UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE

NOAA-DKIRC-NOS-ONMS-PMNM
1845 Wasp Blvd. Bldg. 176
Honolulu, Hawaii 96818

Final Project Instructions

Date Submitted: July 24, 2014

Platform: NOAA Ship *Hi'ialakai*

Project Number: HA-14-04

Project Title: 2014 Papahānaumokuākea Marine National Monument Reef Assessment and Monitoring Program

Project Dates: August 7, 2014 to August 31, 2014

Prepared by: _____ Dated: 7/24/2014
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NOAA-NOS-ONMS-PMNM

Approved by: _____ Dated: 7/24/2014
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Approved by: _____ Dated: 21 July 2014
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Approved by: _____ Dated: 28 JUL 2014
Commander Robert A. Kamphaus, NOAA
Commanding Officer
Marine Operations Center – Pacific Islands

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I. Overview

A. The NOAA ship *Hi'ialakai* will be engaged as support for a NOAA National Ocean Service (NOS) Papahānaumokuākea Marine National Monument (PMNM) project from August 7, 2014 until August 31, 2014, for a total of 25 days at sea (DAS) operating at French Frigate Shoals, Lisianski Island, Pearl and Hermes Reef and Midway Atoll in the Northwestern Hawaiian Islands (NWHI). The scientific party will consist of personnel from NOAA: National Marine Sanctuary Program (NMSP), National Marine Fisheries Service (NMFS) Pacific Islands Fisheries Science Center (PIFSC)-Coral Reef Ecosystem Division (CRED), the University of Hawaii (UH) and Flinders University (FU).

The ship will support the primary mission of SCUBA diver rapid ecological assessments (REA) of reef fish, corals, other invertebrates, and algae, and additional marine research efforts using SCUBA divers to carry out sampling activities to assess bioerosion by marine organisms, disease and parasite prevalence within reef systems, and the presence of cryptic species within coral colonies. An additional research focus will be in the realm of maritime heritage resources, which will be conducted by a team led by the PMNM marine archaeologist.

The REA monitoring surveys will allow Federal and State resource managers to better understand the resources under their jurisdiction. The REA-based long-term monitoring will expand the baseline assessments and monitoring conducted during 2000-2012. Long-term monitoring of the abundance and distributions of reef fish, invertebrates, coral and algae are used to evaluate the status and trends of the health and condition of these remote coral reef ecosystems. Additional field research activities conducted by the University of Hawaii will employ SCUBA diving to conduct field sampling for researching reef bioerosion processes, trends in species diversity and species co-occurrence within the semi-cryptic reef habitats and disease and parasite prevalence within coral reef habitats. Finally, a maritime heritage team will conduct non-invasive wreck assessment surveys of selected maritime heritage sites and continued monitoring of known shipwreck and sunken aircraft sites for the purposes of understanding impacts and changes to maritime heritage sites. The maritime heritage efforts will be conducted with the use of SCUBA and tow-boarding on snorkel. These studies and activities allow Federal and State resource managers to improve our broad understanding of PMNM ecology and assist in achieving management priorities.

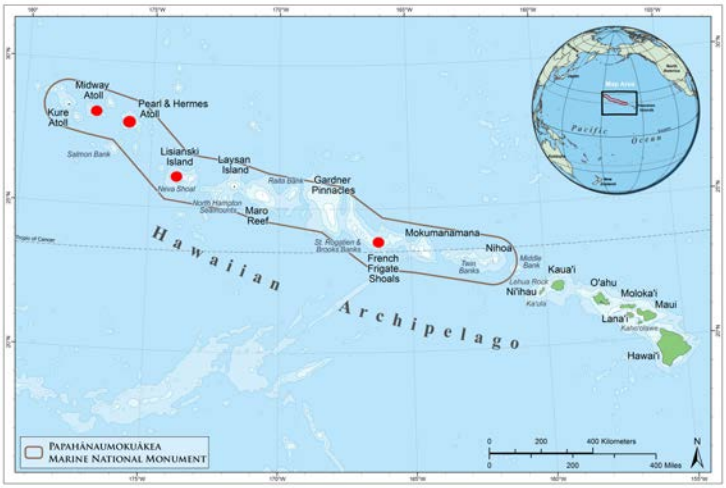
The REA surveys and additional field research projects will require extensive support of diving operations (both SCUBA and snorkeling). Four to five small boats will be operating simultaneously during daylight hours to maximize productivity during the limited amount of time on site. The REA surveys will consist of two reef fish teams (6 divers) and two benthic teams (4 divers) that will utilize the *Hi'ialakai's* HI-1 launch and a PMNM 19 foot SAFE Boat. Six divers will be assigned to HI-1 and 4 divers and a PMNM coxswain will be assigned to a 19 foot SAFE Boat. The University of Hawaii field research team (3 divers) will utilize a 19 foot SAFE Boat provided by the PMNM. The maritime heritage team (3 divers) will utilize the *Hi'ialakai's* HI-2 launch. The

PMNM will provide a coxswain for one of the 19 foot SAFE Boats, the remaining three small vessels will be operated by coxswains provided by the *Hi'ialakai*. The *Hi'ialakai* HI-3 launch will also be needed to act as a back-up for any unforeseen situations with the boats.
Per OMAO Supplement to the NOAA Small Boat Standards and Procedures Manual, March 2010, Section 4.03a2, the program understands that a program certified Operator in Charge (OIC) must "earn the full confidence of both the Commanding Officer (CO) and Designated Examiner (DE), and has successfully completed the shipboard training requirements." As part of the program OIC evaluation, it is understood a ship OIC will be designated to accompany and evaluate the program OIC. The program is aware this may limit the number of small boats the ship can deploy during this evaluation period, and while every effort should be made to limit any impact to operations, the program is also aware that said program OIC is not guaranteed to be qualified by the CO and DE during a project.

B. Service Level Agreements

Of the 25 DAS scheduled for this project, 25 DAS are funded by a NOS line office allocation. This project is estimated to exhibit a **HIGH** Operational Tempo.

C. Operating Area



D. Summary of Objectives

- Reef Assessment and Monitoring Program (RAMP): divers will conduct rapid ecological assessments (REAs) using stratified sampling of reef fish, corals, other invertebrates, and algae. The RAMP is for the purpose of conducting ecological assessments employing standardized methods to improve understanding of the spatial and temporal processes influencing the health of coral reef ecosystems throughout the archipelago.
- Coral Disease and Prevalence Study: a dive team will conduct coral disease surveys to determine disease presence within the NWHI. This effort will be done in conjunction with the REA benthic surveys.

