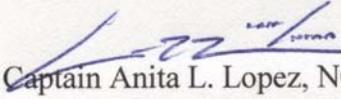




**UNITED STATES DEPARTMENT OF COMMERCE**

National Oceanic and Atmospheric Administration  
NOAA Marine and Aviation Operations  
Marine Operations Center  
439 W. York Street  
Norfolk, VA 23510-1114

MEMORANDUM FOR: Lieutenant Commander Nicholas J. Chrobak, NOAA  
Commanding Officer, NOAA Ship *Nancy Foster*

FROM:   
Captain Anita L. Lopez, NOAA  
Commanding Officer, NOAA Marine Operations Center-Atlantic

SUBJECT: Project Instruction for NF-13-11  
Mapping Essential Fish Habitat in the Southeast US to Support  
Offshore Energy Spatial Planning and Ecosystem Management

Attached is the final Project Instruction for NF-13-11, Mapping Essential Fish Habitat in the Southeast US to Support Offshore Energy Spatial Planning and Ecosystem Management, which is scheduled aboard NOAA Ship *Nancy Foster* during the period of 1 October – 18 October, 2013. Of the 17 DAS scheduled for this project, 12 DAS are based-funded by OMAO and 5 DAS are program funded. This project is estimated to exhibit a Medium Operational Tempo. Acknowledge receipt of these instructions via e-mail to [OpsMgr.MOA@noaa.gov](mailto:OpsMgr.MOA@noaa.gov) at Marine Operations Center-Atlantic.

Attachment

cc:  
MOA1





U.S. DEPARTMENT OF COMMERCE  
 National Oceanic and Atmospheric Administration  
 NATIONAL OCEAN SERVICE  
 NATIONAL CENTERS FOR COASTAL OCEAN SCIENCE  
 CENTER FOR COASTAL FISHERIES AND HABITAT RESEARCH  
 101 Pivers Island Road  
 Beaufort, NC 28516

### Final Project Instructions

**Date Submitted:** September 16, 2013

**Platform:** NOAA Ship *Nancy Foster*

**Project Number:** NF-13-11 EFH Atlantic (OMAO)

**Project Title:** Mapping Essential Fish Habitat in the Southeast US to Support Offshore Energy Spatial Planning and Ecosystem Management

**Project Dates:** October 1 – 18, 2013

Prepared by: TAYLOR.JAMES.C Digitally signed by TAYLOR.JAMES.CHRISTOPHER.1366275122  
DN: cn=US, o=U.S. Government, ou=DoD,  
ou=PRO, ou=OTHER,  
c=US  
CHRISTOPHER.1366275122 Date: 2013.09.17 14:34:53 -04'00' Dated: 17 September 2013

J. Christopher Taylor  
 Chief Scientist  
 Center for Coastal Fisheries and Habitat Research  
 JOHNSON.DAVID.F.DR.1365847939

Approved by:  2013.09.20 16:54:29 -04'00'  
 Dated: \_\_\_\_\_

David Johnson  
 Director  
 Center for Coastal Fisheries and Habitat Research

Approved by: ERICKSON.MAR Digitally signed by ERICKSON.MARY.C.1365826923  
DN: cn=US, o=U.S. Government, ou=DoD,  
ou=PRO, ou=OTHER,  
c=US  
Y.C.1365826923 Date: 2013.09.26 16:10:15 -04'00' Dated: \_\_\_\_\_

Mary Erickson  
 Acting Director  
 National Centers for Coastal Ocean Science

Approved by:  Dated: 27 SEP 13

Captain Anita L. Lopez, NOAA  
 Commanding Officer  
 Marine Operations Center - Atlantic

## I. Overview

### A. Brief Summary and Project Period

The Center for Coastal Fisheries and Habitat Research (CCFHR) will conduct a research mission onboard NOAA Ship *Nancy Foster* in proposed wind energy areas near Cape Fear, North Carolina. The purpose of the cruise will be to collect acoustic signatures of the seafloor, drop camera video images of seafloor habitats (sand habitats or >130 ft) and conduct diver biological assessment of the fish and benthic community on hardbottom habitats (<130 ft).

