

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 Holly Jablonski, NOAA Commanding Officer, NOAA Ship Nancy Foster

JUL 11 2012

Captain Anita L. Lopez, NOAA

FROM:

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

SUBJECT:

Project Instruction for NF-12-06 Florida Keys National Marine Sanctuary Coral Reef Condition, Assessment, Coral Reef Mapping and Fisheries Acoustics Characterizations

Attached is the final Project Instruction for NF-12-06, FKNMS, which is scheduled aboard NOAA Ship *Nancy Foster* during the period of 22 July – 09 August 2012. Acknowledge receipt of these instructions via e-mail to **OpsMgr.MOA@noaa.gov** at Marine Operations Center-Atlantic.

Attachment

cc: MOA1



Project Instructions

Date Submitted: June 25, 2012 Platform: NOAA Ship Nancy Foster **Project Number:** NF-12-06 (FKNMS) **Project Title:** Florida Keys National Marine Sanctuary Coral Reef Condition Assessment, Coral Reef Mapping, and Fisheries Acoustics Characterizations. July 22nd to August 9th, 2012 **Project Dates:** 6 12 Dated: Prepared by: ott Donahue Chief Scientist NOS/ONMS/SEGOM/FKNMS Dated: 7 Approved by: Sean Morton 2012 JUL 11 Superintendent NOS/ONMS/SEGOM/FKNMS Stephen R. Approved by: Gittings email=steve.gittings@noaa.gov, Date: 2012.07.06 11:32:23 -04'00 Dated: Steve Gittings, Ph. D. Science Coordinator NOS/ONMS Approved by: Dated: 10/00712 Captain Anita Lopez, NOAA Commanding Officer Marine Operations Center - Atlantic

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I. Overview

- A. Brief Summary and Project Period
 Depart: Charleston, SC July 22, 2012
 Arrive: Key West, FL July 25, 2012
 Load Vessel: Key West, FL July 25-26, 2012
 Depart: Key West, FL July 26, 2012
 Arrive: Key West, FL August 4, 2012
 Offload Vessel: Key West, FL August 4, 2012
 Depart: Key West, FL August 6, 2012
 Depart: Key West, FL August 6, 2012
 Arrive: Charleston, SC August 9, 2012
- B. Service Level Agreements

Of the 18 DAS scheduled for this project 18 DAS are funded by NOS Chart Funds. Transit DAS is scheduled for July 22-25, 2012 departing Charleston, SC and arriving in Key West, FL. Additional transit DAS is scheduled for August 6-9, 2012 departing Key West, FL and arriving in Charleston, SC. Key West, FL is the project port. This project is estimated to exhibit a Low Fuel and High Overtime Operational Tempo.

C. Operating Area

Florida Keys National Marine Sanctuary - from Tortugas Ecological Reserve (approx. 70 nm west of Key West, FL) to Carysfort Reef, Key Largo, FL (approx. 6 nm east of Key Largo, FL) Please see Appendix 1.



D. Summary of Objectives

- Multibeam survey over Boca Grande Bar, the purported mutton spawning aggregation site near Western Dry Rocks. Couple with fishery acoustics, FL FWC's ROV, divers or drop camera for habitat validation. (8-10 hours accomplished en route to Tortugas from Key West) Please see Appendix 2 for a map of Western Dry Rocks.
- Multibeam target areas in the vicinity of the Dry Tortugas (DT Westbank Gaps) and northwest of Loggerhead Key ("The River"), including fisheries acoustics survey for fish biomass distribution. Please see Appendix 3 for Tortugas Ecological Reserve Coordinates and Appendix 4 for a map of "The River" and DT Westbank Gaps area.
- Fisheries acoustics mapping in select region(s) bisected by the TNER boundary to contribute to existing data on distribution of fish biomass in relation to Ecological Reserve boundary.
- Drop camera and/or diver visual surveys over bathymetry habitat features of interest, particularly in "The River". Please see Appendix 4.
- Service array of VR2 receivers in the vicinity of Dry Tortugas using divers. Please see Appendix 5 for a map of the VR2 Array, April 2012.
- Dive and lower camera over the side of ship or a small boat on mutton spawning aggregation locations on Riley's Hump on/around August full moon on/around 2 August. Please see Appendix 6 for location of Riley's Hump.
- E. Participating Institutions

