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March 29, 2018

CRC-18-14

TO: Coastal Resources Commission

FROM: Heather Coats, Assistant Major Permits Coordinator, Wilmington Office

SUBJECT: Proposed State Port Inlet Management Area of Environmental Concern (AEC)

Beginning in July 2014, the Commission directed DCM staff to develop management objectives and use standards for a new AEC category. The new AEC category would be associated with the two inlets in North Carolina that include federally maintained shipping channels: Beaufort Inlet and the Cape Fear River Inlet. The new AEC category was a result of recommended priorities set in the CRC's Inlet Management Study.

Staff first met with representatives from the adjacent local governments to solicit input regarding the application of current rules, as well as possible new management strategies the local governments believe would address the unique circumstances experienced at these inlets. Discussions with the Village of Bald Head Island revolved around needs previously discussed as part of the Cape Fear River AEC Feasibility Study, which was mandated by the General Assembly in 2012. The Village expressed an interest in more flexible sandbag rules – particularly in regards to the ability to protect dunes in addition to primary structures and infrastructure – as well as the allowable location and size of sandbags and sandbag structures. The Village also stated that new rules for the AEC should advocate the beneficial use of dredged material as part of Coastal Zone Management Act (CZMA) federal consistency process.

Discussions with representatives from the Town of Caswell Beach and the NC Baptist Assembly at Ft. Caswell primarily focused on the federal designation of Ft. Caswell as a national historic site and the need for more flexibility to address shoreline erosion on the property.

The main topic of discussion with Carteret County's Shore Protection Manager was beneficial use of beach-compatible dredged material and the limitations of the current federal Dredged Material Management Plan (DMMP) at Beaufort Inlet. Concerns were expressed that a lack of funding should not be considered sufficient justification to avoid beneficial use of beach-quality material.

Staff drafted an AEC definition and rule language for a new State Port Inlet Management AEC for CRC discussion at your October 2014 meeting. The draft rule language also addressed action taken by the legislature (S.L. 2014-120) to remove the Inlet Hazard Area designation for inlets providing access to a State Port via a channel maintained by the United States Army Corps of Engineers.

Over the first year of AEC development, discussion focused on the beneficial use rule language requiring beach-compatible dredged materials to be placed on active nearshore, beach or inlet shoal system and whether the rule should further require all sand be placed on adjacent beaches. Strong objections were received from the US Army Corps of Engineers (USACE) during that time, with the Corps reporting that removing flexibility could seriously jeopardize the continued operation of the NC State Port at Morehead City. Following additional discussion with the USACE and other stakeholders, the beneficial use requirement was removed from the draft rule. A working group was instead formed to create a Memorandum of Agreement that would facilitate beneficial use through federal, state, and local cost-sharing.

The Coastal Resources Advisory Council (CRAC) also discussed the remaining components of the draft AEC rule language, including the sandbag provisions, at the April and July 2015 meetings. They recommended the AEC definition specify that the AEC includes the Cape Fear and Beaufort Inlets. The CRAC also recommended that a minimum sandbag size be specified, in accordance with current sandbag rule language. The draft rule language was updated to include these recommendations.

In April 2016, staff met with Town of Caswell Beach's newly elected Mayor Deborah Ahlers and Town Administrator, Chad Hicks, to discuss the history of the State Ports Inlet Management AEC development and the Town's previous comments. Mayor Ahlers and Mr. Hicks reaffirmed the Town's previous position and only wished to reiterate the Town's desire to have its entire jurisdiction within the limits of the AEC, rather than limiting the boundary to the "Area of Inlet Influence" that was previously identified by the CRC Science Panel. The Town's request is due to erosion that has historically occurred west of the Science Panel's boundary, which has threatened the primary road and access to much of the Town's jurisdiction. The Town wants the ability to use the less restrictive sandbag rules to protect Caswell Beach Road, if needed in the future, as a response to erosion. The Town has also reiterated their desire to have as much flexibility as possible to address shoreline erosion, which they attribute to boat traffic in the federal channel.