- Bioerosion/Cryptofauna Study: a dive team will retrieve previously deployed small (5x5x2 cm) calcium carbonate blocks at 3-5 existing NOAA-CRED Calcification Acidification Unit sites and survey for trends in species diversity and species co-occurrence within the corals of the genus *Pocillopora*.
- Maritime Heritage: The team will conduct non-invasive wreck assessment surveys of selected maritime heritage sites and continued monitoring of known shipwreck and sunken aircraft sites for the purposes of understanding impacts and changes to maritime heritage resources. The maritime heritage efforts will be conducted with the use of SCUBA and tow-boarding on snorkel.
- Outreach: activities associated with outreach will be conducted by a PMNM staff member. These activities will consist of at-sea outreach through the PMNM Facebook page and webpage, two evening radio show call-ins using an Iridium satellite phone belonging to the PMNM. A Google chat event with local schools on Oahu will be attempted on August 27, 2014 and August 28, 2014 during the transit back to Pearl Harbor.

E. Participating Institutions
- NOAA-NOS-ONMS-Papahānaumokuākea Marine National Monument (PMNM)
- NOAA-NMFS-PIFSC-Coral Reef Ecosystem Division (CRED)
- University of Hawaii (UH)
- Flinders University (FU)

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

Name (Last, First)	Title	Date Aboard	Date Disembark	Gender	Affiliation	Nationality
Godwin, Scott	Chief Scientist	Aug 6	Aug 31	Male	NOAA	USA
Gleason, Kelly	Scientist	Aug 7	Aug 31	Female	NOAA	USA
Raupp, Jason	Scientist	Aug 6	Aug 31	Male	Flinders U.	USA
Tenney, Nick	Scientist	Aug 7	Aug 31	Male	NOAA	USA
Lino, Kevin	Scientist	Aug 7	Aug 31	Male	NOAA	USA
Ayotte, Paula	Scientist	Aug 7	Aug 31	Female	NOAA	USA
Wester, Tate	Scientist	Aug 7	Aug 31	Male	UH	USA
Steward, Kanoelani	Scientist	Aug 7	Aug 31	Female	UH	USA
Gutlay, Tiffany	Scientist	Aug 7	Aug 31	Female	UH	USA
Couch, Courtney	Scientist	Aug 7	Aug 31	Female	UH	USA
Burns, John	Scientist	Aug 7	Aug 31	Male	UH	USA
Silbiger, Nyssa	Scientist	Aug 7	Aug 31	Female	UH	USA
Counsell, Chelsie	Scientist	Aug 7	Aug 31	Female	UH	USA
Matadobra, Stephen	Scientist	Aug 7	Aug 31	Male	UH	USA
Nelley, Eileen	Scientist	Aug 7	Aug 31	Female	UH	USA
Parras, Toni	Scientist	Aug 7	Aug 31	Female	NOAA	USA
Owen, Hadley	Coxswain	Aug 7	Aug 31	Female	NOAA Corps	USA
Gaskin, Emily	Data Manager	Aug 7	Aug 31	Female	NOAA	USA
Katie Mahaffey	Dive Master	July 31	Aug 31	Female	NOAA/NDC	USA

G. Administrative

1. Points of Contacts:

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2. Diplomatic Clearances

This project involves Marine Scientific Research in waters under the jurisdiction of USA; therefore no diplomatic clearance is required.

3. Licenses and Permits

This project will be conducted under the following approved Scientific Research Permits and Shipboard Permits issued by Papahānaumokuākea Marine National Monument. The permittee and the designated field principal investigator (FPI) are listed.

Permittee	**FPI**	**Permit #**	**Permit Type**
Godwin	Godwin	PMNM-2014-018	Research
Godwin	Godwin	PMNM-2014-019	Research
Gleason	Gleason	PMNM-2014-017	Research
Couch	Couch	PMNM-2014-012	Research
Donahue	Silbiger	PMNM-2014-024	Research
Donahue	Counsell	PMNM-2014-025	Research
Meyer	Silbiger	PMNM-2014-014	Research
NOAA Ship *Hi'ialakai*	LCDR Simon	PMNM-2014-005 (01-JAN-14 to 31-DEC-14)	Conservation & Management

II. Operations

A. Project Itinerary

Date	**PORT**	**ACTIVITY**	**DISTANCE**
7-Aug	Pearl Harbor	Science Party on-board 0800, transit to PH fuel pier, DEPART for French Frigate Shoals (FFS) 1700	508.5 nm @ 9.5 kt
8-Aug		Transit	
9-Aug	FFS	Transit to FFS, ARRIVE 2230	
10-Aug	FFS	Full day dive ops	
11-Aug	FFS	Full day dive ops	
12-Aug	FFS	Full day dive ops, DEPART for SE Pearl and Hermes Reef (PHR) 1700	574.6 nm @ 9.5 kt
13-Aug		Transit	
14-Aug		Transit	
15-Aug	PHR	ARRIVE SE side PHR 0530, Full day dive ops	
16-Aug	PHR	Full day dive ops	
17-Aug	PHR	Full day dive ops, DEPART for Midway (MID) 1700	77 nm @ 9.5 kt
18-Aug	PHR	ARRIVE MID 0100, Full day dive ops	
19-Aug	MID	Full day dive ops	
20-Aug	MID	Launch small boats 0730, HA ties up @ Cargo Pier 0900, Full day dive ops	
21-Aug	MID	1/2 day dive ops, DEPART for Lisianski Island (LIS) 1700	219 nm @ 8.5 kt
22-Aug		Transit, ARRIVE 1845	
23-Aug	LIS	Full day dive ops	

24-Aug	LIS	Full day dive ops	
25-Aug	LIS	Full day dive ops	
26-Aug	LIS	Full day dive ops, DEPART for Pearl Harbor	937.5 nm @ 8.5 kt
27-Aug		Transit	
28-Aug		Transit	
29-Aug		Transit	
30-Aug		Transit	
31-Aug	Pearl Harbor	ARRIVE PEARL HARBOR 0800	

