CRC Inlet Management Study

Matt Slagel
Shoreline Management Specialist
CRC “shall study feasibility of creating new AEC” for lands adjacent to mouth of Cape Fear River (HB 819)
- Collaborate with the Town of Caswell Beach and Village of Bald Head Island, landowners and stakeholders
- Report to DENR, Governor, Gen. Assembly on Dec. 31, 2013

Based on regulatory issues identified in the report, the Commission decided to undertake a comprehensive, coast-wide inlet management study in 2014
Related Initiatives

• **S.L. 2012-202 (HB 819): Inlet Hazard Areas**
  – Determine feasibility of eliminating IHA AEC and incorporating appropriate development standards adjacent to developed inlets.
  – Past and ongoing Science Panel work

• **S.L. 2013-138: Ensure Safe Navigation Channels**
  – Permit mechanisms to streamline inlet dredging projects

• **S.L. 2013-413: Regulatory Reform Act of 2013**
  – Re-evaluate the merits of all existing rules
Study Topics

1) Beneficial use of dredged materials (beach placement)
2) Dredging windows / moratoria
3) Dredging depths and sediment criteria rules
4) Channel realignment projects
5) Development standards / erosion setbacks / local vs. state authorities
6) Volumetric triggers for beachfront “static lines”
7) Emergency permitting: beach bulldozing & sandbags
8) Terminal groins and sand bypassing
9) Erosion rate calculations for Inlet Hazard Areas
10) Monitoring conditions associated with projects
Study Schedule / Milestones

• Expert panel at Feb. 2014 CRC Meeting
• Four regional meetings by end of April 2014
• Written comments accepted through April 15
  • Matthew.Slagel@ncdenr.gov
  – May 15: Comments summarized/categorized for CRC
  – July 31: Final draft findings/recommendations
  – September 30: Submit proposed rulemaking changes for public comment
  – December 31, 2014: Final report to Governor & G.A.
Public Meetings

- **Regional Inlet Management Meeting Locations**

  - **March 6, 2016  4:00 PM**
    - Fessenden Center
    - 46830 Hwy 12
    - Buxton NC 27920

  - **March 26, 2014  6:00 PM**
    - Ocean Isle Beach Town Hall
    - 3 West Third Street
    - Ocean Isle Beach, NC 28469

  - **March 12, 2014  6:00 PM**
    - NOAA/NERR Administration Bldg
    - 101 Pivers Island Road
    - Beaufort, N.C. 28516

  - **April 2, 2014  6:00 PM**
    - New Hanover County Gov’t Center
    - 30 Government Center Drive
    - Wilmington, NC 28403
General Inlet Model

N.C. Division of Coastal Management

Overview of Inlet Management

Heather Coats
DCM Field Representative
Ocean Hazard Areas

• DCM jurisdiction includes:
  – Ocean Erodible Area
  – High Hazard Flood Areas
  – Inlet Hazard Areas
  – Unvegetated Beach Area

• Erosion rate-based setbacks based on size of structures
• Erosion-control structures
• Beach and inlet projects
## Ocean Hazard Setbacks