The 2015 Appropriations Bill (S.L. 2015-241) required that the CRC adopt specific amendments to the current temporary erosion control structure (sandbag) rules. Because the State Ports Inlet Management AEC draft rules pertain primarily to sandbag use standards, State Ports Inlet Management AEC development was suspended pending an evaluation of the overall use standards applicable to all Ocean Hazard AECs. While the Commission voted to move forward with AEC development at the September 2016 meeting, additional legislation (S.L. 2017-10) was subsequently passed in regards to temporary erosion control structure rules which warranted further consideration of how any resulting rule changes may impact this AEC's use standards.

With the temporary erosion control structure rules having been addressed at your November 2017 meeting, due to the time that has elapsed, staff wants to consult with the Commission once again prior to moving forward with finalizing rule-making and proceeding with the fiscal analysis. Attached is the last version of draft rule language and proposed AEC boundaries approved by the Commission in September 2016, which reflected past discussions and significant input from the affected local governments.

As a recap, the rule language defines the State Port Inlet Management AEC, allows the use of sandbags to protect primary and frontal dunes as well as structures and infrastructure, redefines the means of determining what is imminently threatened within the new AEC, and allows for the use of larger sized bags (e.g. geotextile tubes) for temporary erosion control structures. In addition, the draft rules address action taken by the legislature through SL2014-120 to remove the Inlet Hazard Area designation for areas meeting one of the following three criteria: the location of a former inlet which has been closed for at least 15 years; inlets that due to shoreline migration, no longer include the current location of the inlet; and for inlets providing access to a State Port via a channel maintained by the United States Army Corps of Engineers.

Staff is looking forward to confirming the Commission's direction through discussion of the AEC at the upcoming meeting in April.

15A NCAC 07H .0304 AECs WITHIN OCEAN HAZARD AREAS

The ocean hazard AECs contain all of the following areas:

- (1) Ocean Erodible Area. This is the area where there exists a substantial possibility of excessive erosion and significant shoreline fluctuation. The oceanward boundary of this area is the mean low water line. The landward extent of this area is the distance landward from the first line of stable and natural vegetation as defined in 15A NCAC 07H .0305(a)(5) to the recession line established by multiplying the long-term annual erosion rate times 90; provided that, where there has been no long-term erosion or the rate is less than two feet per year, this distance shall be set at 120 feet landward from the first line of stable and natural vegetation. For the purposes of this Rule, the erosion rates are the long-term average based on available historical data. The current long-term average erosion rate data for each segment of the North Carolina coast is depicted on maps entitled "2011 Long-Term Average Annual Shoreline Rate Update" and approved by the Coastal Resources Commission on May 5, 2011 (except as such rates may be varied in individual contested cases or in declaratory or interpretive rulings). In all cases, the rate of shoreline change shall be no less than two feet of erosion per year. The maps are available without cost from any Local Permit Officer or the Division of Coastal Management on the internet at <http://www.nccoastalmanagement.net>.
- (2) Inlet Hazard Area. The inlet hazard areas are natural-hazard areas that are especially vulnerable to erosion, flooding, and other adverse effects of sand, wind, and water because of their proximity to dynamic ocean inlets. This area extends landward from the mean low water line a distance sufficient to encompass that area within which the inlet migrates, based on statistical analysis, and shall consider such factors as previous inlet territory, structurally weak areas near the inlet, and external influences such as jetties and channelization. The areas on the maps identified as suggested Inlet Hazard Areas included in the report entitled INLET HAZARD AREAS, The Final Report and Recommendations to the Coastal Resources Commission, 1978, as amended in 1981, by Loie J. Priddy and Rick Carraway are incorporated by reference and are hereby designated as Inlet Hazard Areas, except for:
 - (a) ~~the Cape Fear Inlet Hazard Area as shown on the map does not extend northeast of the Bald Head Island marina entrance channel; and~~
 - (b) ~~the former location of Mad Inlet, which closed in 1997.~~
 - (a) the location of a former inlet which has been closed for at least 15 years,
 - (b) inlets that due to shoreline migration, no longer include the current location of the inlet,
 - (c) inlets providing access to a State Port via a channel maintained by the United States Army Corps of Engineers.
- In all cases, the Inlet Hazard Area shall be an extension of the adjacent ocean erodible areas and in no case shall the width of the inlet hazard area be less than the width of the adjacent ocean erodible area. This report is available for inspection at the Department of Environmental Quality, Division of Coastal Management, 400 Commerce Avenue, Morehead City, North Carolina or at the website referenced in Item (1) of this Rule. ~~Photocopies are available at no charge.~~
- (3) Unvegetated Beach Area. Beach areas within the Ocean Hazard Area where no stable and natural vegetation is present may be designated as ~~an~~ Unvegetated Beach ~~Area~~ Areas on either a permanent or temporary basis as follows:
 - (a) An area appropriate for permanent designation as an Unvegetated Beach Area is a dynamic area that is subject to rapid unpredictable landform change due to wind and wave action. The areas in this category shall be designated following studies by the Division of Coastal Management. These areas shall be designated on maps approved by the Coastal Resources Commission and available without cost from any Local Permit Officer or the Division of Coastal Management on the internet at the website referenced in Item (1) of this Rule.
 - (b) An area that is suddenly unvegetated as a result of a hurricane or other major storm event may be designated by the Coastal Resources Commission as an Unvegetated Beach Area for a specific period of time, or until the vegetation has re-established in accordance with 15A NCAC 07H .0305(a)(5). At the expiration of the time specified or the re-establishment of the vegetation, the area shall return to its pre-storm designation.
- (4) State Ports Inlet Management Area. These are areas adjacent to and within Beaufort Inlet and the mouth of the Cape Fear River, providing access to a State Port via a channel maintained by the United States Army Corps of Engineers. These areas are unique due to the influence of federally-maintained channels, and the critical nature of maintaining shipping access to North Carolina's State Ports. These areas may require specific management strategies not warranted at other inlets to address erosion and shoreline stabilization. State Ports Inlet Management Areas shall extend from the mean low water line landward

