




U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric
Administration
Pacific Islands Fisheries Science Center
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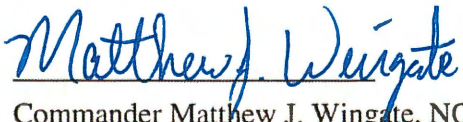
FINAL Project Instructions

Date Submitted: March 6, 2017
Platform: NOAA Ship *Oscar Elton Sette*
Project Number: SE-17-02 (OMAO)
Project Title: Insular Bottomfish Survey
Project Dates: March 8 – 22, 2017

Prepared by:  Dated: 3/6/17
Russell Reardon, Project Leader
Science Operations Division
Pacific Islands Fisheries Science Center

*For: Benjamin Richards, Ph.D., Science Advisor
Fisheries Research and Monitoring Division*

Approved by: _____ Dated: _____
Michael Seki, Ph.D., Director
Pacific Islands Fisheries Science Center

Approved by:  Dated: 3/7/17
Commander Matthew J. Wingate, NOAA
Commanding Officer
Marine Operations Center – Pacific Islands



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I. Overview

A. Brief Summary and Project Period

NOAA Ship *Oscar Elton Sette* will be engaged as support for a Pacific Islands Fisheries Science Center (PIFSC), National Marine Fisheries Service (NMFS), project from March 8 - 22, 2017, for a total of 15 days at sea (DAS).

The focus of this mission is to support the operational survey of Deep-7 bottomfish stock across the Main Hawaiian Islands using the Modular Optical Underwater Survey System (MOUSS) fishery-independent sampling gear. The MOUSS builds and improves upon previous efforts with the Baited Stereo-Video Bottom Camera System (BotCam), which has been effectively used to collect fishery-independent species-specific size-structured abundance data on bottomfish in the Main Hawaiian Islands (MHI).^{1,2}

Both MOUSS and DropCam Instrument Packages - DCIP (equipped with MOUSS components) will be utilized during this mission as surface-tethered and/or untethered camera packages to be deployed and recovered using *Oscar Elton Sette* deck equipment. Sampling will be concentrated within the State of Hawaii Bottomfish Restricted Fishing Areas (BRFAs). Each unit will remain on the seafloor for a minimum of 15 minutes at each sampling station.

As a supplementary project, to further current understanding of the basic life history of both commercially and recreationally important fisheries in the MHI, the PIFSC Life History Program will be conducting bottomfish sampling surveys in the 50-400m depth zone around the Main Hawaiian Islands. Fishing will primarily be conducted from *SE-4*; however, additional fishing operations from *Sette* utilizing the hydraulic gurdies may be conducted. All fish specimens will be processed aboard *Sette* to extract and preserve otoliths, gonads, and tissue samples for future life history analysis.

B. Days at Sea (DAS)

Of the 15 DAS scheduled for this project, 15 DAS are funded by a Line Office Allocation. This project is estimated to exhibit a Low Operational Tempo.

C. Operating Area

The area of scientific operations encompasses waters around the Main Hawaiian Islands. The state's Bottomfish Restricted Fishing Areas (BFRAs) will be the focus of this project, with alternate workable weather-sheltered areas chosen as

¹ Moore, C. H., Drazen, J. C., Kelley, C. D., Misa, W. F. X. E. (2013) Deepwater marine protected areas of the main Hawaiian Islands: establishing baselines for commercially valuable bottomfish populations. *Marine Ecology Progress Series*, 476: 167-183.

² Sackett, D. K., J. C. Drazen, V. N. Moriwake, C. D. Kelley, B. D. Schumacher, and W. F. X. E. Misa. (2014) Marine protected areas for deepwater fish populations: an evaluation of their effects in Hawai'i. *Marine Biology* 161:411-425.

necessary (*Appendix 1*). The highest priority BRFA's for this particular mission are #G, #H, #K, and #M, as these areas could not be surveyed during the previous Fall Insular Bottomfish project, SE-17-01.