B. Staging and Destaging

The PMNM will arrange for crane services July 30, 2014 to load a 10 X 8 foot Conex storage container with a cradle for a 19 foot SAFE Boat prior to departure, which will be removed at the completion of the HA-14-05 project. The PMNM will arrange for the delivery of small boat fuel July 31 2014 to the ship for the 2 PMNM SAFE Boats prior to departure. Additionally, three 55-gallon drums of fuel filled to 45 gallons will be loaded in the barrel racks for off-load at Midway to support marine debris removal operations aboard Oscar Elton Sette (SE-14-07)
Beginning August 4, 2014 scientific gear will be hand carried by science participants or palletized and loaded by the ship's crane. This will include two 19 foot SAFE Boats brought pier-side on trailers by the scientific party for loading by the ship's crane. Three pallet tubs (4 X 4 foot) for extra gear storage and SAFE Boat maintenance and will be staged on the winch deck railing outside the wet lab.
On September 2, 2014 science party participants will hand carry scientific gear off and a single SAFE Boat will need to be craned off. The 10 x 8 foot Conex storage container, one SAFE Boat and the three 4 x 4 foot pallet will remain on board for HA-14-05.
Prior to sailing, the ship's crew will inspect the J-Frame, after deck crane, SCUBA air compressor and delivery systems, scientific freezers, recompression chamber, and ship's small craft and davits for all launches to ensure that they are in proper working order. The ship's crew will provide soundings of the small boat fuel tank by July 25, 2014 to allow for a determination on fuel delivery amount on July 31, 2014.

C. Operations to be Conducted

- Reef Assessment and Monitoring Program (RAMP): SCUBA divers will conduct rapid ecological assessments (REAs) at sites chosen by stratified depth at locations representing the broadest coverage at each island. At each location, a stratified random survey design will be employed to sample coral reef habitat. The stratification scheme comprises the combination of three reef zones—fore reef, back reef, and lagoon—and three depth ranges—0 to 6 m, 6 to 18 m, and 18 to 33 m. A sampling 'site' denotes an area of 100 m by 100 m containing

coral reef habitat. The target number of sampling sites for each location is estimated as follows: At each location, sampling sites will be allocated proportionally among reef zone-depth strata according to the amount of coral reef habitat within each stratum. Specific site locations to be sampled within each stratum will be randomly selected from the complete list of stratum sample sites compiled using a Geographical Information System (GIS). A secondary list of alternative sampling sites will also be randomly generated for each stratum. In some situations, a randomly selected site may be determined upon arrival by the field team to be unsuitable for sampling, e.g., non-reef habitat, unsafe sea conditions, etc. In the case of unsuitable habitat, adjacent sampling sites (approximately 100 m in each direction from the original point) will be searched to the extent possible and substituted for the original site if suitable coral reef habitat is located. Sites determined to be unsuitable for REA sampling will be substituted with an alternative site from the secondary sample list.

- Coral Disease and Prevalence Study: a dive team will conduct coral disease surveys to determine disease spread throughout NWHI. This team will sharehe HI-1 launch with the two other Benthic Divers so as to integrate with the REA teams at all locations and follow the same protocols.
- Bioerosion/Cryptofauna Study: a dive team will collect small (5x5x2 cm) calcium carbonate blocks at 3-5 previously installed at existing NOAA-CRED Calcification Acidification Unit sites. The dive team will survey for urchins using belt transects and collect cryptofauna organism associated with *Pocillopora* corals. The following sites will be visited:

Site	Lat	Lon
FFS-34	23.628	-166.1
FFS-12	23.638	-166.2
FFS-35	23.791	-166.2
FFS-32	23.806	-166.2
FFS-33	23.836	-166.3
FFS-H6	23.88	-166.3
MID-R3	28.19	-177.4
MID-R7	28.196	-177.4
MID-02	28.197	-177.3
MID-H11	28.218	-177.4
LIS-R10	25.945	-174
LIS-18	26.004	-174

LIS-R14	26.078	-174
PHR-R42	27.753	-175.9
PHR-33	27.785	-175.8
PHR-R26	27.786	-175.8
PHR-R31	27.826	-175.8
PHR-23	27.881	-175.9

- Maritime Heritage: This project is part of a continued effort to conduct maritime heritage management activities in the Monument. This includes exploration for new sites that will contribute to the PMNM inventory (an ONMS annual Maritime Heritage performance measure requirement), and documentation and interpretation of known maritime heritage sites. Methods for individual site assessment survey include baseline trilateration and measured sketching will provide data for the creation of site maps. In addition, digital photography will be used to document feature and artifact details, as well as record the survey process itself. Also, hand-held metal detectors are used to confirm/eliminate the presence of iron within sediments or substrate, and limited hand fanning of loose sediments and limited sediment probing is used to record details of artifacts and site boundaries. Snorkel towboarding activities may occur for the purposes of surveying areas of probable losses of shipwreck and sunken aircraft.
- Outreach: a PMNM staff member in the science party (Toni Parras) will conduct activities for outreach involving updating the PMNM webpage and Facebook page with information about the activities based on interviews with ship's crew and scientists and calling into a radio talk show the evening of August 13 from 4:40 to 6:00 using an Iridium phone provided by the PMNM. A Google chat event with local schools on Oahu will be conducted August 27, 2014 and August 28, 2014. This will take place at 1000 and will require that all Internet use besides essential ship's business be curtailed.

D. Dive Plan

The Dive Operations Plan narrative encompassing all of HA-14-04 is presented in Appendix A. The Dive Emergency Assistance Plan is found in Appendix B.

E. Applicable Restrictions

Conditions which preclude normal operations: weather and sea conditions, equipment failure, and unforeseen circumstances. Mitigation of these conditions will involve flexibility in the start and completion of field operations and regular and clear communications with the commanding officer and crew.