NOAA's National Ocean Service - Office of National Marine Sanctuaries

NOAA's National Marine Fisheries Service - Southeast Fisheries Science Center

NOAA's National Ocean Service - National Center for Coastal Ocean Sciences

NOAA's Teacher at Sea Program

Florida Fish and Wildlife Conservation Commission

Florida Department of Environmental Protection

College of Charleston, SC

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

Name (Last, First)	me (Last, First) Title		Date Date		Affiliation	Nationality	
		Aboard	Disembark				
Donahue, Scott	Chief Scientist	7/25/12	8/4/12	М	NOS/ONMS	US	
Morton, Sean	FKNMS	7/25/12	8/4/12	М	NOS/ONMS	US	
	Superintendent						
Fangman, Sarah	Fangman, Sarah Scientist		8/4/12	F	NOS/ONMS	US	
Johnson, Kasey Asst. Survey		7/22/12	8/9/12	F	College of	US	
	Tech				Charleston		
Kaiser, Susan	Teacher at Sea	7/25/12	8/4/12	F	NOAA	US	
Morely, Danielle Scientist		7/25/12	8/4/12	F	Florida FWC	US	
Bailey, Hatsue Scientist		7/25/12	8/4/12	F	Florida DEP	Japan (green card)	
Acosta, Alejandro Co-PI/Scientist		7/25/12	8/4/12	М	Florida FWC	US	

Eaken, Dave Scientist		7/25/12	8/4/12	М	Florida FWC	US
Sympson, Bill	Scientist	7/25/12	8/4/12	М	Florida FWC	US
Binder, Ben	Scientist	7/25/12	8/4/12	М	Florida FWC	US
Renchen, Jeffery	Scientist	7/25/12	8/4/12	М	Florida FWC	US
Barbera, Paul	Scientist	7/25/12	8/4/12	М	Florida FWC	US

G. Administrative

1. Points of Contacts:

Chief Scientist: Scott Donahue Office: 305-809-4700 ext.239 Cell: 305-797-7223 Email: scott.donahue@noaa.gov

Ops Officer: LT Josh Slater Cell: 843-991-6326 Iridium: 808-434-5653 Email: <u>ops.nancy.foster@Noaa.gov</u>

2. Diplomatic Clearances

This project involves Marine Scientific Research in waters under the jurisdiction of the United States of America. Diplomatic clearance is not needed.

3. Licenses and Permits

This project will be conducted under the Scientific Research Permit (U.S.) issued by Florida Keys National Marine Sanctuary (U.S.) to Scott Donahue (Chief Sci.). This will be presented to the ship by the time it sails.

II. Operations

A. Project Itinerary; Times are approximate

Date	Time	Activity
7/22		Depart Charleston, SC to Key West
		Transit
7/23		Transit
7/24		Transit
7/25	TBD	Arrive: Key West Mobilize science crew; Load Vessel

7/26	1000	Depart: Key West
	1100	Arrive: Western Dry Rocks; "Boca Grande Bar"
		CTD cast
		Daytime multibeam/fishery sonar surveys of features of interest off Boca Grande Bar.
		Drop camera, ROV, and/or dives on targets of interest from multibeam ops
	2000	Depart: Western Dry Rocks by sunset
7/27	0200	Arrive: Dry Tortugas "The River" and Gaps
		CTD cast
	0700	Commence multibeam and fisheries acoustics/sonar surveys upon arrival
	0700	Drop camera, ROV, or dives on targets of interest from multibeam ops
		Commence dive operations to service VR2 receivers; VR2 receivers approx. location: 24°40.0'N, 083°0.0'W; VR2 Station #s: 76, 80, 89, 90, 77, 81, 74, 91, 12, 79 (Dives dependent upon depths and location)
		On select dives, conduct visual assessment of reef fish
		Secure from dive ops CTD cast
	2000	Continue multibeam and fisheries acoustics/sonar surveys of "The River" and Gaps if not yet completed
7/28	0800	Commence dive operations to service VR2 receivers; VR2 receivers approx. location: 24°37.0'N, 082°50.0'W; VR2 Station #s: 46, 45, 44, 24A, 22, 84, 20, 40A, 37B (Dives dependent upon depths and location)
		On select dives on VR2, conduct visual assessment of reef fish
		Drop camera, ROV, or dives on targets of interest from multibeam ops
	2000	Secure from dive ops CTD cast Conduct multibeam and fisheries acoustics/sonar surveys on additional nearby areas of interest