The project will target specific areas (grid cells) following a stratified-random sampling approach in an effort to best characterize bottomfish abundance across the survey domain. Surveys will be conducted in water depths of 75 to 400 meters.

Daily site selection will be largely weather dependent. The Station/Waypoint List for these grids is presented as an attached spreadsheet file (*Appendix 2*). Upon request, a file format suitable for direct upload to the ship's navigation software will be provided to the Command prior to departure.

D. Summary of Objectives

The MOUSS / DCIP platforms will collect stereoscopic video data to support fishery-independent estimates of species-specific, size-structured abundance for the Main Hawaiian Islands Deep-7 bottomfish stock.

The objectives of the project are:

1. Deploy surface-tethered/untethered MOUSS/DCIPs from *Oscar Elton Sette* to collect stereoscopic video data to support fishery-independent estimates of species-specific, size-structured abundance for the Main Hawaiian Islands Deep-7 bottomfish stock focusing in the State of Hawaii Bottomfish Restricted Fishing Areas (BRFAs). Anticipated tempo is 6 - 8 deployments per day.
2. The PIFSC Life History Program will be conducting bottomfish sampling surveys in the 50-400m depth zone around the Main Hawaiian Islands, including: collection of deep-slope bottomfish samples (otoliths, gonads, tissue); collection of Carangidae samples; and documentation of deep-slope bottomfish habitat and fish interactions with fishing gear. These operations are supplementary in nature and not to interfere with Objective 1

E. Participating Institutions

- NOAA Pacific Islands Fisheries Science Center:
 - Science Operations Division (SOD)
 - Fisheries Research and Monitoring Division (FRMD)
- Joint Institute for Marine and Atmospheric Research (JIMAR)

F. Personnel / Science Party

Name (Last, First)	Title	Date Aboard	Date Disembark	Gender	Affiliation	Nationality
Amin, Ruhul	Data Manager	3/8/17	3/22/17	M	NOAA/SOD	USA
Nichols, Ryan	LHP Fisherman	3/8/17	3/22/17	M	NOAA/FRMD	USA
O'Malley, Joseph	LHP Fisherman	3/8/17	3/22/17	M	NOAA/FRMD	USA
Ossolinski, Justin	Operations Lead / Gear Specialist	3/8/17	3/22/17	M	JIMAR/SOD	USA
Reardon, Russell	Project Leader	3/8/17	3/22/17	M	JIMAR/SOD	USA
Richards, Benjamin	Science Advisor	3/8/17	3/22/17	M	NOAA/FRMD	USA
Taylor, Jeremy	Gear Specialist	3/8/17	3/22/17	M	JIMAR/SOD	USA

G. Administrative

1. Points of Contact

Project Leader:

Russell Reardon

Russell.Reardon@noaa.gov

1845 Wasp Blvd, Building 176, Honolulu, HI 96818

808-725-5404

Science Advisor:

Dr. Benjamin Richards

Benjamin.Richards@noaa.gov

1845 Wasp Blvd, Building 176, Honolulu, HI 96818

808-725-5320

Ship Operations Officer:

LT Anthony Imberi

OPS.Sette@noaa.gov

NOAA Ship *Oscar Elton Sette*

1897 Ranger Loop, Building 184, Honolulu, HI 96818

808-389-5695 (cell)

2. Diplomatic Clearances

None Required.

3. Licenses and Permits

The Science Advisor will ensure the appropriate authorizations are secured for all planned scientific operations prior to the start of the project. These authorizations include the following:

NEPA: A Categorical Exclusion for this project (SE-17-02) was signed on 06 March 2017 in accordance with NOAA Administrative Order 216-6A and accompanying Companion Manual, the National Environmental Policy Act of 1969 (NEPA) and Council on Environmental Quality regulations, 40 CFR §§ 1500-1508. The NMFS Pacific Islands Fisheries Science Center (PIFSC) has determined that NOAA's Categorical Exclusion Research Action number E5 is applicable to this research survey.