III. Equipment

A. Equipment and Capabilities Provided by the Ship

Aft deck crane
HI-1 10m launch and davit

HI-2 8m launch and davit
1 SCUBA compressor (Nitrox or Air)
Recompression chamber
Dive locker space for 18 divers
Scientific freezer (needed 2d prior to departure)
Scientific Computer System
Adequate fresh water for gear wash-down
Gear wash-down tanks
VHF radios for ship's small boats
GPS for HI-1 and HI-2 small boats
Depth sounders for HI-1 and HI-2 small boats
Large flat-screen monitor in dry lab
Tag lines for small boat ops along side
Wet lab
HI-3 for back-up

B. Equipment and Capabilities Provided by the PMNM

50 scuba cylinders
Dive gear with spares
PFDs, hard hats for scientific staff
3 pallet tubs for storage on the winch deck
3 pallet tub storage containers for scuba tanks
3 Nitrox/O2 gas analyzers
2 DAN emergency diving oxygen kits
and first aid kits for PMNM small boat
4 rescue floats for dive operations
4 portable GPS units for backup
2 portable depth sounders
2 19 foot SAFE Boats with lifting bridles and cradles
12 Gallons bleach for disinfection of dive gear in gear wash-down tank
600 Gallons of gasoline for use in PMNM SAFE Boats (and HI-3 if needed)
3 55 gallon drums of fuel for drop-off at Midway (filled to 45 gallons)
4 hand-held VHF radios for PMNM SAFE Boats
1 10 X 8 foot Conex storage container to be secured to after deck
1 Hand held Iridium satellite phone
3 5 gallon buckets of non-perishable food for French Frigate Shoals
1 5 gallon bucket of boat parts

IV. Hazardous Materials

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 quantity, MSDS, appropriate spill cleanup materials (neutralizing agents, buffers, or absorbents) in amounts adequate to address spills of a size equal to the amount of chemical

brought aboard, and chemical safety and spill response procedures. Documentation regarding those requirements will be provided by the Chief of Operations, Marine Operations Center, upon request.

Per OMAO procedure, the scientific party will include with their project instructions and provide to the CO of the respective ship 30 days before departure:

- List of chemicals by name with anticipated quantity
- List of spill response materials, including neutralizing agents, buffers, and absorbents
- Chemical safety and spill response procedures, such as excerpts of the program's Chemical Hygiene Plan or SOPs relevant for shipboard laboratories
- For bulk quantities of chemicals in excess of 50 gallons total or in containers larger than 10 gallons each, notify ship's Operations Officer regarding quantity, packaging and chemical to verify safe stowage is available as soon as chemical quantities are known.

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
- Confirmation that chemical safety and spill response procedures were brought aboard

Upon departure from the ship, scientific parties will provide the CO or their designee an inventory showing that all chemicals were 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 hazardous materials is not permitted aboard NOAA ships.

B. Inventory

Common Name of Material	Quantity	Notes	Trained Individual	Spill control
RNALater	**10 x 1 gallons**	**Flammable**	**Godwin, Scott Nyssa Silbiger**	**Section C**
Bleach	**12 x 1 gal**	**Corrosive**	**Godwin, Scott**	**Section C**

C. Chemical safety and spill response procedures

RNALater Sodium Citrate Tribasic Dihydrate, Ammonium Sulphate :

Emergency Overview & Spill Response

Appearance: colorless clear liquid. Flash Point: 16.6 deg C. **Flammable liquid and vapor.** May cause central nervous system depression. Causes severe eye irritation. Causes respiratory tract irritation. Causes moderate skin irritation.

In event of spill: 1) Remove all sources of ignition. 2) Retrieve Cary Company 37WSP2 spill kit. 3) Absorb spill with Teal-Sorb, then place in disposal bags.

Exposure Controls/Personal Protection

Eye protection Chemical resistant goggles must be worn. .Ensure that eyewash stations and safety showers are close to the workstation location

Hand protection Wear suitable gloves Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Respiratory protection Avoid breathing vapor. For unknown concentrations or Immediately Dangerous to Life or Health
(IDLH), use a full-face piece positive pressure air supplied respirator.

Skin protection Wear suitable protective clothing.

Engineering measures

Handle only in a place equipped with local exhaust (or other appropriate exhaust).

Potential Health Effects

Eye: Causes severe eye irritation. May cause painful sensitization to light. May cause chemical conjunctivitis and corneal damage.

Skin: Causes moderate skin irritation.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. Vapors may cause dizziness or suffocation.

First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid. Gently lift eyelids and flush continuously with water.

Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Flush skin with plenty of soap and water.

Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

Fire Fighting Measures

General Information: Containers can build up pressure if exposed to heat and/or fire. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire.

Extinguishing Media: For small fires, **use dry chemical, carbon dioxide, water spray or alcohol-resistant foam**. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water.

Bleach (Sodium Hypochlorite):

Emergency Overview & Spill Response
Clear, light, yellow liquid with characteristic chlorine odor. Flashpoint: None**. Not flammable or explosive. Corrosive**. May cause severe irritation or damage to eyes and skin. Vapor or mist may irritate. Harmful if swallowed.
In event of spill: 1) If indoors, ventilate area. 2) Retrieve Cary Company 37WSP2 spill kit. 3) Absorb spill with Teal-Sorb, then place in disposal bags.

Potential Health Effects
Medical conditions that may be aggravated by exposure to high concentrations of vapor or mist: heart conditions or chronic respiratory problems such as asthma, emphysema, chronic bronchitis or obstructive lung disease.
First Aid Measures
Eyes: Hold eye open and rinse with water for 15-20 minutes. Remove
contact lenses, after first 5 minutes. Continue rinsing eye. Call the medical officer.
Skin: Wash skin with water for 15-20 minutes. If irritation develops, call medical officer.
I**ngestion:** Do not induce vomiting. Drink a glassful of water. If irritation develops, call medical officer. Do not give anything by mouth to an unconscious person.
I**nhalation:** Remove to fresh air.
Fire Fighting Measures
N/A

Spill Kit: Located in Wetlab

Product Name	Contents	Chemicals it is useful against	Amount it can clean up
Cary Company 37WSP2	2 -5 gal Bags of Teal-Sorb EQ, 20 - 15"x18" Universal Heavy Weight Pads, 6 - 4' Universal Socks , 1 Pair - Nitrile Gloves, 1 - Pair of Goggles, 3 - Disposal Bags, 1 - 1 gal Empty Shaker	Universal	20 gal

Radioactive Materials

No Radioactive Isotopes are planned for this project.

V. Additional Projects

A. Supplementary ("Piggyback") Projects

Not applicable to HA-14-04

B. NOAA Fleet Ancillary Projects

Ancillary tasks will be accomplished in accordance with the NOAA Fleet Standing Ancillary Instructions.