### B. Service Level Agreements

Of the 16 DAS scheduled for this project, 12 DAS are funded by OMAO and 5 DAS are program funded. This project is estimated to exhibit a Medium Operational Tempo.

### C. Operating Area

Cape Fear, North Carolina. See Figure 1.

### D. Summary of Objectives

1. Scientists will complete high resolution sidescan, multibeam and acoustic fisheries sonar surveys in shallow depths approximately 20- 55 meters to characterize seafloor habitats within fishing grounds and proposed outer continental shelf (OCS) energy development regions.

2. Scientists will conduct fishery acoustic surveys during night-time hours to map the distribution of fishes over hardbottom habitats, particularly focusing on abundance and distribution of fish adjacent to hardbottom habitats

2. Scientists will conduct diver visual surveys to assess fish abundance and community assemblages and benthic invertebrates and sedimentary characteristics of habitats over hardbottom seafloor types and shipwrecks or artificial reef identified from the sonar imagery. Divers will use no-decompression scientific dive methods.

### E. Participating Institutions

NOAA (NCCOS), University of North Carolina – Institute of Marine Science and UNC-Coastal Studies Institute, Geodynamics Group, Inc., Department of Interior (Bureau of Ocean Energy Management), Office of National Marine Sanctuaries, FL Fish and Wildlife Commission, and students from academic institutions.

F. Personnel/Science Party: name, title, gender, affiliation, and nationality

<b>Name</b>	<b>Title</b>	<b>Date Aboard</b>	<b>Date Disembark</b>	<b>Gender</b>	<b>Affiliation</b>	<b>Nationality</b>
Chris Taylor	Chief Sci	2-Oct	15-Oct	m	NOAA	US
Brian Degan	Divemaster	2-Oct	15-Oct	m	NOAA	US
Christine Buckel	Diver	2-Oct	15-Oct	f	NOAA	US
Erik Ebert	Diver	2-Oct	15-Oct	m	NOAA	US
Avery Paxton	Diver	2-Oct	15-Oct	f	UNC	US
Emily Pickering	Diver	2-Oct	9-Oct	f	UNC	US
Shay Viehman	Diver	2-Oct	9-Oct	f	NOAA	US
Walter Rogers	Hydrographer	2-Oct	9-Oct	m	UNC	US
Ben Sumners	Hydrographer	2-Oct	9-Oct	m	UNC	US
Mike Burton	Diver	2-Oct	9-Oct	m	NOAA	US
Roldan Munoz	Diver	2-Oct	9-Oct	m	NOAA	US
Todd Kellison	Diver	9-Oct	15-Oct	m	NOAA	US
Alyssa Adler	Diver	9-Oct	15-Oct	f	UNC	US
Rob Ruzicka	Diver	9-Oct	15-Oct	m	FL FWC	US
Abigail Poray	Diver	9-Oct	15-Oct	f	UNC	US
Wilson Freshwater	Diver	9-Oct	15-Oct	m	UNCW	US
Paula Whitfield	Diver	9-Oct	15-Oct	f	NOAA	US
Brad Teer	Diver	9-Oct	15-Oct	m	NOAA	US

G. Administrative

1. Points of Contacts: Chief Scientist: Chris Taylor, 101 Pivers Island Road, Beaufort, NC, 252-838-0833, [Chris.Taylor@noaa.gov](mailto:Chris.Taylor@noaa.gov); Operations Officer: LT Colin Kliewer, 843-991-6326, [ops.nancy.foster@noaa.gov](mailto:ops.nancy.foster@noaa.gov)

2. Diplomatic Clearances

This project involves Marine Scientific Research in waters under the jurisdiction of the United States. No diplomatic clearances are required.

3. Licenses and Permits

No licenses or permits are required.

II. Operations

A. Project Itinerary

All operations will be conducted within the wind energy area identified in Appendix 1, Figure 1. A Plan of the Day (POD) will be provided to the bridge that details the specifics of projects and timelines related to operations and logistics for the following day. The POD will be delivered to the Operations Officer each evening.