ESA: Section 7 consultation for deployment and operation of survey equipment initiated with the NMFS Pacific Islands Regional Office (PIRO) on 11 January 2017 and concluded on 09 February 2017 with a "May Affect, but Not Likely to Adversely Affect" determination.

Essential Fish Habitat: Consultation for deployment and operation of survey equipment was initiated with PIRO on 03 February 2017 and concluded on 06 February with a "Not Likely to Adversely Affect" determination.

State of Hawaii: DLNR Special Activity Permit No. 2018-16 allows the take and possession of bottomfish and various fish spp. (incidental catch) and the deployment of stationary stereo-video camera stations at select locations both inside and outside of Bottomfish Restricted Fishing Areas. Permit valid through 23 February 2018.

II. Operations

The Project Leader is responsible for ensuring the scientific staff is trained in planned operations. The Science Advisor is responsible for ensuring that the scientific staff is knowledgeable of project objectives and priorities. The Commanding Officer is responsible for ensuring all operations conform to the ship's accepted practices and procedures.

A. Project Itinerary

Weather, equipment failures, and scheduling problems are unpredictable. As such, the following planned 'ideal' itinerary should be considered as only a guide for survey progression. Operations may be altered as appropriate based on weather, sea conditions, or the progress of the survey itself. Some adjustment is highly anticipated given the exposure of the survey areas to prevailing conditions. Ship

transit estimates to and from the survey areas have been estimated based on a ship speed of: 9.7 knots westbound, 9.2 knots northbound and southbound, and 8.7 knots eastbound.

03 MAR **Begin Ship Loading:** Begin staging pallets of anchor blocks and totes on the pier for crane loading. Continue loading throughout the following days.

07 MAR **Fuel Delivery/Transfer and Final Ship Loading:** Fuel is to be pumped into one hip tank and one drum on shore. The hip tank will be subsequently loaded onto the ship at the Command's discretion. Complete final loading of gear and equipment.

08 MAR **Depart Pearl Harbor:** Embark full scientific complement (Amin, Nichols, O'Malley, Ossolinski, Reardon, Richards, Taylor) at Ford Island per ship's sailing board. Depart Pearl Harbor and transit to the appropriate (based on conditions) Maui Nui or Hawaii Island survey area. If time permits, conduct trial deployment/recovery of surface-tethered packages prior to transit. Conduct Welcome Aboard Brief, safety drills and operational planning.

09-21 MAR **Maui Nui and Hawaii Island Scientific Operations:** Arrive at the selected BRFA on 09 MAR to conduct a full day of scientific operations. Standard daily operations consist of tethered and/or untethered drop-camera operations from *Oscar Elton Sette* (Appendix 3a & 3b). If conditions in the BRFAs do not permit operations, then suitable alternate work areas will be found.

Additionally, *SE-4* will be launched daily throughout the project to conduct bottomfishing operations. Opportunistic bottomfishing operations may also occur from *Sette* in the evenings, as time allows.

Actual survey locations will be distance and weather dependent. The highest priority sites for this project are BRFAs #G (Kalaupapa); #H (Pailolo Channel), #K (Hamakua) and #M (South Point).

Upon conclusion of scientific operations on 21 March, depart for Pearl Harbor, Oahu.

22 MAR **Return to Pearl Harbor. End of Project.**

B. Staging and Destaging

Staging: Assistance from ship personnel for craning aboard other large gear and for loading small boat fuel will be necessary. Staging is anticipated to occur 03 March. Transfer of small boat fuel is anticipated to occur 07 March. Hand carried items will be loaded 07 March.

Destaging: Full off-load of all program-provided gear and small boats will begin in coordination with the Command upon return to Pearl Harbor, 22 March.

C. Operations to be Conducted

The Project Leader has the authority to revise or alter the technical portion of the instructions as work progresses, provided that, after consultation with the Science Advisor and Commanding Officer, it is ascertained that the proposed changes will not (1) jeopardize the safety of personnel or the ship, (2) exceed the overall time allotted for the project, (3) result in undue additional expenses, and (4) alter the general intent of the project instructions or scientific integrity of the project. In addition, the Project Leader must notify the Office of the Science Director of the Pacific Islands Fisheries Science Center at the earliest opportunity prior to making (1) deviations from the general project track or area of operations noted in the project instructions, (2) changes or additions of research operations to those specified in the project instructions, or (3) port calls not specifically identified in the project instructions.