7/29	0800	Commence dive operations to service VR2 receivers; VR2 receivers approx. location: 24°42.0'N, 082°53.0'W; VR2 Station #s: 69, 82, 75, 86, 85, 60, 83, 67, 61, 62A (Dives dependent upon depths and location)
		On select dives on VR2, conduct visual assessment of reef fish Drop camera, ROV, or dives on targets of interest from multibeam ops
	2000	Secure from dive ops CTD cast Conduct multibeam and fisheries acoustics/sonar surveys on additional nearby areas of interest
7/30	0800	Commence dive operations to service VR2 receivers; VR2 receivers approx. location: 24°36.0'N, 082°54.0'W; VR2 Station #s: 68, 59, 36A, 35A, 27, 28, 29, 30A, 32A, 17A (Dives dependent upon depths and location)
		On select dives on VR2, conduct visual assessment of reef fish
		Drop camera, ROV, or dives on targets of interest from multibeam ops
	2000	Secure from dive ops CTD cast Conduct multibeam and fisheries acoustics/sonar surveys on additional nearby areas of interest
7/31	0800	Commence dive operations to service VR2 receivers; VR2 receivers approx. location: 24°33.0'N, 082°59.0'W; VR2 Station #s: 72, 15, 16, 55, 18, 66, 70, 57, 19A, 14A (Dives dependent upon depths and location)
		On select dives on VR2, conduct visual assessment of reef fish
		Drop camera, ROV, or dives on targets of interest from multibeam ops
	2000	Secure from dive ops CTD cast Conduct multibeam and fisheries acoustics/sonar surveys on additional nearby areas of interest
8/1	0800	Commence dive operations to service VR2 receivers; VR2 receivers approx. location: 24°41.0'N, 083°04.0'W; VR2 Station #s: 92, 93, 53, 94, 95, 96, 97, 52, 87, 8, 88

		(Dives dependent upon depths and location)
		On select dives on VR2, conduct visual assessment of reef fish
		Drop camera, ROV, or dives on targets of interest from multibeam ops
	2000	Secure from dive ops CTD cast Conduct multibeam and fisheries acoustics/sonar surveys on additional nearby areas of interest
	2330	Arrive: Station 3 – Riley's Hump
		Full moon Drop camera over Riley's Hump. Also conduct multibeam and fisheries acoustics/sonar surveys. See Appendix 6. Mutton spawning aggregation location.
8/2	0800	Commence dive operations to service VR2 receivers; VR2 receivers approx. location: 24°30.0'N, 083°08.0'W;
		VR2 Station #s: 6, 7, 49, 1, 5, 3, 2, 48, 4 (Dives dependent upon depths and location)
		On select dives on VR2, conduct visual assessment of reef fish
	2000	Drop camera, ROV, or dives on targets of interest from multibeam ops
	2000	Secure from dive ops
		CTD cast Conduct multibeam and fisheries acoustics/sonar surveys on additional nearby areas of interest
8/3	0800	Commence dive ops on any additional areas of interest, such as checking VR2 receivers, fish surveys, mooring buoys
		Secure from dive ops
	2000	CTD cast Conduct multibeam and fisheries acoustics/sonar surveys on additional nearby areas of interest
8/4	0800	Commence dive ops on any additional areas of interest, such as checking VR2 receivers, fish surveys, mooring buoys
		Depart: Dry Tortugas

		Arrive: Western Dry Rocks; "Boca Grande Bar"
		Commence drop camera / ROV operations on targets of interest for spawning aggregations.
		Depart: Western Dry Rocks; "Boca Grande Bar"
		Arrive: Key West
		Offload Vessel; Demob
8/5		Nancy Foster In port in Key West
8/6	TBD	Depart: Key West
8/7		Transit
8/8		Transit
8/9		Arrive: Charleston, SC

B. Staging and De-staging

TBD - If ship wants to load science equipment when it arrives in Key West on 7/25, then we can be ready to do so. De-staging will occur when we arrive back in Key West on 8/4.