**1 October**

ETD TBD: Transit from Charleston to Morehead City, NC

**2 - 15 October**

0730 Ship completes night multibeam survey. Scientist will direct ship to conduct fishery acoustic at select dive stations prior to day dive operations. Divers load gear on small boats (NF3 2-4 divers and 2 tanks each, NF4 2-6 divers 2 tanks each)

0745 Daily safety meeting

0800 Deploy small boats for dive operations

0830 NF Stand by to support dive operations. Drop camera from J-frame may be used on selected days when ship is over sandy seafloor to aid groundtruthing efforts.

1100 Small boats return to NF, boats recovered

1130 Lunch

1300 Divers reload small boats as in morning evolution

1330 Small boats deployed for dive operations

1345 NF Stand by to support dive operations. Drop camera from J-frame may be used on selected days when ship is over sandy seafloor to aid groundtruthing efforts.

1600 Small boats return to ship.

1630 Recover small boats

1700 Secure from dive operations, refill tanks

1730 Commence night operations: Scientist enter next day's dive coordinates in small boat GPS. Night fishery acoustic and hydrographic survey: sidescan sonar (2-8 October only) and multibeam with fishery sonar to complete seafloor habitat mapping of operating area.

## **9 October**

TBD At sea transfer of personnel (names will be provided to command)

## **IN-PORT**

### **16 October: In port Rest Day**

Policy and Management Event (1200-1500). Meeting, demonstration, and tour of ship for local and state policy makers and research partners run by science party.

### **17 October: In Port Rest Day**

Education Outreach Day (0900-1130; 1330-1600). Education-Outreach tour and demonstration on board. 30 high school students and chaperones will be hosted by NCCOS scientists. Tour of vessel and demonstration of survey and dive technologies.

### **18 October:**

ETD: Return transit to Charleston

## **B. Staging and Destaging**

Equipment will be loaded on 2 October 2013 PM at Morehead City, NC. The project science operations will conclude on 15 October 2013. Destaging will occur following outreach events on 17 October 2013 in Morehead City, NC.

Outreach events will occur 16-17 October 2013 alongside in Morehead City, NC.

## **C. Operations to be Conducted (N 33.5° W 78°).**

### **Operations Set 1. Sidescan sonar and multibeam sonar seafloor mapping**

Seafloor mapping will be conducted during night operations, and when sea conditions do not permit safe small boat operations. Sidescan sonar towfish will be towed from small winch from A-frame. Winch will be remotely controlled from dry lab by science operators. Ship's multibeam sonar (Reson 7125) will be used simultaneously to log bathymetry and backscatter and will be operated by the survey department with assistance from science party. Initial survey plan will use sidescan sonar to complete coverage of operating area (*cf.* Project NF-13-06). Once completed, only multibeam will be used to develop specific habitat locations and possible shipwreck targets. Survey lines will be developed and transmitted to survey department and bridge using Hypack. A CTD cast will be used at beginning of each night. XBT probes system will be used for sound velocity profiles every 4 hours through night survey operations. Fishery acoustics will be acquired using EK60 simultaneous to sidescan sonar and multibeam sonar.

### **Operations Set 2: Fish and benthic community surveys**

Divers will conduct biological assessments of selected stations on hardbottom habitats identified from the sidescan, multibeam and splitbeam fishery sonar mapping. Dive teams will vary between 2 and 4 divers depending on the objective. One or more divers will assess the

benthic invertebrate community and the remaining diver will census the fish community and sizes. Photographs and videos will accompany the data records. In some cases, organisms will be brought to the surface for identification and verification. No chemicals will be needed, but freezers may be used. Some stations will be selected from shipwreck or other artificial objects on the seafloor identified from the sidescan and multibeam sonar imagery. Archaeological surveys will be coordinated with biological assessments of the biological and benthic cover on these sites. Stations will be located using GPS and confirming expected depths on small boats. Upon arrival, lead diver will deploy weighted line with polyball float. This line will be used as a reference mark for divers to descend to station. Divers will deploy from and be retrieved by small boats; *Nancy Foster* will stand by near dive operations area to support as needed. The anticipated bottom time will be 25-40 minutes. Divers will use the following methods while maintaining buddy contact:

