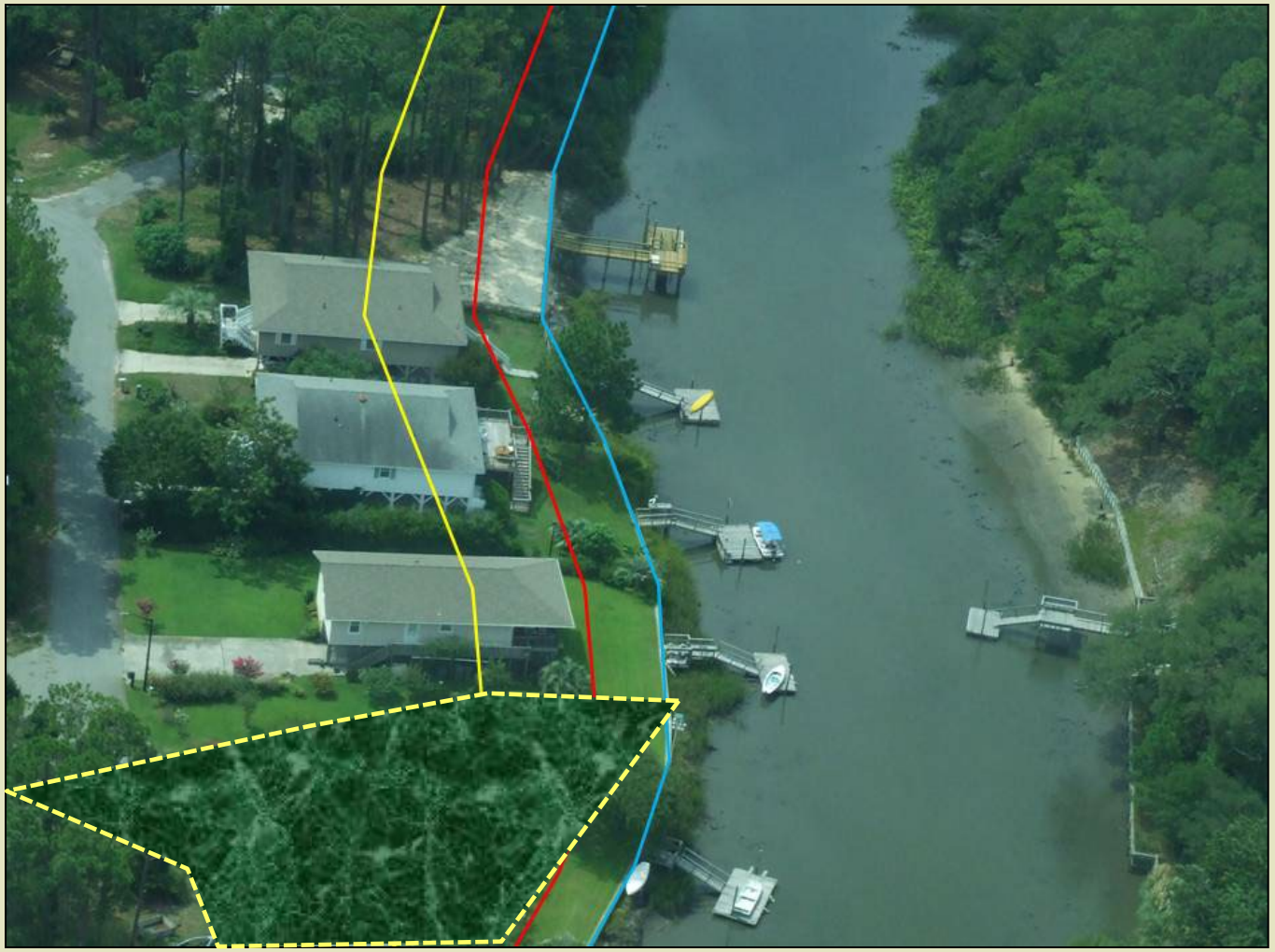
What about Coastal and Section 404 Wetlands?