Multi-gear fishery-independent surveys are an important component of the efforts to improve the data informing current stock assessment models. The focus of this mission is to sample the Main Hawaiian Islands Deep-7 bottomfish stock using the Modular Optical Underwater Survey System (MOUSS) fishery-independent gear and its components within DropCam Instrument Packages (DCIPs).

MOUSS is an evolution of the existing BotCam developed in 2005 by PIFSC. In contrast to the BotCam, the MOUSS is smaller, lighter, able to attach to different deployment platforms, and captures high-resolution digital footage. This reduction in size and weight allows for easier deployment, while the use of high-resolution digital video enables more accurate and precise fish identifications and measurements. Project operations will further support the development and evaluation of the MOUSS as an effective and efficient sampling gear for use in operational fishery-independent surveys of deep slope bottomfish assemblages in the Pacific Islands Region.

This mission will target a minimum of 24 primary sampling units (500 m x 500 m grid cells) focused primarily across Maui Nui and Hawaii Island in the four BRFA that could not be surveyed during SE-17-01. In an effort to best characterize bottomfish size-structured abundance across the survey domain, sampling will follow a stratified-random sampling approach based on habitat type

to include a larger area within the region bounded by Main Hawaiian Islands. Specific grid cells will be chosen daily based on weather and local conditions prior to the sampling effort.

Oscar Elton Sette will be engaged in daylong, replicate deployment and retrieval operations of drop-camera packages. The minimum sample size to cover the four highest priority BRFA's is 48 successful deployments (24 Primary Sampling Units x 2 replicate deployments). The anticipated pace is 6 deployments per day, equating to 2 days within a single BRFA. The general goal, however, is to cover as many grid cells and BRFA's as possible in order to increase sample size and overall effort on the project. The operational tempo may be adjusted as the project progresses based on underway efforts, weather, and experience. The standard operating procedures for both surface-tethered and untethered DCIPs are attached (*Appendix 3a & 3b*).

Research efforts will also require daily use of the ship's *SE-4*. An *Oscar Elton Sette* small boat coxswain will be required to support planned bottomfishing efforts from *SE-4*.

D. Dive Plan

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

There are no dives planned for this project.

E. Applicable Restrictions

Conditions which preclude normal operations: Poor weather and sea conditions, equipment failure, safety concerns, heavy local vessel traffic, and/or unforeseen circumstances, may alter or prohibit operations as planned. At these times, the Project Leader and Commanding Officer will determine the appropriate plan of action, consulting with the Science Advisor as necessary.

NMFS employees are not exempt from the requirements of the Marine Mammal Protection Act (MMPA) or the Endangered Species Act (ESA). PIFSC has developed mitigation measures for its fisheries and ecosystem research projects to avoid take and to comply with the Lecky, Murawski, and Merrick guidance. A copy of these documents is available at <https://sites.google.com/a/noaa.gov/pifsc-science-operations/nepa-permits/protected-species-mitigation-measures> and on the ship's bridge.