- 1) Fish diver will trail a field tape along prescribed heading and document large fishes along a 50 m transect. Returning to station, the same diver will record presence of small fish species.
- 2) Habitat point diver: Diver will record benthic organism occurrence at points distributed every 30 cm for 20 of the fish transect tape. Returning to the start point, diver will record physical height of relief or ledges.
- 3) Habitat photo diver: Diver will record photos of 0.5 x 0.5 m quadrats at 20 prescribed locations along the transect tape.
- 4) Habitat in-situ: Diver will record occurrence and height of benthic organisms within a 0.5 x 0.5 m quadrat at 4 stations along the transect.

At all stations a fish diver + habitat point diver team will conduct a transect survey. At select stations the additional habitat dive team will also survey the station. When two dive teams are surveying the same station, the dive teams may enter at the same time or alternate time on the bottom, with the surface dive team acting as surface support/safety divers (especially for depths >100 fsw). Buddy pairs can call dive if visibility hinders ability to collect scientific data OR is perceived by any diver to be a safety issue. Divers will always be "connected" to one another by transect tape but will be required to maintain visual contact with buddy.

At the conclusion of the dive, divers will attach a lift bag to the anchor allowing it to be retrieved by topside personnel in the small boats. Each buddy team will have at least one NOAA diver that is trained in deploying small lift bags (<100lbs). Divers are trained to inflate lift bag with back gas. Back gas is also used to inflate SMB (Surface Marker Buoys) that each diver will have on person in cases of free ascent after anchor is deployed to surface or in cases of buddy separation/emergencies. Divers will free drift off the bottom releasing a surface marker buoy (lift bag or other highly visible marker) that can be seen from the surface. Small boats will follow divers and upon surfacing retrieve all divers and equipment into the small boats. Where multiple dives are occurring at the same site, divers will descend and ascend the marker buoy line until the last dive team, which will conduct a free ascent. This approach minimizes diver fatigue and ensures anchor retrieval.

If at any time divers breathe their cylinders down to 2/3's of the starting volume the data collection will be terminated and safety ascent procedures will be initiated. This is also known as the rule of thirds, where the first 1/3 of the cylinder is allotted for use by the diver during the bottom phase of the dive, 1/3 of the cylinder is allotted for use by the diver during ascent, and 1/3 of the cylinder is reserved for his/her dive partner in cases of an out of air situation or other emergency contingency. All divers will surface with a minimum of 500 PSI.

Dives will be planned using nitrox computers or appropriate nitrox tables to allow for pre-dive planning and gas management. Maximum depth and bottom time will be planned according to the buddy with the most conservative profile.

### **Operations Set 3: Drop camera on sand and deep (>130 fsw) habitats**

During dive operations on small boats, the ship's J-frame may be used to deploy a drop camera to collect images of the seafloor at stations over sand habitats or hardbottom habitats that exceed 130ft. The ship will maneuver to station and establish station keeping using dynamic positioning. The small sea-view camera in a small frame will have a heavy weight attached. The drop camera operator will note depth at station and instruct the winch operator to lower the camera frame to just above seafloor. The camera operator may instruct the ship to make small movements using z-drives. After 5 minutes, the camera will be retrieved.

#### **D. Dive Plan (See Appendix for dive plan and dive emergency action plan)**

Diving operations will be conducted as required to support photography, habitat characterization, and fish surveys. Two small boats will be needed simultaneously to support dive surveys. Each small boat will carry 2-6 divers and will conduct 2-4 dives before returning to the ship. Individuals who will function as divers are identified above in the list of scientific crew. Ship's divers are invited to assist with dive operations as other duties allow. A NOAA Divemaster will be provided for all dive operations on this project and will follow all NOAA diving policies and regulations. Dive teams will be comprised of two divers each. Where conditions permit 1 or 2 dive teams will be deployed for each dive evolution. Each team will dive between one and five times daily as allowed under "No Decompression" limits of 30, 32 or 36% NITROX at maximum operating depths of 130 fsw. The presence and use of a qualified technician or crewmember to assist with the mixing of NITROX is respectfully requested.

