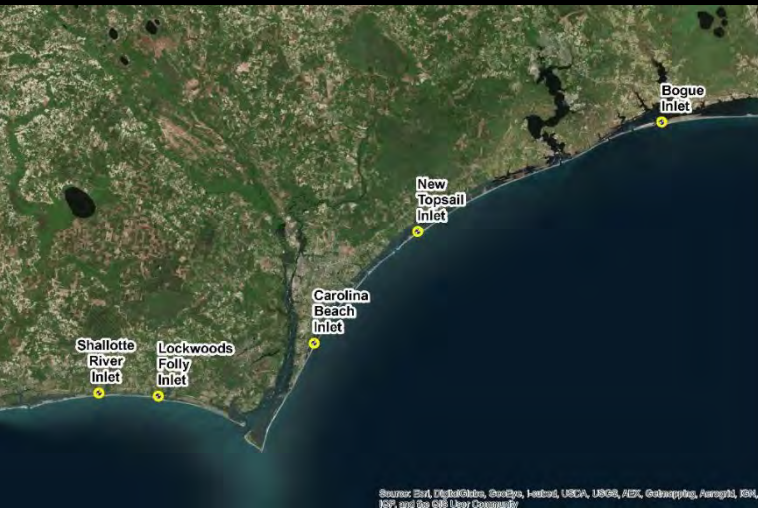


**OBG PRESENTS:**

# **Best Management Practices for Endangered Species Act Compliance at Five Shallow-Draft Inlets in North Carolina**

Chris Kriegner



Source: Earthstar/Mapbox, GeoEye, GeoEye, USDA, USGS, NPS, Google, Aerial, ESRI, and other providers.



# AGENDA

Project Overview

Section 7 Consultation

Issued Biological Opinion

Takeaways





# Project Overview



# Project Needs



U.S. Department  
of Homeland Security  
**United States  
Coast Guard**

---

## LOCAL NOTICE TO MARINERS

**District: 5**

**Week: 20/16**

### NC - HAZARDS OF NORTH CAROLINA COASTAL INLETS

This notice is to notify mariners about accessing hazardous inlets, to heighten public awareness about the hazards that exist in and around the inlets, and to provide the mariner with available information. Mariners are advised that shoaling conditions exist at following North Carolina coastal inlets:

Oregon Inlet Hatteras Inlet

Ocracoke Inlet Barden Inlet

Beaufort Inlet Bogue Inlet

New River Inlet Topsail Inlet

Masonboro Inlet Carolina Beach Inlet

Lockwoods Folly Inlet Shallotte Inlet

Shoaling conditions increase the potential for groundings. These inlets are subject to continual and sometimes rapid environmental changes.

Mariners are highly encouraged to obtain the most recent U.S. Army Corps of Engineers Wilmington, North Carolina District hydrographic survey information, centerline waypoints and controlling depth at:

<http://www.saw.usace.army.mil/Missions/Navigation/HydrographicSurveys.aspx>

Mariners should use caution when navigating in these areas and passage through the inlets is not recommended without local knowledge of the area. The aids to navigation in these inlets may not be charted and may not be marking best water due to continually shifting shoals. Consult Local Notice to Mariners, 5th Coast Guard District for the latest positions and status of aids to navigation:

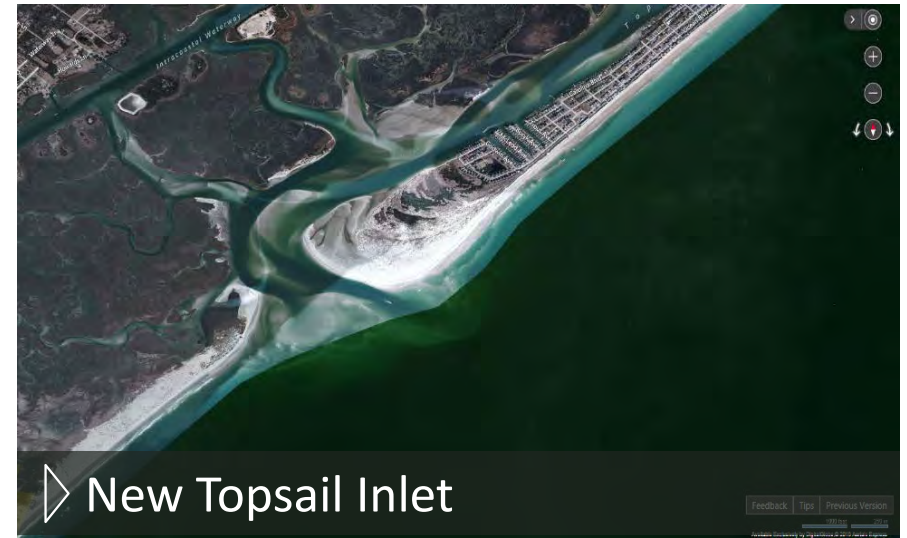
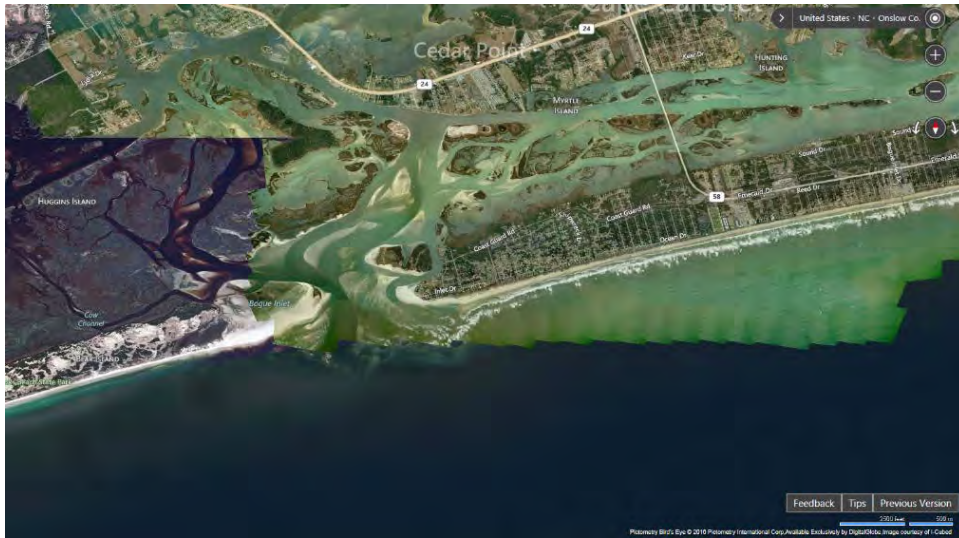
<http://www.navcen.uscg.gov/?pageName=lnmDistrict&region=5>

To report any aids to navigation discrepancies (missing, damaged, off station, extinguished lights), shoaling, hazards to navigation, or discrepancies on bridge lighting, please contact Sector North Carolina Command Center (910) 343-2200.