<table>
<thead>
<tr>
<th>Total Square Footage</th>
<th>Setback Factor</th>
<th>2 ft/year</th>
<th>3 ft/year</th>
<th>4 ft/year</th>
<th>5 ft/year</th>
<th>6 ft/year</th>
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<tbody>
<tr>
<td>less than 5,000 sq ft</td>
<td>30</td>
<td>60'</td>
<td>90'</td>
<td>120'</td>
<td>150'</td>
<td>180'</td>
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<tr>
<td>5,000 - 9,999 sq ft</td>
<td>60</td>
<td>120'</td>
<td>180'</td>
<td>240'</td>
<td>300'</td>
<td>360'</td>
</tr>
<tr>
<td>10,000 - 19,999 sq ft</td>
<td>65</td>
<td>130'</td>
<td>195'</td>
<td>260'</td>
<td>325'</td>
<td>390'</td>
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<tr>
<td>20,000 - 39,999 sq ft</td>
<td>70</td>
<td>140'</td>
<td>210'</td>
<td>280'</td>
<td>350'</td>
<td>420'</td>
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<tr>
<td>40,000 - 59,999 sq ft</td>
<td>75</td>
<td>150'</td>
<td>225'</td>
<td>300'</td>
<td>375'</td>
<td>450'</td>
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<td>60,000 - 79,999 sq ft</td>
<td>80</td>
<td>160'</td>
<td>240'</td>
<td>320'</td>
<td>400'</td>
<td>480'</td>
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<tr>
<td>80,000 - 99,000 sq ft</td>
<td>85</td>
<td>170'</td>
<td>255'</td>
<td>340'</td>
<td>425'</td>
<td>510'</td>
</tr>
<tr>
<td>100,000 sq ft or greater</td>
<td>90</td>
<td>180'</td>
<td>270'</td>
<td>360'</td>
<td>450'</td>
<td>540'</td>
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</table>
Inlet Hazard Areas (IHA)

- Areas especially vulnerable to erosion and flooding due to proximity to ocean inlets
- IHA boundaries designated in 1981
- Structures < 5,000 sf
- Density restrictions
- No dune building
Sandbags in Inlet Hazard Areas

- If community is actively pursuing inlet relocation or stabilization project, sandbags may remain in place for up to 8 years from date of approval, and may be used more than once.
- Bags can be used to protect septic systems.

New River Inlet  Shallotte Inlet  Tubbs Inlet
Bulldozing in Inlet Hazard Areas

- GP 1800 (15A NCAC 7H.1800) allows beach bulldozing landward of the MHW mark in the Ocean Hazard AEC, but does not apply to IHAs.

- 15A NCAC 7H.0308(b)(5) “no new dunes shall be created in inlet hazard areas.”
Timing of Projects

- 15A NCAC 7H.0308(a)(1)(F) states that “project construction shall be timed to minimize adverse effects on biological activity.”
“Umbrella Permitting”

• Hold pre-application meetings
  – Staff work with the applicant to develop a project that will likely meet CRC and other state and federal regulations.

• Assist applicants in filling out permit applications, which also meet req’s for:
  – Water Quality Certification (DWR)
  – Federal Wetlands Permit (USACE)
  – Section 10 (Navigation) Permit (USACE)
Sediment Criteria Rules

• Recent rule changes have reduced the burden on project applicants for sampling and analysis.
• Changes were based on DCM experience with implementing the rules.
  – Adequate sediment sampling is maintained.
  – Costs for applicants are decreased.
Beneficial Use of Dredged Materials

Dredging of Cape Fear River Inlet with Sand Placed on Bald Head Island
Inlet Channel Realignment

Figure Eight Island

Shell Island Resort

Mason Inlet

Before

Wrightsville Beach

Figure Eight Island

Mason Inlet

Shell Island Resort

Wrightsville Beach

After
Inlet Channel Realignment
Terminal Groins

- SB 151 allows 4 terminal groins to be permitted
- In various stages of the process:
  - Bald Head Island, Figure Eight Island, Holden Beach, Ocean Isle Beach
Oregon Inlet

June 15, 2013

Bodie Island

Bonner Bridge

terminal groin

Pea Island
Drum Inlet

North Core Banks

South Core Banks

April 6, 2013
Barden Inlet

April 6, 2013
Bear Inlet

December 31, 2011
New River Inlet

AIWW

Onslow Beach

North Topsail Beach

December 31, 2011
New Topsail Inlet

Topsail Beach

Lea-Huttaff Island

January 3, 2013
Rich Inlet

AIWW

Lea-Huttaff Island

Figure Eight Island

January 3, 2013
Cape Fear River Inlet

January 3, 2013