C. Operations to be conducted:

1. Multibeam Sonar Operations:

Multibeam survey regions during first day operations and transit to Dry Tortugas will be provided to the Operations Officer. Polygons will be provided as maps and as ArcGIS shapefiles for use by ship Survey department for planning. Actual survey polygons for all proposed multibeam coverage during cruise operations will be provided or modified during daily operation meetings.

Multibeam operations will be conducted in two areas. Daytime operations for the Western Dry Rocks "Boca Grande Bar" survey is suggested for safety in navigation, and will occur in depths ranging from 36 to 130 fsw. Multibeam operations at Dry Tortugas will be conducted during night time, at depths ranging from 70 to 120 fsw.

The Reson 7125 Seabat will be used for multibeam operations. Ship's Survey Department will determine appropriate frequency for operations given depth of the survey area. CTD casts will be taken at the beginning of each survey and as appropriate to ensure high data quality.

2. Fishery Splitbeam Sonar Operations

Fish distribution will be mapped during multibeam sonar surveys using the Simrad EK60 suite. An additional survey area for fishery acoustics mapping will be selected around the southern boundary of the Tortugas Ecological Reserve North on the West Tortugas Bank. The exact area for this survey will be provided during daily operations meetings.

3. Dives to Service Acoustic Tag Receivers

Up to 74 VR2 acoustic tag receivers will be serviced during the mission. Each unit will be retrieved, data downloaded, batteries replaced, reprogrammed, then redeployed. Dive depths range from 20 fsw to 115 fsw. Dive operations will occur from ship's small boats.

4. Paired diver visual survey and fishery acoustics surveys

During selected dives to service the acoustic tag receivers, divers will conduct a visual assessment of reef fish using a 30m band transect and count fish within 2m of the survey tape. At these stations, fishery acoustic surveys will be conducted immediately prior to divers entering the water (e.g., before first diver evolution of the day) or immediately after divers return to the ship (after the last evolution for the day).

5. ROV Operations

Opportunistic video surveys using an ROV are planned for areas of interest identified during night multibeam and splitbeam sonar surveys. ROV operations will be conducted using small boat operations.

D. Dive Plan

All dives are to be conducted in accordance with the requirements and regulations of the NOAA Diving Program (<u>http://www.ndc.noaa.gov/dr.html</u>) and require the approval of the ship's Commanding Officer.

The Dive Plans encompassing all legs of NF-12-06 are presented in Appendix 8.

E. Applicable Restrictions

Conditions which preclude normal operations:

Poor field conditions:

- 1. Tropical cyclone activity is possible during this mission the CO will determine best mitigation practice for the ship in this scenario.
- 2. Summertime thunderstorms could influence dive ops periodically– teams will deploy/retreat at the direction of the CO and/or Chief Sci.
- 3. Oceanic currents could be too strong for safe ROV or diving operations Chief Sci to advise CO

Equipment failure:

- 1. ROV failure will not jeopardize the primary objectives of this mission an attempt to correct an issue with the ROV will be made, but not at the expense of our field schedule.
- 2. Nitrox compressor failure will jeopardize the mission in this case, the ship could do a touchand-go in Key West for delivery of enough scuba tanks to complete the mission (to be coordinated by Chief Sci).
- 3. Dive equipment failure spare parts will be on hand to fix the most common problems.

Safety concerns:

- 1. Dive related injuries Scott Donahue will serve as the NOAA Unit Dive Supervisor and Dive Master on board to supervise all dive operations while underway. A diving safety drill will also be coordinated with the CO on the first day of diving operations to prepare all teams for an unlikely dive injury scenario. The most likely dive emergency situation will be AGE or DCS.
- 2. General deck operations CO (or her designee) can relay safety issues surrounding deck ops to Chief Sci and party. Also, a daily safety meeting will be held with the CSCI and all department. heads.
- 3. Exposure Coxwains and science crew will need to stay hydrated and protected from sun/rain exposure.