#### **E. Applicable Restrictions**

Conditions which preclude normal operations:

Equipment failure: Mitigation - at sea repair, switch to alternate sidescan or multibeam operations, or suspend operations.

Poor weather: Mitigation – switch to more protected area, switch to alternate sidescan or multibeam operations, or suspend operations.

Safety concerns: Mitigation – discuss as safety briefing or with ships command.

### **III. Equipment**

#### **A. Equipment and Capabilities provided by the ship (itemized)**

- 1) Hand held radios for communication between bridge and deck.
- 2) CTD's 100m depth rating.
- 3) EM 1002 and Reson Seabat 7125 multibeam sonars, and Kongberg split-beam EK-60 sonars.
- 4) DT20 Winch and coaxial armored data cable for towing sidescan sonar at 6-7 kts, 20-50 meters below surface, towing from A-frame
- 5) Simrad EK60 splitbeam calibration downriggers and calibration sphere
- 6) Metered block at A-frame and digital Cable counter (data feed to dry lab)
- 7) Applanix Pos/MV v.4
- 8) Remote camera to view DT20 winch
- 9) 2-3 cubic foot freezer space (<32 F)
- 10) Internet connection and connection to ship's data server for MBES and EK60 processing computers
- 11) Dynamic Positioning System
- 12) NITROX scuba tanks and compressor system
- 13) 1 small boat for 2-4 divers (NF3), 1 small boat capable of carrying 2-6 divers and tanks (NF4) with GPS and depth sounder to locate stations and confirm depth at station.

#### **B. Equipment and Capabilities provided by the scientists (itemized)**

- 1) Edgetech 4200 Sidescan Sonar
- 2) Cable termination pigtails for Edgetech 4200 Sidescan Sonar, wetside and topside
- 3) Loaned XBT system (from AOML) and probes
- 4) Three high end laptops / workstations and 4 flat screen monitors, internet connection required
- 5) 6 Tb Data Server
- 6) 10 120 cf NITROX scuba tanks, 10 100 cf NITROX scuba tanks with tank racks
- 7) Nitrox gas analyzers
- 8) Dive benches to store 120 cf nitrox tanks for refill.
- 9) Dive tapes, weights, clipboards, data sheets, dive gear (SEP or alternative serviced within 12 months)
- 10) Laptops for data entry and data management

### **IV. Hazardous Materials**

#### **A. Policy and Compliance**

The Chief Scientist is responsible for complying with FEC 07 Hazardous Materials and Hazardous Waste Management Requirements for Visiting Scientific Parties (or the OMAO procedure that

supersedes it). By Federal regulations and NOAA Marine and Aviation Operations policy, the ship may not sail without a complete inventory of all hazardous materials by name and the anticipated quantity brought aboard, MSDS and appropriate neutralizing agents, buffers, or absorbents in amounts adequate to address spills of a size equal to the amount of chemical brought aboard, and a chemical hygiene plan. Documentation regarding those requirements will be provided by the Chief of Operations, Marine Operations Center, upon request.

Per FEC 07, the scientific party will include with their project instructions and provide to the CO of the respective ship 60 to 90 days before departure:

- A list of hazardous materials by name and anticipated quantity
- Include a chemical spill plan that addresses all of the chemicals the program is bringing aboard. This shall include:
  - Procedures on how the spilled chemicals will be contained and cleaned up.
  - A complete inventory (including volumes/amounts) of the chemical spill supplies and equipment brought aboard by the program. This must be sufficient to clean and neutralize all of the chemicals brought aboard by the program.
  - A list of the trained personnel that will be accompanying the project and the training they've completed.