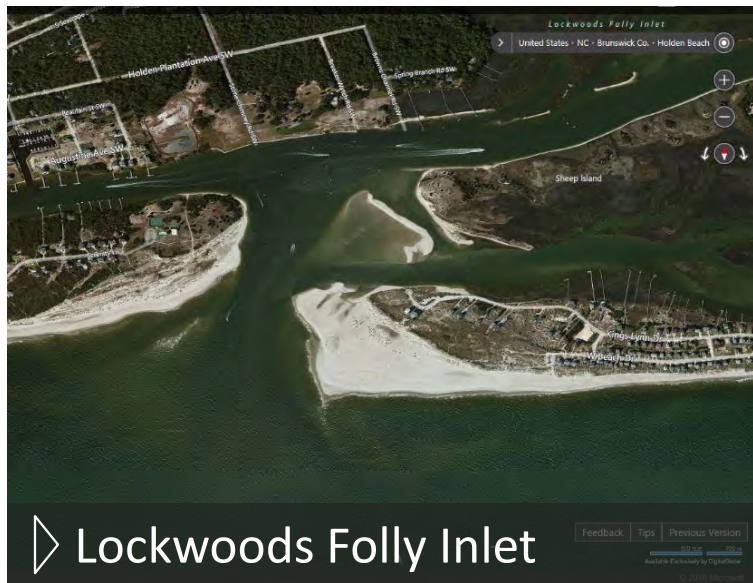


## Participants

<b>Project Area</b>	<b>Applicant</b>
<b>Bogue Inlet, Connecting Channel, AIWW Crossing</b>	Town of Emerald Isle
<b>New Topsail Inlet, Topsail Creek, Banks Channel, AIWW Crossing</b>	Town of Topsail Beach
<b>Carolina Beach Inlet, AIWW Crossing</b>	New Hanover County
<b>Lockwoods Folly Inlet, AIWW Crossing</b>	Town of Holden Beach
<b>Shalotte River Inlet CSDR Borrow Area, AIWW Crossing</b>	Town of Ocean Isle Beach



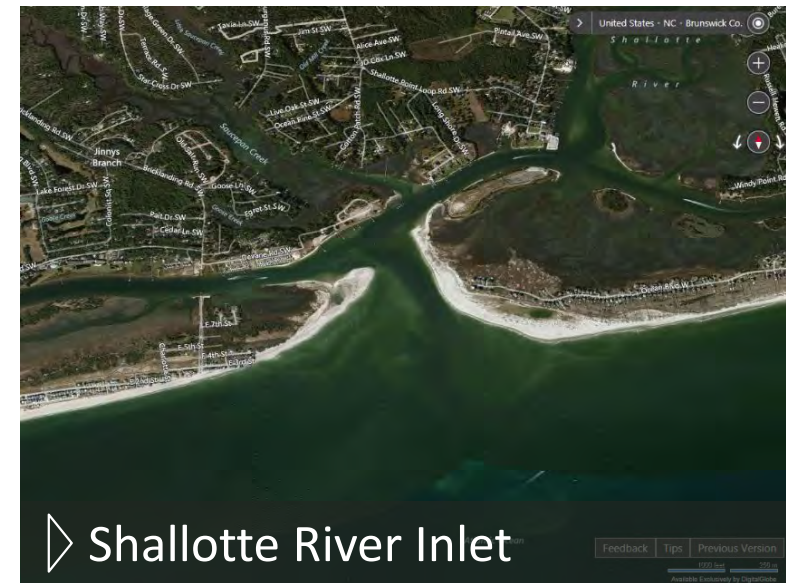
▶ New Topsail Inlet



▶ Lockwoods Folly Inlet



▶ Carolina Beach Inlet



▶ Shallotte River Inlet



## Dredging Locations

- AIWW crossings and wideners
- Connecting channels
- Inlets

## Material Disposition

- Beneficial placement
- Nearshore placement
- CDF



Dimension	Bouge Inlet	New Topsail Inlet	Carolina Beach Inlet	Lockwoods Folly Inlet	Shalotte River Inlet
Length	<b>AIWW:</b> 5,400 ft <b>Bouge Inlet:</b> 6,100 ft <b>Connecting Channel:</b> 10,400 ft	<b>AIWW:</b> 7,800 ft <b>New Topsail Inlet:</b> 7,800ft <b>Topsail Creek:</b> 8,000 ft <b>Banks Channel:</b> 21,100 ft	<b>AIWW:</b> 3,900 ft <b>Carolina Beach Inlet:</b> 6,300 ft	<b>AIWW:</b> 7,700 ft <b>Lockwoods Folly Inlet:</b> 4,100 ft	<b>AIWW:</b> 9,000 ft <b>Shalotte River Inlet:</b> 5,400 ft
Width	<b>AIWW:</b> 90 ft <b>Bouge Inlet:</b> 150 ft <b>Connecting Channel:</b> 90 ft	<b>AIWW:</b> 90 ft <b>New Topsail Inlet:</b> 150 ft <b>Topsail Creek &amp; Banks Channel:</b> 80 ft	<b>AIWW:</b> 90 ft <b>Carolina Beach Inlet:</b> 150 ft	<b>AIWW:</b> 90ft <b>Lockwoods Folly Inlet:</b> 150 ft	<b>AIWW:</b> 90 ft <b>Shalotte River Inlet:</b> 150 ft
Approx. Maintained Navigation Area (Includes Wideners)	~64 acres	~108 acres	~44 acres	~48 acres	~53 acres