1. "Take" of Protected Species

- a. Under the MMPA and ESA it is unlawful to take a protected species. The MMPA defines take as "harass, hunt, capture, kill or collect, or attempt to harass, hunt, capture, kill or collect." The ESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." An incidental take is one that is incidental to, but not the purpose of, otherwise lawful activities.
 - b. In the event of an incidental take of a marine mammal or federally listed threatened or endangered species during the project, the Project Leader will report the incident to the ship's Commanding Officer then the PIFSC Director and Deputy Director IMMEDIATELY via IRIDIUM, INMARSAT, and email. Samples should not be collected from any incidentally taken marine mammals, sea turtles, or seabirds.
 - c. PIFSC has developed mitigation measures for its fisheries and ecosystem research cruises to avoid take and comply with the Lecky, Murawski, and Merrick guidance. A copy of these documents is available at <https://sites.google.com/a/noaa.gov/pifsc-science-operations/home/nepa-permits/protected-species-mitigation-measures> and on the ship's bridge.
2. Activities in the Hawaiian Islands Humpback Whale National Marine Sanctuary
 - a. The humpback whale season in Hawaii is November through May.
 - b. Unless otherwise authorized under the MMPA and ESA, it is unlawful to approach, or cause a vessel or other object to approach, within 100 yards of any humpback whale within the Sanctuary. Please reference the complete list of prohibited activities and boundary maps at <https://sites.google.com/a/noaa.gov/pifsc-science-operations/nepa-permits/protected-species-mitigation-measures>. A copy of these materials will also be available on the ship's bridge.

III. Equipment

A. Equipment and Capabilities Provided by the Ship

1. **Equipment:** To successfully meet the project objectives, the scientific compliment aboard will need the ship to provide the items listed below.

Prior to sailing, the ship's crew will inspect these items to ensure they are in proper working order for the project:

- Operational Scientific Computing System (SCS)
- Acoustic Doppler Current Profiler (ADCP) – if working
- ThermoSalinoGraph (TSG)
- Adequate fresh water for gear wash-down
- Boat Deck and Aft deck (knuckle) cranes
- A-Frame, block and winch (for package deployment)
- J-frame (port) with pot hauler block (for package recovery)
- Scientific freezer (maintained -30°C to -20°C)
- Small chest freezers in Breezeway for daily-use bait
- Working Wet Lab faucets and drains
- Iridium phone
- Coolers for food and water on *SE-4*
- GPS navigational system
- Depth sounders and recorders
- One hip tank for small boat gasoline storage
- Sea Catch Toggle Release (or similar) for package deployment
- Grapples and heaving lines for recovering survey package
- Northwind launch, *SE-4*
- Hydraulic gurdies for bottomfishing
- Acoustic Release Deck Box and Dunking Transducer

2. **Capabilities:** It is requested that the ship provide the following:

- a. A small boat coxswain for *SE-4* to support daily bottomfishing operations.
- b. Deck personnel for the deployment and recovery of small boats and camera packages.
- c. Permission for Scientists to ready scientific work spaces (e.g. computer/camera stations) prior to departure.
- d. Assistance from the ship's Deck Department in craning and staging large gear during loading and off-loading.
- e. Support from the Engineering and Deck departments prior to sailing to transfer program-provided gasoline into the ship's hip tank to be used as outboard engine fuel: one hip tank (200 gallons) and one drum (50 gallons). Note: The drum will be left ashore.
- f. Support from the Engineering department to fuel *SE-4* as appropriate to maintain daily operations.

- An inventory list showing actual amount of hazardous material brought aboard
- An SDS 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. SDS 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 of Hazardous Materials

See Appendix 5.

C. Chemical Safety and Spill Response Procedures

See Appendix 6.

D. Radioactive Materials

No Radioactive Isotopes are planned for this project.

V. Additional Projects

Supplementary (piggyback) and ancillary projects are secondary to the objectives of the project and should be treated as additional investigations. The difference between the two types of secondary projects is that an ancillary project does not have representation aboard and is accomplished by the ship's force.

A. Supplementary (“Piggyback”) Projects

To further the current understanding of the basic life history of both commercially and recreationally important fisheries in the MHI, the PIFSC Life History Program will be conducting bottomfish sampling surveys in the 50-400m depth zone around the Main Hawaiian Islands, including 1) the collection of deep-slope bottomfish samples (otoliths, gonads, tissue), 2) collection of Carangidae samples,

3) documentation of deep-slope bottomfish habitat and fish interactions with fishing gear, 4) other. These operations are supplementary in nature and not to interfere with the primary objectives of SE-17-02.

Daytime fishing will primarily be conducted from *SE-4*; however, additional fishing operations from *Sette* utilizing the hydraulic gurdies may be opportunistically conducted. *Sette*-based fishing would be secondary to small-boat operations and required transits between operating areas. If evening fishing operations were possible (until ~2100), these would only be conducted from *Sette*.