Upon embarkation and prior to loading hazardous materials aboard the vessel, the scientific party will provide to the CO or their designee:

- An inventory list showing actual amount of hazardous material brought aboard
- An MSDS for each material
- Confirmation that neutralizing agents and spill equipment were brought aboard sufficient to contain and cleanup all of the hazardous material brought aboard by the program.

Upon departure from the ship, scientific parties will provide the CO or their designee an inventory of hazardous material indicating all materials have been used or removed from the vessel. The CO's designee will maintain a log to track scientific party hazardous materials. MSDS will be made available to the ship's complement, in compliance with Hazard Communication Laws.

Scientific parties are expected to manage and respond to spills of scientific hazardous materials. Overboard discharge of scientific chemicals is not permitted during projects aboard NOAA ships.

B. Radioactive Isotopes

N/A

C. Inventory (itemized) of Radioactive Materials

No Radioactive Materials will be used or brought on the vessel.

**V. Additional Projects**

A. Supplementary (“Piggyback”) Projects

No piggyback projects planned.

C. NOAA Fleet Ancillary Projects

No NOAA Fleet Ancillary Projects are planned for this mission.

**VI. Disposition of Data and Reports**

A. Data Responsibilities

We request that the Ship’s data storage be made available during the cruise to store all digital data. The science party will transfer that data from the Ship storage to scientist drives at the end of the cruise. The scientists will be responsible for providing data archives to NGDC and AHB as part of R2R within 12 months of the completion of the survey objectives or in consultation with AHB and research partners.

B. Pre and Post Project Meeting

Prior to departure, the Chief Scientist will conduct a meeting of the scientific party to train them in sample collection and inform them of project objectives. Some vessel protocols, e.g., meals, watches, etiquette, etc. will be presented by the ship’s Operations Officer prior to departure.

Post-Project Meeting: Upon completion of the project, a meeting will normally be held at 0830 (unless prior alternate arrangements are made) and attended by the ship’s Operations Officer, Commanding Officer and the Chief Scientist to review the project. Concerns regarding safety, efficiency, and suggestions for improvements for future projects should be discussed.

C. Ship Operation Evaluation Report

Within seven days of the completion of the project, a Ship Operation Evaluation form is to be completed by the Chief Scientist. The preferred method of transmittal of this form is via email to [omao.customer.satisfaction@noaa.gov](mailto:omao.customer.satisfaction@noaa.gov). If email is not an option, a hard copy may be forwarded to:

Director, NOAA Marine and Aviation Operations  
NOAA Office of Marine and Aviation Operations  
8403 Colesville Road, Suite 500  
Silver Spring, MD 20910

## VII. Miscellaneous

### A. Meals and Berthing

The ship will provide meals for the scientists listed above. Meals will be served 3 times daily beginning one hour before scheduled departure, extending throughout the project, and ending two hours after the termination of the project. Since the watch schedule is split between day and night, the night watch may often miss daytime meals and will require adequate food and beverages (for example a variety of sandwich items, cheeses, fruit, milk, juices) during what are not typically meal hours. Divers on small boats may require box lunches if scheduled to not return to ship in time for lunch. These cases will be communicated to command the day prior and on daily plan. Special dietary requirements for scientific participants will be made available to the ship's command at least seven days prior to the survey.

There are three vegetarians in the science party for Leg 1 of the mission.

Berthing requirements, including number and gender of the scientific party, will be provided to the ship by the Chief Scientist. The Chief Scientist and Commanding Officer will work together on a detailed berthing plan to accommodate the gender mix of the scientific party taking into consideration the current make-up of the ship's complement. The Chief Scientist is responsible for ensuring the scientific berthing spaces are left in the condition in which they were received; for stripping bedding and linen return; and for the return of any room keys which were issued. The Chief Scientist is also responsible for the cleanliness of the laboratory spaces and the storage areas utilized by the scientific party, both during the project and at its conclusion prior to departing the ship.