VI. Disposition of Data and Reports

Disposition of data gathered aboard NOAA ships will conform to NAO 216-101 *Ocean Data Acquisitions* and NAO 212-15 *Management of Environmental Data and Information.* To guide the implementation of these NAOs, NOAA's Environmental Data

Management Committee (EDMC) provides the *NOAA Data Documentation Procedural Directive* (data documentation) and *NOAA Data Management Planning Procedural Directive* (preparation of Data Management Plans). OMAO is developing procedures and allocating resources to manage OMAO data and Programs are encouraged to do the same for their Project data.

A. Data Classifications: *Under Development*

a. OMAO Data

i. Observations Log

b. Program Data

i. Station Plot

B. Data Responsibilities

Observations Log: Marine Observations Log will be maintained during the project. Other forms required by the Chief Scientists for each of the operations will be integrated into the Marine Operations Log.

Station Plot: The position of each dive site for all teams will be plotted on charts generated by the ship's navigation software. Ship's personnel will supply the Chief Scientist with copies of these charts at the end of the project, if requested. The copies provided can be in the form of standard printouts.

Data Disposition: The Chief Scientists will be considered to be the representative of the Monument Superintendent for purpose of data disposition. A single copy of all data gathered by the vessel will be delivered to the Chief Scientist upon request for forwarding to the Manager.

VII. Meetings, Vessel Familiarization, and Project Evaluations

A. Pre-Project Meeting: The Chief Scientist and Commanding Officer will conduct a meeting of pertinent members of the scientific party and ship's crew to discuss required equipment, planned operations, concerns, and establish mitigation strategies for all concerns. This meeting shall be conducted before the beginning of the project with sufficient time to allow for preparation of the ship and project personnel. The ship's Operations Officer usually is delegated to assist the Chief Scientist in arranging this meeting.

B. Vessel Familiarization Meeting: The Commanding Officer is responsible for ensuring scientific personnel are familiarized with applicable sections of the standing orders and vessel protocols, e.g., meals, watches, etiquette, drills, etc. A vessel familiarization meeting shall be conducted in the first 24 hours of the project's start and is normally presented by the ship's Operations Officer.

C. Post-Project Meeting: The Commanding Officer is responsible for conducting a meeting no earlier than 24 hours before or 7 days after the completion of a project to discuss the overall success and short comings of the project. Concerns regarding safety, efficiency, and suggestions for future improvements shall be discussed and mitigations for future projects will be documented for future use. This meeting shall be attended by the ship's officers, applicable crew, the Chief Scientist, and members of the scientific party and is normally arranged by the Operations Officer and Chief Scientist.

D. Project Evaluation Report: Within seven days of the completion of the project, a Customer Satisfaction Survey is to be completed by the Chief Scientist. The form is available at: http://www.omao.noaa.gov/fleeteval.html and provides a "Submit" button at the end of the form. Submitted form data is deposited into a spreadsheet used by OMAO management to analyze the information. Though the complete form is not shared with the ships', specific concerns and praises are followed up on while not divulging the identity of the evaluator.

VIII. Miscellaneous

A. Meals and Berthing

The ship will provide meals for the scientists listed above, which will include field lunches on dive operations days. 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 scientific participants will be made available to the ship's command at least seven days prior to the project.

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 17, 2000 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, NF 57-10-01 (3-14)) 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.
All NHSQs submitted after March 1, 2014 must be accompanied by NOAA Form (NF) 57-10-02 - Tuberculosis Screening Document in compliance with OMAO Policy 1008 (Tuberculosis Protection Program).
The completed forms should be sent to the Regional Director of Health Services at the applicable Marine Operations Center. The NHSQ and Tuberculosis Screening Document should reach the Health Services Office no later than 4 weeks prior to the start of the project to allow time for the participant to obtain and submit additional information should health services require it, before clearance to sail can be granted. Please contact MOC Health Services with any questions regarding eligibility or completion of either form. Ensure to fully complete each 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.
The participant can mail, fax, or email the forms to the contact information below. Participants should take precautions to protect their Personally Identifiable Information (PII) and medical information and ensure all correspondence adheres to DOC guidance (http://ocio.os.doc.gov/ITPolicyandPrograms/IT_Privacy/PROD01_008240).
The only secure email process approved by NOAA is Accellion Secure File Transfer which requires the sender to setup an account. Accellion's Web Users Guide is a valuable aid in using this service, however to reduce cost the DOC contract doesn't provide for automatically issuing full functioning accounts. To receive access to a "Send Tab", after your Accellion account has been established send an email from the associated email account to accellionAlerts@doc.gov requesting access to the "Send Tab" function. They will notify you via email usually within 1 business day of your approval. The 'Send Tab" function will be accessible for 30 days.
Contact information.
Regional Director of Health Services
Marine Operations Center – Pacific
2002 SE Marine Science Dr.
Newport, OR 97365
Telephone 541-867-8822
Fax 541-867-8856
Email MOP.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

Hard hats are 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 PMNM for all science participants when required.

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. At the discretion of the ship CO, safety shoes (i.e. steel or composite toe protection) may be required to participate in any work dealing with suspended loads, including CTD deployment and recovery. The ship does not provide safety-toed shoes/boots. The ship's Operations Officer should be consulted by the Chief Scientist to ensure members of the scientific party report aboard with the proper attire.

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 email 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 and it must be arranged through the ship's Commanding Officer at least 30 days in advance.

E. IT Security

Any computer that will be hooked into the ship's network must comply with the *OMAO 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 the above 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

Foreign National access to the NOAA ship or Federal Facilities is not required for this project.

Appendices

A. DIVING OPERATIONS PLAN

The proposed diving activities will take place on the NOAA ship *Hi'ialakai* project HA-14-04 from August 7, 2014 until August 31, 2014, for a total of 25 sea days at French Frigate Shoals, Pearl and Hermes Atoll, Lisianski Island and Midway Atoll in the Northwestern Hawaiian Islands (NWHI). The Reef Assessment and Monitoring Program (RAMP) activities are the lead project on this project and will require SCUBA diving. The project will also support additional management driven research missions requiring SCUBA diving including sampling of coral communities for disease, bioeroders and cryptofauna and the survey and documentation of maritime heritage resources. The scientific party will consist of personnel from NOAA, University of Hawaii and Flinders University.