<u>Unforeseen circumstances:</u> The CO and/or the Chief Sci will determine best mitigation for unforeseen circumstances with a 'safety first' approach.

III. Equipment

- A. Equipment and Capabilities provided by the ship (itemized).
 - 1. Three small boats (launches).
 - 2. Dry laboratory space with access to two ship computers.
 - 3. Wet laboratory space with electrical outlets (i.e., 120V), and running fresh and salt water.
 - 4. Air compressor to fill scuba cylinders.
 - 5. Nitrox compressor with NN 32% capability.
 - 6. 15 Nitrox tanks.
 - 7. Fishery acoustic sonar system (e.g., Simrad EK60 suite, including the ES38B 38 kHz, ES120-7C 120kHz, and ES200-7C 200kHz frequencies) and supporting equipment.
 - 8. Multibeam sonar systems (e.g., Kongsberg EM1002 MBES system and Reson 7125 Seabat), and supporting equipment (e.g., CTD).
- B. Equipment and Capabilities provided by the scientists (itemized)
 - 1. One emergency oxygen kit.
 - 2. One oxygen analyzer for verifying nitrox mixtures.
 - 3. One small ROV (i.e., small enough to operate from a small boat).
 - 4. 18 scuba tanks, along with 3 storage racks for them.
 - 5. 3 handheld GPS units for small boat ops.
 - 6. VR2 sonic receivers (quantity TBD).
 - 7. Up to 15 laptop computers (possibly one per scientist)
 - 8. One or two trained science party members to mix breathing gas and/or fill scuba cylinders (the crew will train them at start of project).

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 cruise instructions and provide to the CO of the respective ship <u>60 to 90 days before departure</u>:

- A list of hazardous materials by name and anticipated quantity
- A list of neutralizing agents, buffers, and/or absorbents required for these hazardous materials, if they are spilled
- A chemical hygiene plan.

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

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)

N/A

V. Additional Projects

There are no additional projects associated with this cruise (i.e., no piggybacks, no fleet ancillaries).

VI. Disposition of Data and Reports

A. Data Responsibilities

The ship's survey technicians will acquire all survey data, thence the Chief Scientist will be responsible for data storage and archiving.

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 cruise objectives. Some vessel protocols, e.g., meals, watches, etiquette, etc. will be presented by the ship's Operations Officer.

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 OPS officer, the Chief Scientist and the CO to review the

project. What was done well, in addition to any concerns regarding safety, efficiency, and suggestions for improvements for future projects will 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 <u>omao.customer.satisfaction@noaa.gov</u>. 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 13 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. Special dietary requirements for 2 scientific participants are requested – both are vegetarian.

Berthing requirements, including number and gender of the scientific party, will be provided to the ship by the Chief Scientist. The Chief Scientist and Operations 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 cruise 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 cruise 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 <u>MOA.Health.Services@noaa.gov</u>

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

All foreign national access to the vessel shall be in accordance with NAO 207-12 and RADM De Bow's March 16, 2006 memo (<u>http://deemedexports.noaa.gov</u>). National Marine Fisheries Service personnel will use the Foreign National Registration System (FRNS) to submit requests for access to NOAA facilities and ships. The Departmental Sponsor/NOAA (DSN) is responsible for obtaining clearances and export licenses and for providing escorts required by the NAO. DSNs should consult with their designated NMFS Deemed Exports point of contact to assist with the process.

The following are basic requirements. Full compliance with NAO 207-12 is required.

Responsibilities of the Chief Scientist:

- 1. Provide the Commanding Officer with the e-mail generated by the FRNS granting approval for the foreign national guest's visit. This e-mail will identify the guest's DSN and will serve as evidence that the requirements of NAO 207-12 have been complied with.
- 2. Escorts The Chief Scientist is responsible to provide escorts to comply with NAO 207-12 Section 5.10, or as required by the vessel's DOC/OSY Regional Security Officer.
- 3. Ensure all non-foreign national members of the scientific party receive the briefing on Espionage Indicators (NAO 207-12 Appendix A) at least annually or as required by the servicing Regional Security Officer.
- 4. Export Control Ensure that approved controls are in place for any technologies that are subject to Export Administration Regulations (EAR).