All NOAA scientists will have proper travel orders when assigned to any NOAA ship. The Chief Scientist will ensure that all non NOAA or non Federal scientists aboard also have proper orders. It is the responsibility of the Chief Scientist to ensure that the entire scientific party has a mechanism in place to provide lodging and food and to be reimbursed for these costs in the event that the ship becomes uninhabitable and/or the galley is closed during any part of the scheduled project.

All persons boarding NOAA vessels give implied consent to comply with all safety and security policies and regulations which are administered by the Commanding Officer. All spaces and equipment on the vessel are subject to inspection or search at any time. All personnel must comply with OMAO's Drug and Alcohol Policy dated May 7, 1999 which forbids the possession and/or use of illegal drugs and alcohol aboard NOAA Vessels.

### B. Medical Forms and Emergency Contacts

The NOAA Health Services Questionnaire (NHSQ, Revised: 02 JAN 2012) must be completed in advance by each participating scientist. The NHSQ can be obtained from the Chief Scientist or the NOAA website <http://www.corporateservices.noaa.gov/~noaaforms/eforms/nf57-10->

[01.pdf](#). The completed form should be sent to the Regional Director of Health Services at Marine Operations Center. The participant can mail, fax, or scan the form into an email using the contact information below. The NHSQ should reach the Health Services Office no later than 4 weeks prior to the project to allow time for the participant to obtain and submit additional information that health services might require before clearance to sail can be granted. Please contact MOC Health Services with any questions regarding eligibility or completion of the NHSQ. Be sure to include proof of tuberculosis (TB) testing, sign and date the form, and indicate the ship or ships the participant will be sailing on. The participant will receive an email notice when medically cleared to sail if a legible email address is provided on the NHSQ.

Contact information:

Regional Director of Health Services  
Marine Operations Center – Atlantic  
439 W. York Street  
Norfolk, VA 23510  
Telephone 757-441-6320  
Fax 757-441-3760  
E-mail [MOA.Health.Services@noaa.gov](mailto:MOA.Health.Services@noaa.gov)

Prior to departure, the Chief Scientist must provide an electronic listing of emergency contacts to the Executive Officer for all members of the scientific party, with the following information: contact name, address, relationship to member, and telephone number.

C. Shipboard Safety

Wearing open-toed footwear or shoes that do not completely enclose the foot (such as sandals or clogs) outside of private berthing areas is not permitted. The ship does not provide steel-toed boots. Hard hats are also required when working with suspended loads. Work vests are required when working near open railings and during small boat launch and recovery operations. Hard hats and work vests will be provided by the ship when required.

D. Communications

A progress report on operations prepared by the Chief Scientist may be relayed to the program office. Sometimes it is necessary for the Chief Scientist to communicate with another vessel, aircraft, or shore facility. Through various means of communications, the ship can usually accommodate the Chief Scientist. Special radio voice communications requirements should be listed in the project instructions. The ship's primary means of communication with the Marine Operations Center is via e-mail and the Very Small Aperture Terminal (VSAT) link. Standard VSAT bandwidth at 128kbs is shared by all vessels staff and the science team at no charge. Increased bandwidth in 30 day increments is available on the VSAT systems at increased cost to the scientific party. If increased bandwidth is being considered, program accounting is required it must be arranged at least 30 days in advance.

E. IT Security

Any computer that will be hooked into the ship's network must comply with the *NMAO Fleet IT Security Policy 1.1* (November 4, 2005) prior to establishing a direct connection to the NOAA WAN. Requirements include, but are not limited to:

- (1) Installation of the latest virus definition (.DAT) file on all systems and performance of a virus scan on each system.
- (2) Installation of the latest critical operating system security patches.
- (3) No external public Internet Service Provider (ISP) connections.

Completion of these requirements prior to boarding the ship is required.

Non-NOAA personnel using the ship's computers or connecting their own computers to the ship's network must complete NOAA's IT Security Awareness Course within 3 days of embarking.