as designated on maps approved by the Coastal Resources Commission and available without cost from the Division of Coastal Management, and on the internet at the website referenced in Sub-item(1)(a) of this Rule.

15A NCAC 07H .0309 USE STANDARDS FOR OCEAN HAZARD AREAS: EXCEPTIONS

(a) The following types of development shall be permitted seaward of the oceanfront setback requirements of Rule .0306(a) of the Subchapter if all other provisions of this Subchapter and other state and local regulations are met:

- (1) campsites;
- (2) driveways and parking areas with clay, packed sand or gravel;
- (3) elevated decks not exceeding a footprint of 500 square feet;
- (4) beach accessways consistent with Rule .0308(c) of this Subchapter;
- (5) unenclosed, uninhabitable gazebos with a footprint of 200 square feet or less;
- (6) uninhabitable, single-story storage sheds with a foundation or floor consisting of wood, clay, packed sand or gravel, and a footprint of 200 square feet or less;
- (7) temporary amusement stands;
- (8) sand fences; and
- (9) swimming pools.

In all cases, this development shall be permitted only if it is landward of the vegetation line or static vegetation line, whichever is applicable; involves no alteration or removal of primary or frontal dunes which would compromise the integrity of the dune as a protective landform or the dune vegetation; has overwalks to protect any existing dunes; is not essential to the continued existence or use of an associated principal development; is not required to satisfy minimum requirements of local zoning, subdivision or health regulations; and meets all other non-setback requirements of this Subchapter.

(b) Where application of the oceanfront setback requirements of Rule .0306(a) of this Subchapter would preclude placement of permanent substantial structures on lots existing as of June 1, 1979, buildings shall be permitted seaward of the applicable setback line in ocean erodible areas and State Ports Inlet Management Areas, but not inlet hazard areas or unvegetated beach areas, if each of the following conditions are met:

- (1) The development is set back from the ocean the maximum feasible distance possible on the existing lot and the development is designed to minimize encroachment into the setback area;
- (2) The development is at least 60 feet landward of the vegetation line or static vegetation line, whichever is applicable;
- (3) The development is not located on or in front of a frontal dune, but is entirely behind the landward toe of the frontal dune;
- (4) The development incorporates each of the following design standards, which are in addition to those required by Rule .0308(d) of this Subchapter.
 - (A) All pilings shall have a tip penetration that extends to at least four feet below mean sea level;
 - (B) The footprint of the structure shall be no more than 1,000 square feet, and the total floor area of the structure shall be no more than 2,000 square feet. For the purpose of this Section, roof covered decks and porches that are structurally attached shall be included in the calculation of footprint;
 - (C) Driveways and parking areas shall be constructed of clay, packed sand or gravel except in those cases where the development does not abut the ocean and is located landward of a paved public street or highway currently in use. In those cases concrete, asphalt or turfstone may also be used;
 - (D) No portion of a building's total floor area, including elevated portions that are cantilevered, knee braced or otherwise extended beyond the support of pilings or footings, may extend oceanward of the total floor area of the landward-most adjacent building. When the geometry or orientation of a lot precludes the placement of a building in line with the landward most adjacent structure of similar use, an average line of construction shall be determined by the Division of Coastal Management on a case-by-case basis in order to determine an ocean hazard setback that is landward of the vegetation line, static vegetation line or measurement line, whichever is applicable, a distance no less than 60 feet.

(5) All other provisions of this Subchapter and other state and local regulations are met. If the development is to be serviced by an on-site waste disposal system, a copy of a valid permit for such a system shall be submitted as part of the CAMA permit application.

(c) Reconfiguration and development of lots and projects that have a grandfather status under Paragraph (b) of this Rule shall be allowed provided that the following conditions are met:

(1) Development is setback from the first line of stable natural vegetation a distance no less than that required by the applicable exception;

(2) Reconfiguration shall not result in an increase in the number of buildable lots within the Ocean Hazard AEC or have other adverse environmental consequences. For the purposes of this Rule, an existing lot is a lot or tract of land which, as of June 1, 1979, is specifically described in a recorded plat and which cannot be enlarged by combining the lot or tract of land with a contiguous lot(s) or tract(s) of land under the same ownership. The footprint is defined as the greatest exterior dimensions of the structure, including covered decks, porches, and stairways, when extended to ground level.

(d) The following types of water dependent development shall be permitted seaward of the oceanfront setback requirements of Rule .0306(a) of this Section if all other provisions of this Subchapter and other state and local regulations are met:

(1) piers providing public access; and

(2) maintenance and replacement of existing state-owned bridges and causeways and accessways to such bridges.

(e) Replacement or construction of a pier house associated with an ocean pier shall be permitted if each of the following conditions is met:

(1) The ocean pier provides public access for fishing and other recreational purposes whether on a commercial, public, or nonprofit basis;

(2) Commercial, non-water dependent uses of the ocean pier and associated pier house shall be limited to restaurants and retail services. Residential uses, lodging, and parking areas shall be prohibited;

(3) The pier house shall be limited to a maximum of two stories;

(4) A new pier house shall not exceed a footprint of 5,000 square feet and shall be located landward of mean high water;

(5) A replacement pier house may be rebuilt not to exceed its most recent footprint or a footprint of 5,000 square feet, whichever is larger;

(6) The pier house shall be rebuilt to comply with all other provisions of this Subchapter; and

(7) If the pier has been destroyed or rendered unusable, replacement or expansion of the associated pier house shall be permitted only if the pier is being replaced and returned to its original function.

(f) In addition to the development authorized under Paragraph (d) of this Rule, small scale, non-essential development that does not induce further growth in the Ocean Hazard Area, such as the construction of single family piers and small scale erosion control measures that do not interfere with natural oceanfront processes, shall be permitted on those nonoceanfront portions of shoreline that exhibit features characteristic of an Estuarine Shoreline. Such features include the presence of wetland vegetation, and lower wave energy and erosion rates than in the adjoining Ocean Erodible Area. Such development shall be permitted under the standards set out in Rule .0208 of this Subchapter. For the purpose of this Rule, small scale is defined as those projects which are eligible for authorization under 15A NCAC 07H .1100, .1200 and 07K .0203.

(g) Transmission lines necessary to transmit electricity from an offshore energy-producing facility may be permitted provided that each of the following conditions is met:

(1) The transmission lines are buried under the ocean beach, nearshore area, and primary and frontal dunes, all as defined in Rule 07H .0305, in such a manner so as to ensure that the placement of the transmission lines involves no alteration or removal of the primary or frontal dunes; and

(2) The design and placement of the transmission lines shall be performed in a manner so as not to endanger the public or the public's use of the beach.