SECTION I – Overview of the Diving Project Activities

Justification & Objective

The planned diving on this project is designed to support management driven research activities in the Papahānaumokuākea Marine National Monument. The NOAA ship *Hi'ialaka* will support SCUBA diver rapid ecological assessments (REAs) of reef fish, corals, other invertebrates, and algae, surveys of coral disease, sampling activities to assess bioerosion by marine organisms, disease and parasite prevalence, and survey and characterization of maritime heritage resources.

The REA monitoring surveys will allow Federal and State resource managers to better understand the resources under their jurisdiction. The REA-based long-term monitoring will expand the baseline assessments and monitoring conducted during 2000-2010. Long-term monitoring of the abundance and distributions of reef fish, invertebrates, coral and algae are used to evaluate the status and trends of the health and condition of these remote coral reef ecosystems. This project will incorporate a sampling design focused on collecting a high number of surveys at several atolls/islands. Additional field research activities conducted by the University of Hawaii a will employ SCUBA diving operations to accomplish data collection for bioerosion and crytofauna organisms and disease and parasite prevalence within coral reef habitat. These studies allow Federal and State resource managers to improve our broad understanding of PMNM ecology and assist in achieving management priorities.

Location, Schedule & Roster

Dive operations will take place over 13 days between August 7 and August 31, 2014. The current project schedule dictates that dive activities will take place at French Frigate Shoals August 10-12, Pearl and Hermes Reef August 16-18, Midway Atoll August 19-21 and Lisianski Island August 23-26. The bioerosion/cryptofauna team will consist of three divers and will utilize a 19 foot Safeboat and coxswain provided by the *Hi'ialakai* Papahānaumokuākea Marine National Monument (PMNM). The coral disease team will consist of two divers combined with the REA operations. The REA teams will be split into one team of four Fish Survey divers (Team 1) and a second team of two Fish Survey divers, two Benthic Survey divers and two Coral Disease divers (Team 2). Team 1 will utilize a 19 foot Safeboat coxswained by a scientist and the PMNM Marine

Operation Coordinator (ENS Hadley Owen, NOAA Corps) and Team 2 will utilize the ten meter HI-1 launch provided by the NOAA ship *Hi'ialakai* and coxswained by their crew. The Maritime Heritage team will utilize the HI-2 launch and coxswain provided by *Hi'ialakai*.

Dive operations will follow the established multi-day, repetitive dive policy developed for all NMSP personnel and operations (including NMAO projects, small boat operations and other activities), effective January 19, 2011. After 10 consecutive days of diving, a minimum 24-hour period of no-dive operations shall occur for the individual diver. Divers, Divemasters, Unit Diving Supervisors, Principal Investigators/Chief Scientists, Small Boat OIC's and Commanding Officers are encouraged to avoid a dive operations tempo that could diminish the spirit of this policy.

Dive operations will be led by a designated Dive Master (Katie Mahaffey,NOAA Dive Center). The dive roster given below includes 16 divers and 3 snorkelers. The organization and dive certification associated with each diver is included in the Section III.

Scott Godwin, Diver
Courtney Couch, Diver
John Burns, Diver
Paula Ayotte, Diver
Kevin Lino, Diver
Kelly Gleason, Diver
Nick Tenney, Snorkeler
Jason Raupp, Diver
Nyssa Silbiger, Diver
Chelsie Counsell, Diver
Eileen Nelley, Diver
Emily Gaskin, Snorkeler
Toni Parras, Snorkeler
Katie Mahaffey, Divemaster
Tate Wester, Diver
Kanoelani Steward, Diver
Tiffany Gutlay, Diver
Stephen Matadobra, Diver

Dive Methods

Reef Assessment and Monitoring Program (RAMP): divers will conduct rapid ecological assessments (REAs) using stratified sampling of reef fish, corals, other invertebrates, and algae. The RAMP is for the purpose of conducting ecological assessments employing standardized methods to improve understanding of the spatial and temporal processes influencing the health of coral reef ecosystems throughout the archipelago. Rapid Ecological Assessment (REA) sampling for fishes and benthic flora and fauna will be conducted at the locations listed previously. At each location, a

stratified random survey design will be employed to sample coral reef habitat. The stratification scheme comprises the combination of three reef zones—fore reef, back reef, and lagoon—and three depth ranges—0 to 6 m, 6 to 18 m, and 18 to 33 m.

- Benthic Survey Methodology: At each survey site, two to three 25 m transect transects are the focal point for the benthic surveys. Within each of the two transects above, five, 2.5-meter segments are surveyed (beginning at points: 0, 5, 10, 15, and 20 meters), whereby in each segment, all coral colonies whose center falls within 0.5 meters of either side of the transect line are identified to the species level and two planar size metrics collected (i.e., maximum diameter and maximum diameter perpendicular to the maximum diameter).

- Fish Survey Methodology: Stationary Point Counts (nSPC): Stationary point counts are the main method now to survey reef fish assemblages. At each site, replicate nSPC surveys are conducted by a pair of divers, surveying adjacent visually-estimated cylinders of 7.5 m radius, centered on the divers. Each nSPC diver records the number, size (TL, to nearest cm), and species of all fishes present or passing through the cylinder in the course of the survey. nSPC surveys consists of 2 components: (i) a 5 minute species listing component – the aim of which is to build a list of species present pr passing through the cylinder; and (ii) an enumeration component, in which each diver records the number and sizes of fishes of those listed species in a series of instantaneous visual sweeps of their cylinder. Where time allows, 2 pairs of nSPC cylinders are surveyed per site per dive. nSPC Survey sites are randomly located with specified habitat strata encompassing all 0-30m hard bottom areas at each surveyed reef -with specific position generated prior to each project based on the random-stratified survey design.

Disease and Parasite Prevalence Study: a dive team will conduct coral disease surveys and to determine disease spread throughout NWHI. Three 25 m lines laid out by the REA team will be utilized. Diver will then swim over the lines during which all corals within one half meter of either side of the transect lines will be identified to species, counted, and assigned to a size class (0-5cm; 6-10cm; 11-20cm; 21-40cm; 41-80cm; 81-150cm; >150cm).

Bioerosion/Cryptofauna Study: a dive team will collect small (5x5x2 cm) calcium carbonate blocks at 3-5 previously installed at existing NOAA-CRED Calcification Acidification Unit sites. The dive team will survey for urchins using belt transects and collect cryptofauna organism associated with *Pocillopora* corals.