The Commanding Officer and the Chief Scientist will work together to implement any access controls necessary to ensure no unlicensed export occurs of any controlled technology onboard regardless of ownership.

Responsibilities of the Commanding Officer:

- 1. Ensure only those foreign nationals with DOC/OSY clearance are granted access.
- 2. Deny access to OMAO platforms and facilities by foreign nationals from countries controlled for antiterrorism (AT) reasons and individuals from Cuba or Iran without written NMAO approval and compliance with export and sanction regulations.
- 3. Ensure foreign national access is permitted only if unlicensed deemed export is not likely to occur.
- 4. Ensure receipt from the Chief Scientist or the DSN of the FRNS e-mail granting approval for the foreign national guest's visit.
- 5. Ensure Foreign Port Officials, e.g., Pilots, immigration officials, receive escorted access in accordance with maritime custom to facilitate the vessel's visit to foreign ports.
- 6. Export Control 8 weeks in advance of the cruise, provide the Chief Scientist with a current inventory of OMAO controlled technology onboard the vessel and a copy of the vessel Technology Access Control Plan (TACP). Also notify the Chief Scientist of any OMAO-sponsored foreign nationals that will be onboard while program equipment is aboard so that the Chief Scientist can take steps to prevent unlicensed export of Program controlled technology. The Commanding Officer and the Chief Scientist will work together to implement any access controls necessary to ensure no unlicensed export occurs of any controlled technology onboard regardless of ownership.
- 7. Ensure all OMAO personnel onboard receive the briefing on Espionage Indicators (NAO 207-12 Appendix A) at least annually or as required by the servicing Regional Security Officer.

Responsibilities of the Foreign National Sponsor:

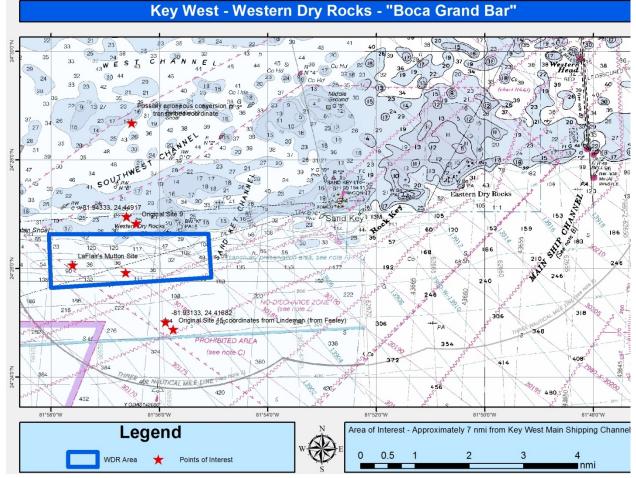
- 1. Export Control The foreign national's sponsor is responsible for obtaining any required export licenses and complying with any conditions of those licenses prior to the foreign national being provided access to the controlled technology onboard regardless of the technology's ownership.
- 2. The DSN of the foreign national shall assign an on-board Program individual, who will be responsible for the foreign national while on board. The identified individual must be a U.S. citizen, NOAA (or DOC) employee. According to DOC/OSY, this requirement cannot be altered.
- 3. Ensure completion and submission of Appendix C (Certification of Conditions and Responsibilities for a Foreign National

Appendices

1. Operational Area: Florida Keys



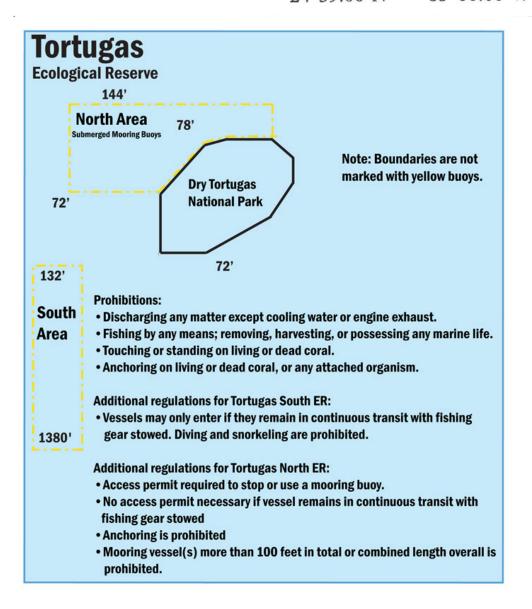
2. Western Dry Rocks: Mutton spawning aggregation site