15A NCAC 07H .0313 USE STANDARDS FOR STATE PORTS INLET MANAGEMENT AREAS

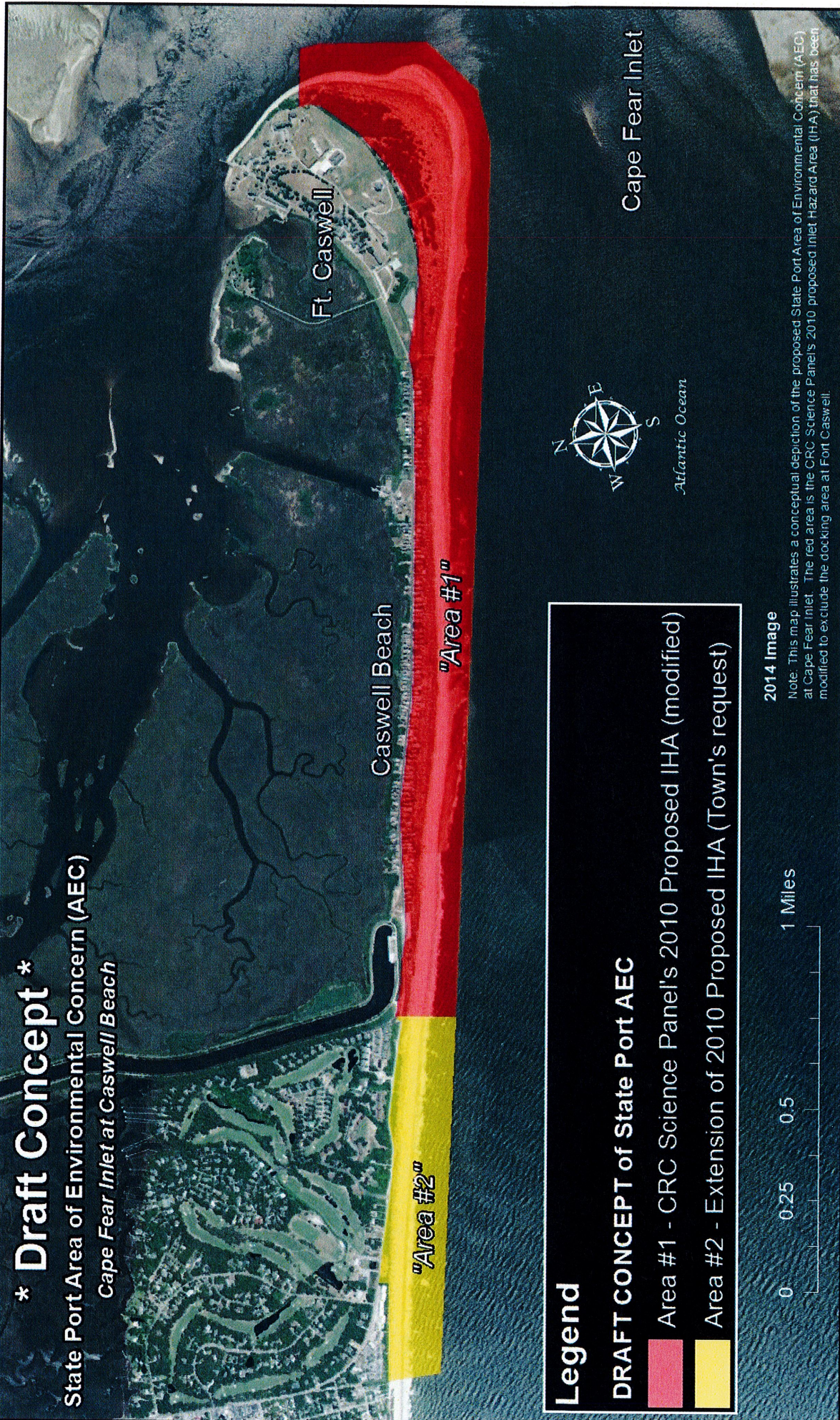
Development within State Ports Inlet Management areas, as defined by Rule .0304 of this Section, shall be permitted in accordance with the following standards:

- (a) All development in the State Ports Inlet Management Areas shall be set back from the first line of stable and natural vegetation, static vegetation line, or measurement line at a distance in accordance with 15A NCAC 7H .0305(a)(5), except for development exempted under 15A NCAC 7H .0309.
- (b) Notwithstanding the use standards for temporary erosion control structures described in 15A NCAC 7H .0308(a)(2), a local government may apply for a permit to seek protection of an imminently threatened frontal or primary dune, public and private structures and/or infrastructure within a State Ports Inlet Management Area. For the purpose of this rule, a frontal or primary dune, structure, or infrastructure shall be considered imminently threatened in a State Ports Inlet Management Area if:
 - (1) its foundation, septic system, right-of-way in the case of roads, or waterward toe of dune is less than 20 feet away from the erosion scarp; or
 - (2) site conditions, such as flat beach profile or accelerated erosion, increase the risk of imminent damage to the structure as determined by the Director of the Division of Coastal Management; or
 - (3) the frontal or primary dune or infrastructure will be imminently threatened within six (6) months as certified by persons meeting applicable State occupational licensing requirements; or
 - (4) the rate of erosion from the erosion scarp or shoreline within 100 feet of the infrastructure, structure, frontal or primary dune was greater than 20 feet over the preceding 30 days.Permit applications to protect property where no structures are imminently threatened require consultation with the US Army Corps of Engineers.
- (c) Temporary erosion control structures constructed by a local government shall have a base width not exceeding 20 feet, and a height not to exceed six feet. Individual sandbags shall be tan in color and be a minimum of three feet wide and seven feet in length when measured flat.
- (d) Established common-law and statutory public rights of access to the public trust lands and waters in State Ports Inlet Management Areas shall not be eliminated or restricted. Development shall not encroach upon public accessways nor shall it limit the intended use of the accessways.
- (e) Except where inconsistent with the above standards, all other rules in this Subchapter pertaining to development in the ocean hazard areas shall be applied to development within the State Ports Inlet Management Areas.
- (f) In addition to the types of development excepted under Rule .0309 of this Section, small scale, non-essential development that does not induce further growth in the State Ports Inlet Management Areas, such as the construction of single-family piers and small scale erosion control measures that do not interfere with natural inlet movement, may be permitted on those portions of shoreline within a designated State Ports Inlet Management Area that exhibit features characteristic of Estuarine Shoreline. Such features include the presence of wetland vegetation, lower wave energy, and lower erosion rates than in the adjoining Ocean Erodible Area. Such development shall be permitted under the standards set out in Rule .0208 of this Subchapter. For the purpose of this Rule, small scale is defined as those projects which are eligible for authorization under 15A NCAC 7H .1100, and.1200.

* Draft Concept *

State Port Area of Environmental Concern (AEC)

Cape Fear Inlet at Caswell Beach



Legend

DRAFT CONCEPT of State Port AEC

- Area #1 - CRC Science Panel's 2010 Proposed IHA (modified)
- Area #2 - Extension of 2010 Proposed IHA (Town's request)