# Supporting Documentation

Cultural Resource Assessment

Essential Fish Habitat Assessment

Geotechnical Assessment

Biological Assessments





# Section 7 Consultation



photo courtesy of GADNR



Red Knots, Mispillion Harbor, Delaware.  
Credit: Gregory Breese/USFWS

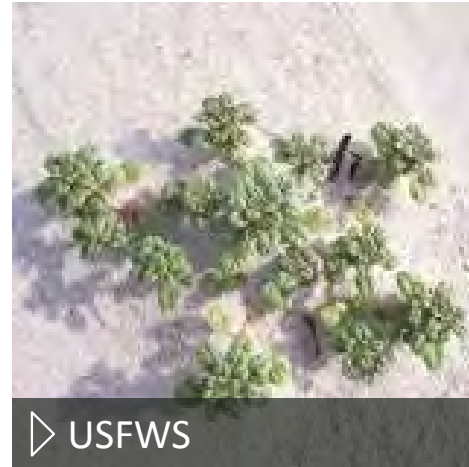
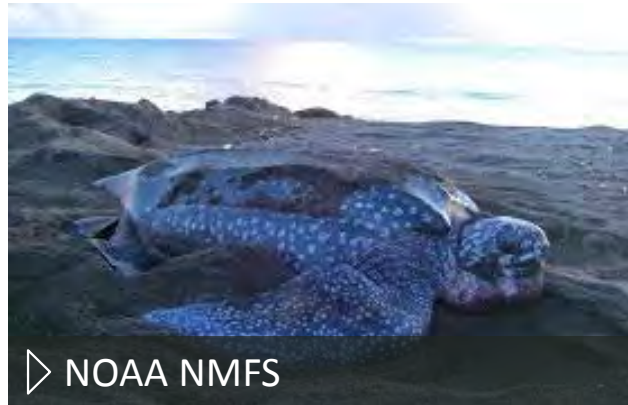


NOAA NMFS

- Federal approval (USACE Wilmington District) required
- Formal ESA Section 7 Consultation required
- Supplemental BA developed for loggerhead sea turtle (*Caretta caretta*), Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*), and rufa red knot (*Calidris canutus rufa*)