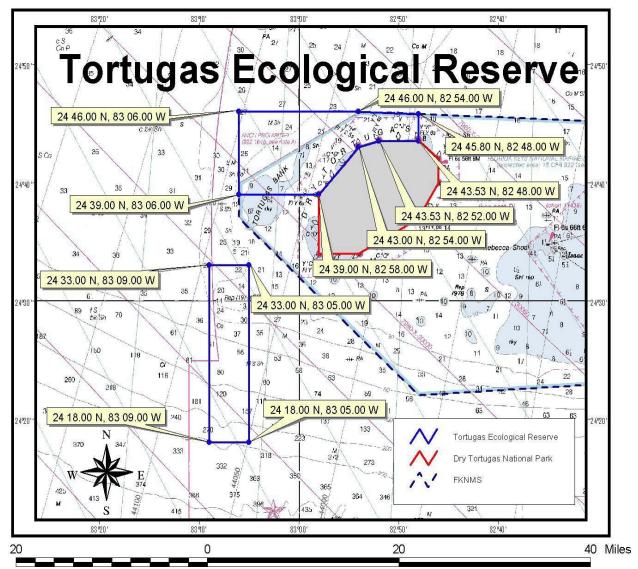


3. Dry Tortugas

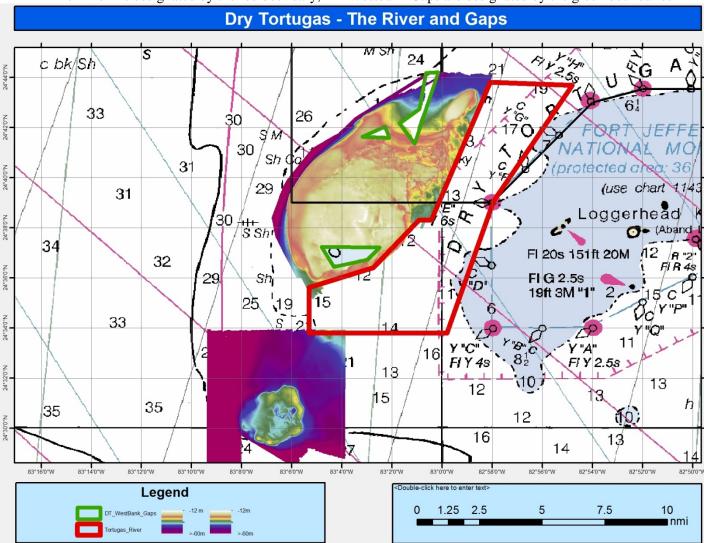
Reserve Coordinates

Tortugas South					Tortugas Nor	th
	24°33.00'N	83°09.00'W			24°46.00'N	83°06́.00'W
	24°33.00'N	83°05.00'W		•	24°46.00'N	82°54.00'W
	24°18.00'N	83°05.00'W			24°45.80'N	82°48.00'W
	24°18.00'N	83°09.00'W			24°43.53'N	82°48.00'W
					24°43.53'N	82°52.00'W
ŧ					24°43.00'N	82°54.00'W
			81. 		24°39.00'N	82°58.00'W
					24°39.00'N	83°06.00'W