2014 Image

1 Miles

0.5

0.25

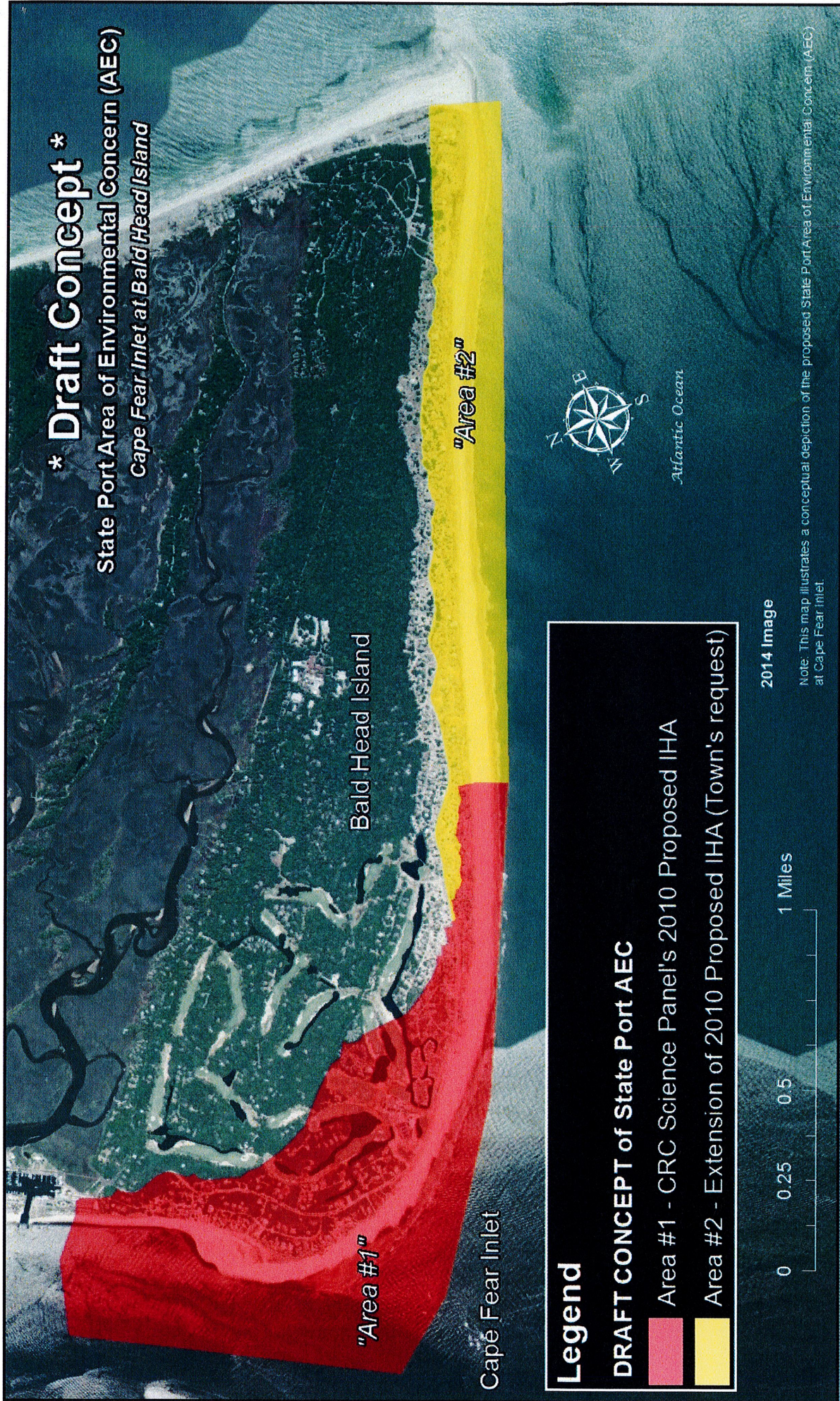
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Note: This map illustrates a conceptual depiction of the proposed State Port Area of Environmental Concern (AEC) at Cape Fear Inlet. The red area is the CRC Science Panel's 2010 proposed Inlet Hazard Area (IHA) that has been modified to exclude the docking area at Fort Caswell.

* Draft Concept *

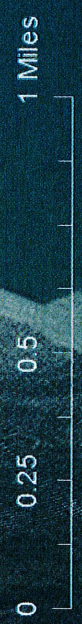
State Port Area of Environmental Concern (AEC)
Cape Fear Inlet at Bald Head Island



Legend

DRAFT CONCEPT of State Port AEC

- Area #1 - CRC Science Panel's 2010 Proposed IHA
- Area #2 - Extension of 2010 Proposed IHA (Town's request)





*** Draft Concept***
State Port Area of Environmental Concern (AEC)
 Beaufort Inlet



Shackleford
Banks

Beaufort Inlet

Radio Island

Ft. Macon State Park

Legend

DRAFT CONCEPT of State Port AEC

CRC Science Panel's 2010 Proposed IHA (modified)

2014 Image

1 Miles

Atlantic Ocean

Note: This map illustrates a conceptual depiction of the proposed State Port Area of Environmental Concern (AEC) at Cape Fear Inlet.