Maritime Heritage: individual site assessment surveys will include baseline trilateration and measured sketching will provide data for the creation of site maps. In addition, digital photography will be used to document feature and artifact details, as well as record the survey process itself. Also, hand-held metal detectors are used to confirm/eliminate the presence of iron within sediments or substrate, and limited hand fanning of loose sediments and limited sediment probing is used to record details of artifacts and site

boundaries. Snorkel towboarding activities may occur for the purposes of surveying areas of probable losses of shipwreck and sunken aircraft.

Dive Profiles and Gas Usage

Divers will be using open-circuit scuba. Zero to four dives will take place by each team daily, depending on Available Bottom Time. Preferred dive plans will schedule deeper dives first, followed by progressively shallower dives every day. Each dive team will have a DPIC (Designated Person in Charge) topside, capable of rendering assistance. Each morning, divemaster and DPIC will run through a daily dive checklist and conduct a pre dive briefing prior to any dive activities. Each diver will surface will no less than 500 psi available in his/her SCUBA tank.

All dives will take place during daylight hours. No nighttime dive operations are planned. Maximum depth for all dives is 100 fsw. For dives in excess of 100 fsw and all fish surveys, each diver will have a reserve supply of air (RASS). For dives in excess of 100 fsw, each dive team will have a stand by diver(s), unless otherwise approved by the UDS. No advanced skills will be performed beneath 100 fsw.

Specifics for nSPC Methodology:

Only NOAA fish divers will be conducting the nSPC surveys. Survey divers remain in visual contact at fixed locations along the transect line as they implement circular scans of their respective survey area. SPC surveyors will carry a reserve air supply system (RASS). Divers will carefully monitor their air supplies and communicate tank pressures at the 10 and 20 minute mark as well as at the 1000psi mark. Divers will have an audio signaling device, to be used in case of emergency, or if they are otherwise unable to get their buddy's attention. Towards the end of the count, if divers feel they need to explore their respective survey cylinders more thoroughly (i.e. move off center), Diver A will need to move towards Diver B to allow him to move freely without being more than 15m away (and vice-versa for diver A). Dives will be carried out at a maximum depth of 30m with a minimum visibility of 7.5m. In case of low visibility (15m or less), divers will move closer to each other, overlapping their survey areas. If conditions of visibility less than 7.5m or strong current are encountered, then the dive will be aborted.

All diving operations will comply with the NOAA Diving Regulations (NOAA Administrative Order 209-123), current policies of the NOAA Diving Center, and applicable reciprocity agreements. All dives will be conducted within the no-decompression limits of the U.S. Navy Dive Tables. Dive operations will also abide by the recent changes in NOAA diving status in regards to OSHA diving guidelines.

SECTION II – Schedule of Diving Operations

Date	PORT	ACTIVITY	DISTANCE
7-Aug	Pearl Harbor	Science Party on-board 0800, transit to PH fuel pier, DEPART for French Frigate Shoals (FFS) 1700	508.5 nm @ 9.5 kt
8-Aug		Transit	
9-Aug	FFS	Transit to FFS, ARRIVE 2230	
10-Aug	FFS	Full day dive ops	
11-Aug	FFS	Full day dive ops	

12-Aug	FFS	Full day dive ops, DEPART for SE Pearl and Hermes Reef (PHR) 1700	574.6 nm @ 9.5 kt
13-Aug		Transit	
14-Aug		Transit	
15-Aug	PHR	ARRIVE SE side PHR 0530, Full day dive ops	
16-Aug	PHR	Full day dive ops	
17-Aug	PHR	Full day dive ops, DEPART for Midway (MID) 1700	77 nm @ 9.5 kt
18-Aug	PHR	ARRIVE MID 0100, Full day dive ops	
19-Aug	MID	Full da dive ops	
20-Aug	MID	Launch small boats 0730, HA ties up @ Cargo Pier, Full day dive ops	
21-Aug	MID	1/2 day dive ops, DEPART for Lisianski Island (LIS) 1700	219 nm @ 8.5 kt
22-Aug		Transit, ARRIVE 1845	
23-Aug	LIS	Full day dive ops	
24-Aug	LIS	Full day dive ops	
25-Aug	LIS	Full day dive ops	
26-Aug	LIS	Full day dive ops, DEPART for PH	937.5 nm @ 8.5 kt
27-Aug		Transit	
28-Aug		Transit	
29-Aug		Transit	
30-Aug		Transit	
31-Aug	Pearl Harbor	ARRIVE PEARL HARBOR 0800	

SECTION III – Divers, Duties, and Diving Operations

Diver's Name	**Diver's Agency**	**Certification Level**	**Diver's Duties**	**Equipment To Be Used**
Scott Godwin	NOAA	Working Diver	Benthic REA	Tapes, slates, underwater camera,
Courtney Couch	UH/AAUS	Scientific Diver	Benthic REA	Tapes, slates, underwater camera
John Burns	UH/AAUS	Scientific Diver	Benthic REA	Tapes, slates, underwater camera
Paula Ayotte	NOAA	Scientific Diver	Fish REA	Tapes, slates, underwater camera
Kevin Lino	NOAA	Scientific Diver	Fish REA	Tapes, slates, underwater camera
Kelly Gleason	NOAA	Scientific Diver, Snorkeler	Maritime Heritage	Tapes, slates, metal detector, underwater camera

Nick Tenney	NOAA	Snorkeler	Maritime Heritage	Tapes, slates, underwater camera
Jason Raupp	NOAA	Scientific Diver, Snorkeler	Maritime Heritage	Tapes, slates, metal detector, underwater camera
Nyssa Silbiger	UH/AAUS	Scientific Diver	Collection of invertebrates, transect surveys	Tapes, slates, underwater camera
Chelsie Counsell	UH/AAUS	Scientific Diver	Collection of invertebrates, transect surveys	Tapes, slates, underwater camera
Eileen Nelley	UH/AAUS	Scientific Diver	Collection of invertebrates, transect surveys	Tapes, slates, underwater camera
Emily Gaskin	NOAA	Snorkeler	Data Manager, Media/Outreach	underwater camera
Toni Parris	NOAA	Snorkeler	Media/Outreach	underwater camera
Katie Mahaffey	NOAA	Working Diver	Dive Master/ Chamber Op	n/a
Kanoelani Steward	UH/AAUS	Scientific Diver	Benthic REA	Tapes, slates, underwater camera,
Tate Wester	UH/AAUS	Scientific Diver	Fish REA	Tapes, slates, underwater camera,
Stephen Matadobra	UH/AAUS	Scientific Diver	Fish REA	Tapes, slates, underwater camera,
Tiffany Gutlay	UH/AAUS	Scientific Diver	Fish REA	Tapes, slates, underwater camera,