B. NOAA Fleet Ancillary Projects

No NOAA Fleet Ancillary Projects are planned.

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*

1. OMAO Data
2. Program Data - *Under Development*
The project will follow the current PIFSC data management plans, which comply with NOAA requirements. Contact Nori Shoji (noriko.shoji@noaa.gov), Director, PIFSC Science Operations Division, for PIFSC data policy updates.

B. Responsibilities: *Under Development*

VII. Meetings, Vessel Familiarization, and Project Evaluations

- A. Pre-Project Meeting:** The Project Leader, Science Advisor 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 Project Leader 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 shortcomings 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 Project Leader, Science Advisor and members of the scientific party and is normally arranged by the Operations Officer and Project Leader.
- D. Project Evaluation Report:** Within seven days of the completion of the project, a Customer Satisfaction Survey is to be completed by the Project Leader. The form is available at <https://sites.google.com/a/noaa.gov/omao-intranet-dev/operations/marine/customer-satisfaction-survey> and provides a "Submit" button at the end of the form. It is also located at https://docs.google.com/a/noaa.gov/forms/d/1a5hCCkgIwaSII4DmrHPudAehQ9HqhRqY3J_FXqbJp9g/viewform. 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. Meals will be served three times daily beginning one hour before scheduled departure, extending throughout the project, and ending two hours after the termination of the project. Packed lunches and water jugs will be required for scientists on all full-day small boat operations. 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 Project Leader. The Project Leader 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 Project Leader 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 Project Leader 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 Project Leader will ensure that all non NOAA or non-Federal scientists aboard also have proper orders. It is the responsibility of the Project Leader 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 (03-14)) must be completed in advance by each participating scientist. The NHSQ can be obtained from the Project Leader 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 Project Leader 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. 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 steel-toed boots. The ship's Operations Officer should be consulted by the Project Leader to ensure members of the scientific party report aboard with the proper attire.

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 program and worn when required.

All scientists will comply with standing safety regulations of PIFSC and that of the vessel's standing orders from the Commanding Officer.

D. Communications

A progress report on operations prepared by the Project Leader may be relayed to the program office. Sometimes it is necessary for the Project Leader to communicate with another vessel, aircraft, or shore facility. Through various means of communications, the ship can usually accommodate the Project Leader. 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 and 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 prior to embarking. Arrangements to take the Course and/or achieve security clearance for any non-NOAA computers should be coordinated with PIFSC administration well in advance of the project.

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.

IX. APPENDICES

- Appendix 1:* Operating Area for SE-17-02: Main Hawaiian Islands Bottomfish Restricted Fishing Areas (BFRAs)
- Appendix 2:* Station/Waypoint List (Coordinates in Latitude, Longitude: Degree-Minutes) (*Attached File*)
- Appendix 3a:* Standard Operating Procedures for the Deployment and Recovery of a Surface-Tethered DropCam Instrument Package (DCIP) (*Attached File*)
- Appendix 3b:* Standard Operating Procedures for the Deployment and Recovery of an Untethered DropCam Instrument Package (DCIP) (*Attached File*)
- Appendix 4:* Program Equipment List (*Attached File*)
- Appendix 5:* Section IV.B. Hazardous Materials Inventory
- Appendix 6:* Section IV.C. Chemical Safety and Spill Response Procedures

Appendix 1: Operating Area for SE-17-02: Main Hawaiian Islands Bottomfish Restricted Fishing Areas (BFRAs)