F. Foreign National Guests Access to OMAO Facilities and Platforms

No foreign nationals are participating in this project

# Appendices

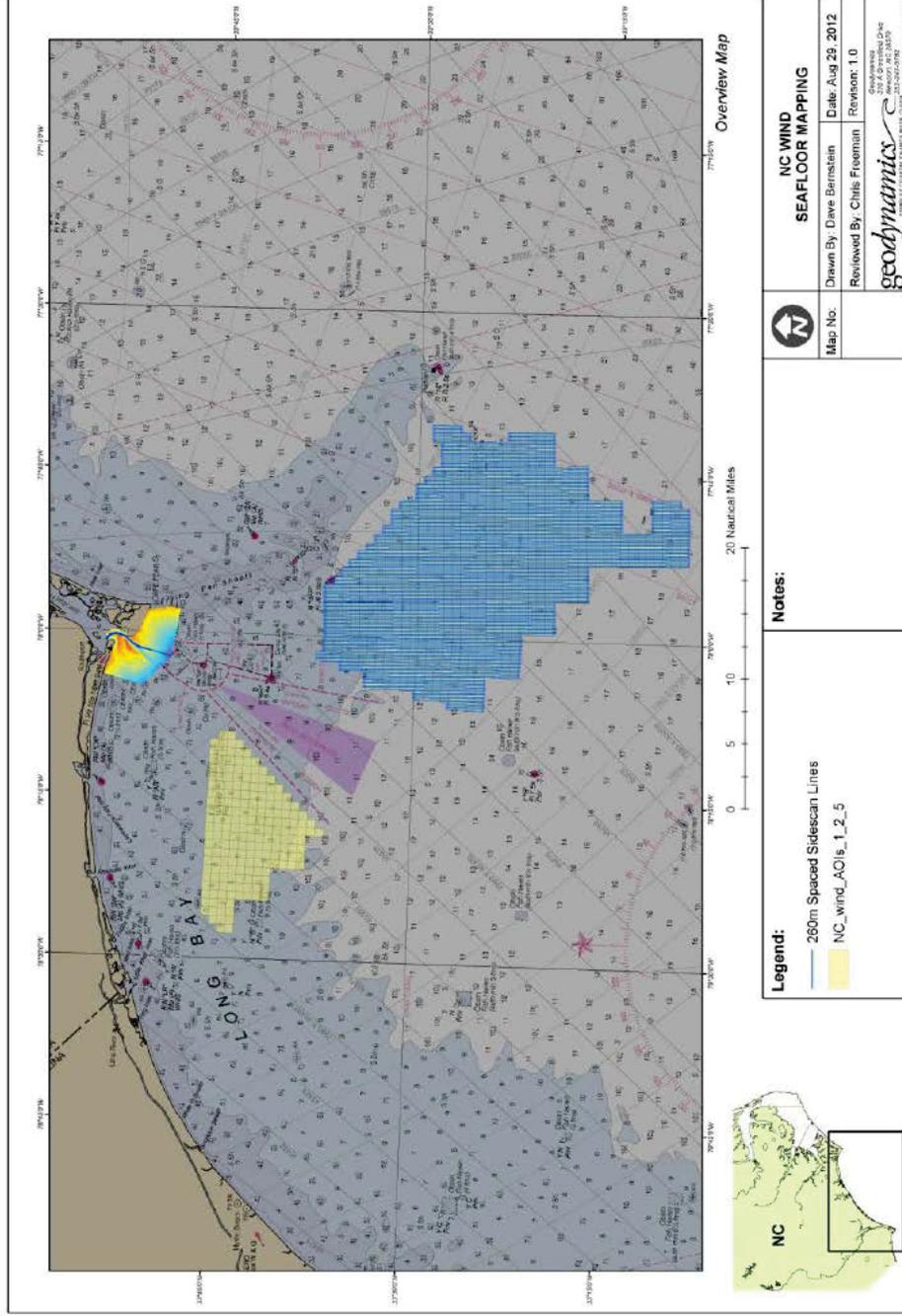


Figure 1: NF-13-11 Project Area (Blue), Wilmington-East Wind Energy and Essential Fish Habitat Area, Cape Fear, North Carolina