# Expanded Biological Assessment





# Issued Biological Opinion



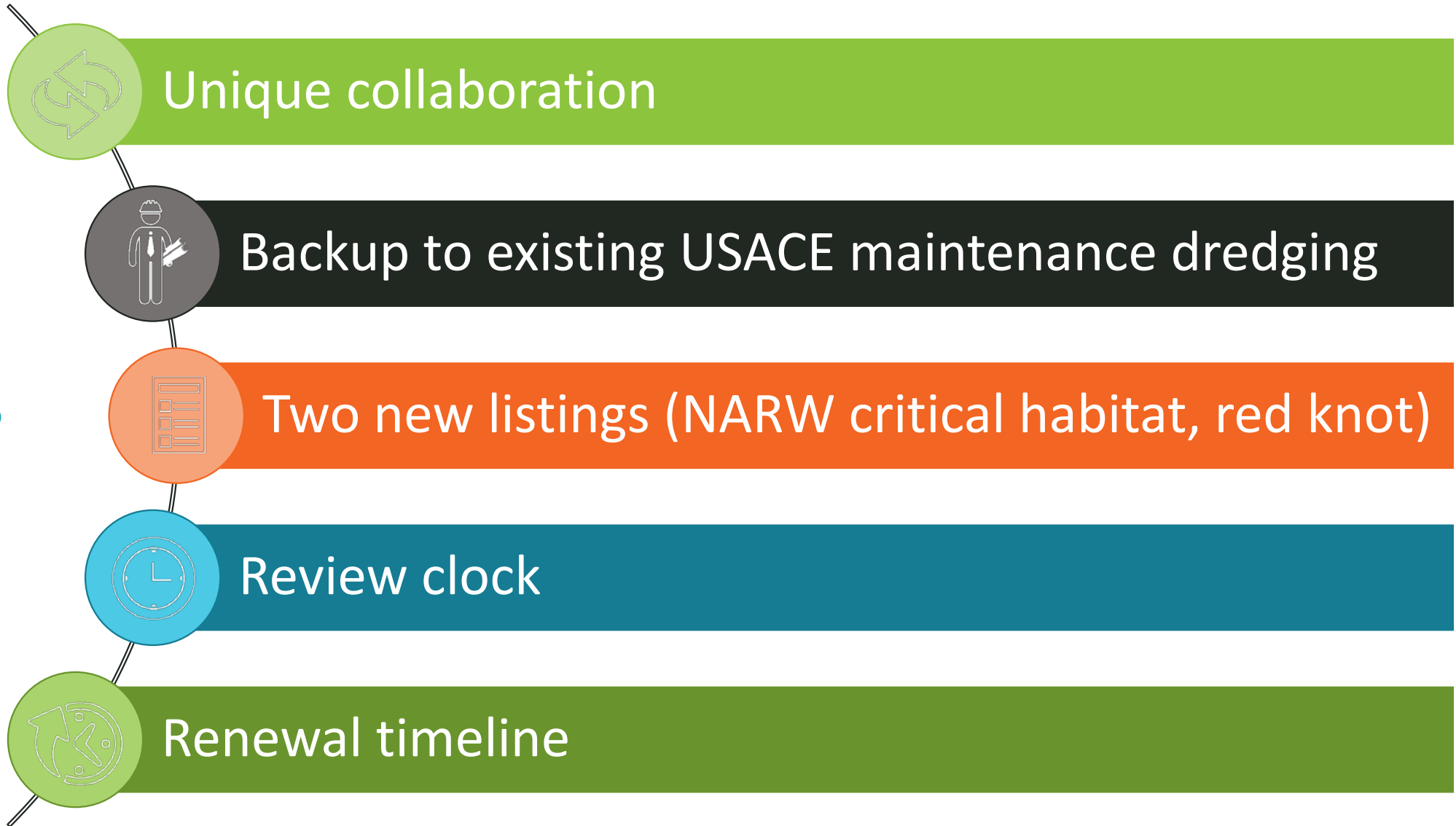
## Biological Opinion

- ▶ Evaluated all listed species identified in Expanded BA
- ▶ Incidental take determinations
- ▶ Issued species-specific RPMs
- ▶ Issued species-specific Terms and Conditions (a.k.a. Best Management Practices)

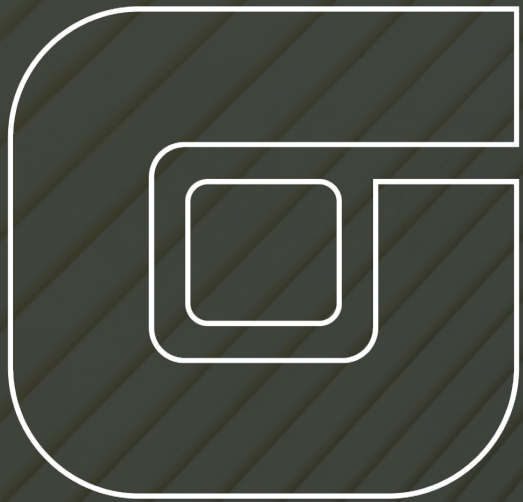


# Project Takeaways

# Takeaways







OBG | THERE'S A WAY

**Thank you!**

Chris Kriegner