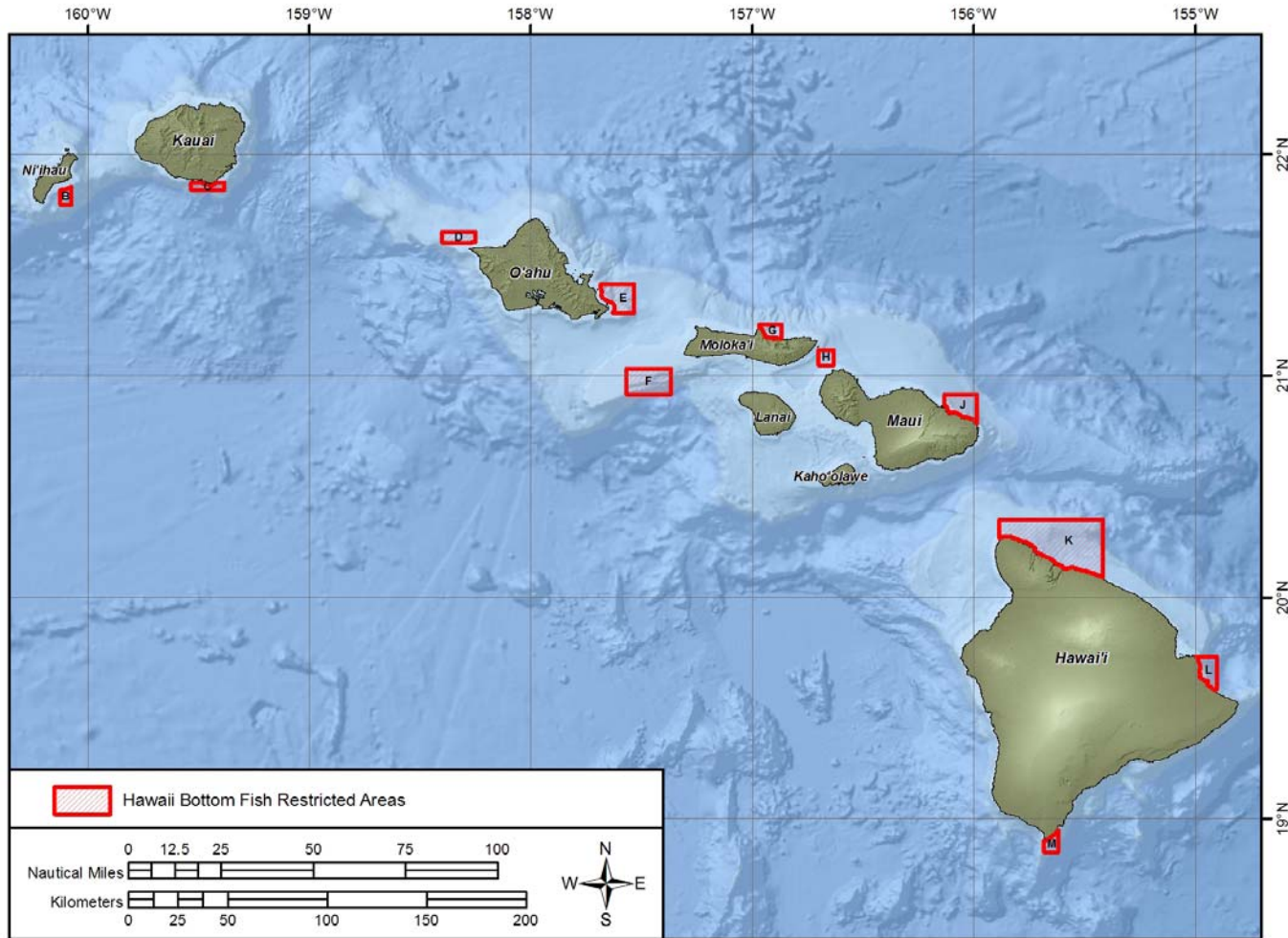


Figure 1. The primary MOUSS survey locations are the depicted Bottomfish Restricted Fishing Areas (BFRAs). Highest priority sites are BRFAs #G, #H, #K, and #M.

Appendix 2: Station/Waypoint List (Coordinates in Latitude, Longitude: Degree-Minutes)

A file format suitable for direct upload to Oscar Elton Sette's navigation software will be provided to the Command prior to departure.

Appendix 3a: Standard Operating Procedures for the Deployment and Recovery of a Surface-Tethered DropCam Instrument Package (DCIP).