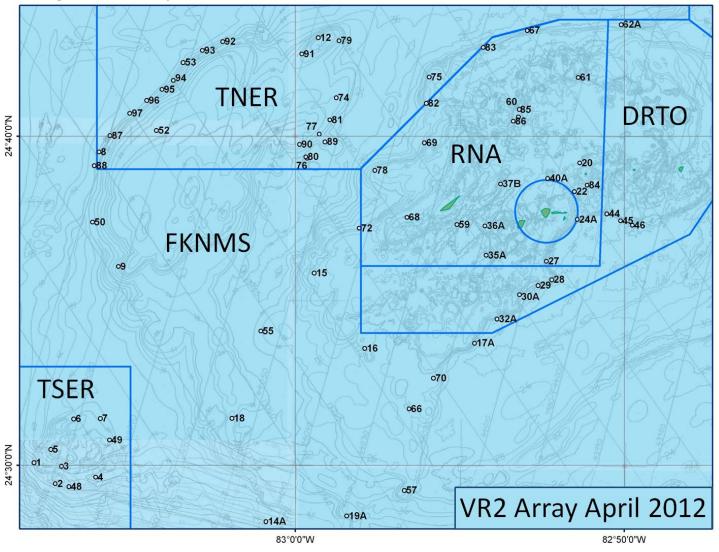
This chart and these coordinates are for informational purposes only and are not intended for navigational use.



4. Dry Tortugas – The River and Gaps "The River" is designated by the red boundary, DT Westbank Gaps are designated by the green boundaries

5. VR2 Array, April 2012

Excel Spreadsheet of VR2 Locations (via coordinates) and accompanying information will be provided to the operations and navigation officers





	NOA	a diving pr	OGRAM -	DIVE	OPERATIO	ONS PLAN		
Date(s) of Operations: Location of Operations: Distance from Shore: Evac. Time to Chamber: Depth Range of Dive Ops: Platform:		26-Jul-12 to 4-Aug-12 In the vicinity of Dry Tortug >70 miles from Key West 5 - 10 hours 20 - 120fsw NOAA ship Nancy Foster		Time of Operations: Number of Divers: Planned # of Dives per Day: Max Possible # of Dives to be Logged/Day: Number of Consecutive Dive Days: On-Duty Dive I Off-Duty Dive w/SE			10	
Scientific Dive (meets all criteria) Working Dive		Float Plan Req	Yes uired No		Safe Ship C	Checklist Required	Yes No	
Diving Mode:	CUBA urface Su	Ipplied	Decompress	ion Calcı	ulation Method:	Dive Computer		
Divemaster / Lead Di Divers:	Sean I					der, Danielle More Jeffrey Renchen	ely, Saral	h
Purpose of dives and Assess, remove, interrogate, an tasks to be Tortugas (Florida) area; RVC fis performed: operations.								
Principal Diver-Worn Equipment & Standard scuba equipment (S Breathing Media: main breathing gas, with air fil								2% as
Tools / Specialized Equipment to be Used:			, wrench, sma		saw, scrape	er, screwdriver, pl	iers)	
Potential	jellyfis	scrapes, fire cor	al, marine life vorms, lionfis	e, spiny sh, and	stonefish (pr	, stinging organisı otective dive wea		
Hazards & Mitigations:		trong currents will require close buddy contact, use of RASS, and/or safety sausag and audible signaling device. Certain hazards are present on all dives (AGE, DCS, drowning, etc.), the above are unique to this operation.						sage
Primary means of Evacuation for Emergencies:	Florida	a Fish & Wildlife	Conservatio	n Comr		C) and United Sta	tes Coas	t Guar
Submitted by: (Prir	nt) <u>Sc</u>	ott Donahue	Sign	ature:	Att De Do Do	ataly signed by Scott nahue te: 2012.06.25 12:10:53 Date: 100 ⁷	25-Jun-1	2
Reviewed by: (Prin UDS or Designee	t)		Sign	ature:		Date:		
						Revised: 4 Ja	anuary 201	2

8. Station/Waypoint List (coordinates in Latitude, Longitude: degree-minutes)

Image files will be e-mailed to the operations and navigation officer for approximating locations. The VR2 list with coordinates will be e-mailed to the operations and navigation officer.

Station 1: Project Port: Key West, FL

Station 2: Western Dry Rocks "Boca Grande Bar" Approx. location: 24°26.0'N, 081°57.0'W Please see Appendix 2.

Station 3: Dry Tortugas – "The River" and Gaps Approx. location: 24°42.0'N, 083°0.0'W Please see Appendix 4.

Station 4: Riley's Hump Approx. Location: 24°30'23.0"N, 083°06'40.0"W Please see Appendix 6.