Coastal Wetlands

- **Presence of at least one of the ten species listed in 15A NCAC 7H.0205.**
- **Subject to regular or irregular tidal flooding**

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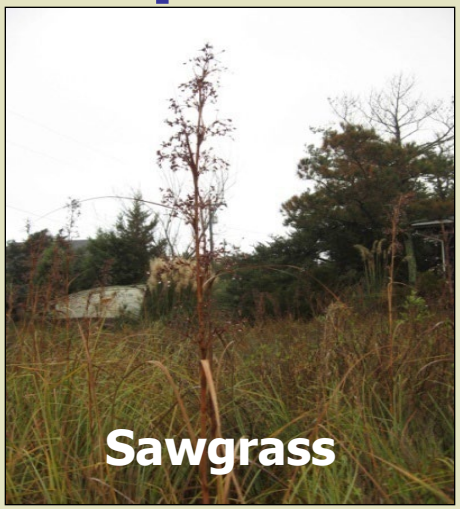
Coastal Wetland species



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VS

INVASIVE

Why is Coastal Marsh Important?

- first line of defense for estuarine shoreline erosion (natural buffer)

- waterfowl and wildlife habitat

- nutrient and sediment traps for organic/inorganic

- pollutants and nutrients uptake

- Nursery area for juvenile fish and shellfish (90% of commercial/recreational fish species are dependant on wetlands)

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Question:

“Can my client build a pier on the lot we have under contract”?

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Does this parcel have Riparian Rights?

1. **Deed** – Meets and bounds
2. **Plat Map-** Do property lines follow MHW?
3. **Survey** – Does Mean or Normal High Water cross the property line?

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Estuarine Waters and Public Trust Areas
Who has Riparian Rights?

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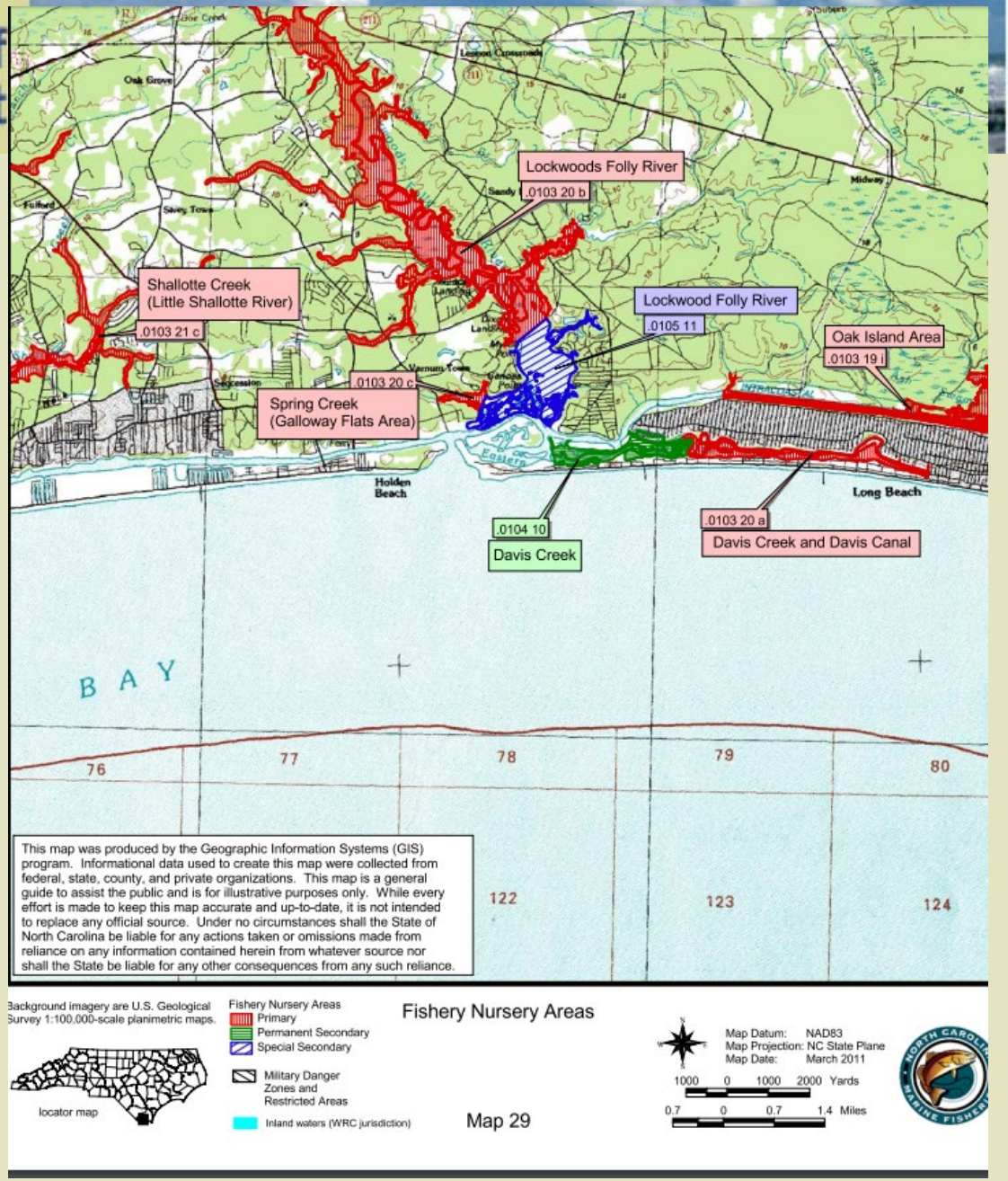
PNA- Primary Nursery Areas