B. Dive Emergency Assistance Plan

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U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

DIVING EMERGENCY ASSISTANCE PLAN

NOAA DIVING UNIT	DIVE LOCATION	DATE
NOS/ONMS/PMNM	PMNM, North Western Hawaiian Islands	3/17/14

INSTRUCTIONS:

Complete a Diving Emergency Assistance Plan (DEAP) for each unique diving location and submit the plan to NDP.Diveplans@noaa.gov with the initial dive plan of each calendar year and every time any information on the DEAP changes.

GENERAL PROCEDURES:

A. Evaluate the victim's Circulation, Airway, and Breathing (CABs). If necessary, begin cardiopulmonary resuscitation (CPR) using a manually triggered ventilator (MTV) or bag-type oxygen resuscitator.

B. If the victim is breathing, but unconscious, place the victim in the recovery position and administer oxygen using a non-rebreather type mask.

C. If the victim is awake and alert, place the victim in a position of comfort and administer 100% oxygen using an MTV/demand oxygen resuscitator or non-rebreather type mask. If the victim is not nauseated, give clear non-alcoholic/non-caffeinated fluids to drink.

D. If the victim's condition is life threatening or urgent, call the local Emergency Medical Services (EMS) or U. S. Coast Guard (USCG) for transport to the nearest medical treatment facility.

E. If the victim's condition is not urgent, contact the NOAA Dive Medical Officer (DMO) for guidance. If unable to reach the NOAA DMO with 15 minutes, contact the Divers' Alert Network (DAN).

F. Use the Dive Accident Management Field Reference Guide to document a neurological exam and dive history information.

G. Gather additional information about the incident and prepare the victim for transport.

H. Secure the diver's gear for inspection. **DO NOT DISASSEMBLE GEAR OR EXHAUST AIR FROM THE SYSTEM.** Close the cylinder valve ONLY. Count and record number of turns required to secure the valve.

I. Call and speak to the NOAA DMO, (855) 822-DIVE (3483), to report the incident.

J. Call the Line Office Diving Officer (LODO) to report incident. If unable to reach the LODO, call the Deputy LODO. Continue calling until positive contact is made. Speak to a person, don't just leave a message.

EMERGENCY TRANSPORTATION CONTACTS:

Primary Shore Based Emergency Transportation	
NAME of TRANSPORTATION PROVIDER	EMS Ambulance
POINT of CONTACT	Any
PHONE NUMBER	911

Secondary Shore Based Emergency Transportation	
NAME of TRANSPORTATION PROVIDER	Fire/Rescue/Police
POINT of CONTACT	Any
PHONE NUMBER	911

At Sea Vessel Emergency Transportation	
NAME of TRANSPORTATION PROVIDER	USCG Honolulu
POINT of CONTACT	Any
PHONE NUMBER	888-535-3333, VHF ch. 16

At Sea Aviation Emergency Transportation	
NAME of TRANSPORTATION PROVIDER	USCG Honolulu
POINT of CONTACT	Any
PHONE NUMBER	888-535-3333, VHF ch. 16

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U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

DIVING EMERGENCY ASSISTANCE PLAN

NOAA DIVING UNIT	DIVE LOCATION	DATE
NOS/ONMS/PMNM	PMNM, North Western Hawaiian Islands	3/17/14

EMERGENCY CONTACTS:

Primary Operational Hyperbaric Chamber	
NAME of FACILITY	NOAA Vessel Hi'ialakai
ADDRESS of FACILITY	NOAA Vessel Hi'ialakai
POINT of CONTACT	James Bostick (Chamber Operator)
PHONE NUMBER	VHF ch 68

Secondary Operational Hyperbaric Chamber	
NAME of FACILITY	Kuakini Hospital Hyperbaric Facility
ADDRESS of FACILITY	347 North Kuakini Street, Honolulu
POINT of CONTACT	Dr. Richard Smerz
PHONE NUMBER	808-587-3425

Primary Hospital Emergency Room	
NAME of FACILITY	Queens Hospital
ADDRESS of FACILITY	1301 Punchbowl Street, Honolulu
POINT of CONTACT	any
PHONE NUMBER	808-538-9011

Secondary Hospital Emergency Room	
NAME of FACILITY	Straub Hospital
ADDRESS of FACILITY	888 South King Street
POINT of CONTACT	any
PHONE NUMBER	808-522-4000

USCG, Area Search and Rescue (SAR) Coordinator	
NAME of FACILITY	Pacific Area SAR Coordinator
PHONE NUMBER	(510) 437-3700 (Pacific)

USCG, Rescue Coordination Center (RCC)	
NAME of FACILITY	RCC Honolulu, HI
PHONE NUMBER	(808) 535-3333 (Honolulu)

NOAA DIVING PROGRAM CONTACTS:

Unit Diving Supervisor	
NAME	Jason Leonard
EMERGENCY CELL PHONE NUMBER	808-271-4187

Divers Alert Network (DAN)	
PRIMARY PHONE NUMBER	(919) 684-9111

Line Office Diving Officer	
NAME	Kimberly Woody
EMERGENCY CELL PHONE NUMBER	240-997-8040
OFFICE PHONE NUMBER	301-713-3028 x229

Deputy Line Office Diving Officer	
NAME	Tane Casserley
EMERGENCY CELL PHONE NUMBER	989-657-9951
OFFICE PHONE NUMBER	989-356-8805 x17

NOAA Diving Safety Officer	
EMERGENCY CELL PHONE NUMBER	(206) 619-1615
OFFICE PHONE NUMBER	(206) 526-6223

NOAA Diving Medical Officer	
EMERGENCY CELL PHONE NUMBER	(855) 822-3483
OFFICE PHONE NUMBER	(206) 526-6474

RESET