(Attached File)

Appendix 3b: Standard Operating Procedures for the Deployment and Recovery of an Untethered DropCam Instrument Package (DCIP).

(Attached File)

Appendix 4: Program Provided Equipment List

(Attached File)

Appendix 5: Section IV.B. Hazardous Materials Inventory

Inventory of Hazardous Materials

Common Name	Quantity	Notes	Trained Individual	Spill Control*
Commercial Bleach	7.6L (2 gal)	Stored in Hydro Lab corrosives locker	Russell Reardon	B
Ethyl Alcohol (EtOH 95%)	19L (5 gal)	Highly Volatile, Flammable Preserved samples stored in secondary containment in Scientific freezer.	Ryan Nichols	AL
Formaldehyde solution (3.7%)	19L (5 gal)	Toxic; Carcinogenetic	Ryan Nichols	F
Gasoline, unleaded	0.76 kL (200 gal)	Volatile, Flammable Stored in ship's fantail tank & drum rack	Ship's Chief Engineer	Ship SOP

* Spill Control Key is presented in *Appendix 6*.

Appendix 6: Section IV.C. Chemical Safety and Spill Response Procedure

AL: Alcohols

- Remove all sources of ignition.
- Wear appropriate PPE and clothing during clean-up.
- Ventilate closed spaces before entering them.
- Use absorbent socks to surround spills or to divert fluid flow.
- Use vermiculite or kitty litter to soak up and absorb fluid.
- Do not use combustible materials, such as saw dust.
- Use absorbent pads/diapers to wipe up the spill or a dust pan to sweep up vermiculite/kitty litter.
- Place used absorbents in plastic bag or pail.
- Clean surface thoroughly to remove residual contamination.
- Bags containing used absorbents will be properly disposed of once the ship returns to port.

B: Bases

- Wear appropriate PPE and clothing during clean-up.
- Keep upwind. Keep out of low areas.
- Ventilate closed spaces before entering them.
- Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.
- Never mix with an unknown liquid or residue or any compound incompatible with oxidizers.
- **Large Spills:** Dike ahead of spill for containment. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.
- **Small Spills:** Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
- Never return spills to original containers for re-use.
- Neutralize spill area and washings with product such as Grainger Base Eater Spill Kit. Collect in a non-combustible container for prompt disposal.

F: Fixatives/Formalin/Formaldehyde

- Wear appropriate PPE (gloves, goggles, wet breathing mask).
- Ventilate area of leak or spill. Remove all sources of ignition.
- Isolate hazard area. Keep unnecessary and unprotected personnel from entering.
- Contain to minimize evaporation; recover liquid when possible.
- Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e.g., vermiculite, kitty litter, absorbent pads), and place in a chemical waste container. A dust pan and plastic bags are available to aid in cleanup and disposal.
- Do not use combustible materials, such as saw dust.

Inventory of Spill Kit Supplies

Product Name	Qty	Chemicals useful against	Amount of clean up possible
Chemical Spill Kit Contents: - Acid Neutralizer (1qt) - Base Neutralizer (1qt) - Halogen Neutralizer (1qt) - Hydrofluoric Neutralizer (1qt) - Surface Cleaner (1qt) - Goggles - Safety Gloves - Vinyl Apron - Sponge - Sprayer Applicator - Instructions	1 1 1 1 1 2 2 1 1 1 1	AL B Neutralizes the following into Non-Toxic Organic Salts and Water: Acids, Hydrofluoric Acid, Caustics, Halogens and Solvents	Amount neutralized varies with concentration. pH indicating neutralizers eliminate need for pH meters or strips to determine appropriate amount.
HazMat Spill Kit Contents: - 20 Gallon Overpack - HazMat Socks (48") - HazMat Pillows - Yellow HazMat Bonded Pads - Safety Gloves - Goggles - Light Stick - Response Guide Book - Disposal Bags w/ Hazardous Waste Labels	1 6 7 20 5 1 1 1 3	AL B F Chemical & HazMat Fluids	64 L (17 gal) collectively