Proposed docking facilities in these areas must have at least 24 “ of water at NLW



Piers and Bulkheads

- **Linear ft. of shoreline x 8** = amount of platform allowed over water
- **Floating boatlifts** are not counted as boatslips but count towards allowed platform area, must meet riparian setbacks and depths for PNA.
- **Drip lines** are used for calculations for water dependent development.
- **Bulkheads/riprap** for erosion control at NHW line and landward of all wetlands.

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Permitting

Permitting Mechanisms:

Minor Permits

- Activities that are proposed above the NWL or NHW with less than 1 acre of impact

****NO WETLAND IMPACTS****

Major Permits

- Activities that are proposed below the NWL or NHW (water dependent)
- Requires review from other State and Federal Agencies

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3 Categories of CAMA Permits

- **Minor permits** issued by local governments consistent w/CRC-established standards **for non-water dependent projects only**.

- **General permits** issued by DCM field staff - streamlined for routine projects (docks, piers, bulkheads).

- **Major permit** applications issued by Morehead City office after review by 10 state & 4 fed. Agencies.

"Umbrella Permitting"

Federal Agencies	State Agencies
U.S. Army Corps of Engineers	Division of Water Quality
U.S. Fish and Wildlife Service	Division of Marine Fisheries
Environmental Protection Agency	Division of Transportation
National Marine Fisheries Service	Division of Land Resources
	Wildlife Resources Commission
	Department of Cultural Resources
	Division of Public Health
	State Property Office
+ Local Government	Community Assistance

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Maintenance and Repair

Maintenance and Repair : If proposed work is less than 50% of the total structure or project a Certificate of Exemption from requiring a CAMA permit may be issued. (Does not alleviate the necessity of obtaining other state, federal or local authorization).

**All work must be done within the original project footprint.

Question – What is a CAMA Line??

- Normal or Mean High Water Line
- Coastal Wetland Line
- 30 ft. buffer Line
- 75 ft. AEC Line
- Building Setback

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When does development on a Barrier Island trigger a CAMA Permit??

1. **Is the proposed project in one of the 20 coastal counties???**

2. **Is the proposed project in an AEC?**

3. **Does the proposed project fit the definition of development?**

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Wilmington Regional Office
DCM

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