FINDING OF NO SIGNIFICANT IMPACT

Papahānaumokuākea Marine National Monument Research and Conservation and Management Permits to the Florida State University and University of Alaska – Fairbanks, School of Fisheries and Ocean Sciences, Seaward Marine Center for vessel support operations for permitted research activities.

The Council on Environmental Quality (CEQ) Regulations state that the determination of significance using an analysis of effects requires examination of both context and intensity, and lists ten criteria for intensity (40 CFR 1508.27). In addition, the National Oceanic and Atmospheric Administration Administrative Order (NAO) 216-6 Section 6.01b. 1 - 11 provides eleven criteria, the same ten as the CEQ Regulations and one additional, for determining whether the impacts of a proposed action are significant. Each criterion is discussed below with respect to the proposed action and considered individually as well as in combination with the others.

The National Oceanic and Atmospheric Administration, National Ocean Service, Office of National Marine Sanctuaries drafted an environmental assessment (dated October 2014) to evaluate the impacts of allowing:

- The Florida State University (FSU) to conduct a range of deep-sea marine research projects using the AUV *Sentry,* and;
- The University of Alaska – Fairbanks (UAF), School of Fisheries and Ocean Sciences, Seward Marine Center (SMC) to provide vessel operations with the R/V *Sikuliaq* in support of separately permitted research projects in the Papahānaumokuākea Marine National Monument (PMNM or Monument).

The activities require two permits from NOAA's Office of National Marine Sanctuaries (ONMS), the United States Fish and Wildlife Service, and the State of Hawai'i, which are all co-trustee management agencies for the PMNM. ONMS drafted the environmental assessment as a basis for this finding of no significant impact for its issuance of one Monument research permit and one Monument conservation and management permit.

1. Can the proposed action reasonably be expected to cause both beneficial and adverse impacts that overall may result in a significant effect, even if the effect will be beneficial?

No. The beneficial impacts of the proposed research activities and support vessel operations are expected to outweigh the minimal adverse impacts associated with this action. The research projects include multibeam mapping, surveys of the seafloor using the AUV *Sentry*, collection of water samples, and deployment of a current meter data logger. The research projects would provide for a better understanding of the deep-sea biota within the Monument through collection and documentation of new records and new species and bathymetric habitat mapping. In addition this research would provide more insight into the impacts of trawling and the recovery potential for deep-sea coral and sponge bed communities. The research projects would utilize the AUV *Sentry* a maximum of twenty-seven (27) times (three dives would be conducted at nine target sites) over the duration of one research cruise at nine target locations, three of which are located within PMNM. Therefore nine (9) dives are planned to occur within the boundaries of PMNM.

The AUV *Sentry* is the best available means to collect, survey, and map in deep water areas of the Monument. Thus, AUV operations play an integral role in supporting these projects which would benefit the management and subsequent resource protection of the Monument.

The AUV *Sentry* would use steel dive weights for ballast. The *Sentry* dive weights are made of unpainted and untreated flame cut mild steel. To control bouyancy, the AUV *Sentry* would drop one descent weight (weight approximately 64 lbs) per dive and two *Sentry* ascent weights (weighing between 48-64 lbs) per dive. All dive weight ballast would be left on the seafloor. In total, a maximum of 310 plates (4,960 lbs) bolted together to form 93 complete dive weights would be configured in anticipation of 27 AUV dives and potential weather contingencies. The project anticipates three dives at each of the nine identified sites, of which three sites are located within PMNM. A total of 27 dives would occur in the first year, leaving an estimated 81 dive weights on the seafloor throughout the project area, including 27 weights within the boundaries of PMNM. There are mitigation measures in place to address the discharging of ballast on the sea floor. AUV operators would survey their surroundings visually and avoid sensitive areas when landing and dropping weights. The Monument would also request that sub operators mark the locations of ballast drops using GPS points for easy location upon return in future years.
While the plates are expected to persist in the environment for a prolonged period of time, over time the steel plates will corrode and integrate into the environment.

The *Sikuliaq* is the transport research vessel that would carry all crew, and the AUV into the Monument. The *Sikuliaq* would serve as the support vessel, field research laboratory and provide accommodations to all the researchers and respective crew for the duration of the cruise.

Vessel anchoring has the potential to impact the ecosystem depending on many factors, such as the size of the ship and anchor system, weather conditions, and the location and vicinity of the anchorage relative to sensitive ecosystems. The *Sikuliaq* would not drop anchor within the PMNM except in emergency situations. Even in emergency situations, efforts would be made to drop anchor in specially designated areas.

The *Sikuliaq* would have completed all required inspections prior to departure for the Monument. These inspections include: hull, ballast water, tender and gear inspections, and rat inspections. The *Sikuliaq* would have its hull spot-cleaned to eliminate any invasive species, prior to departure for the Monument. The *Sikuliaq* also has an approved Marine Sanitation Device (MSD) capable of treating black water, reusing treated effluent for toilet operations, and a holding tank for gray water. The *Sikuliaq* would abide by all Monument discharge regulations and policies for all vessel discharge including treated MSD effluent and biodegradable solid waste associated with galley use.

In summary, the Proposed Action will not result in a significant effect to the environment. However, monument managers will moderately benefit from increased knowledge (gained by the undertaking of the aforementioned research projects) about the deep water regions of the Monument.

2. Can the proposed action reasonably be expected to significantly affect public health or safety?

No negative impacts to public health or safety are associated with these activities, as the public will not be in the area of the activity. In addition, use of the R/V *Sikuliaq* would involve actions in which the vessels and their respective crew are routinely engaged with the inherent challenges

involved (weather, deployment and retrieval of AUV, CTDs, and a current meter and data logger, etc.). The R/V *Sikuliaq's* captain and crew are trained in the University of Alaska's Seaward Marine Center's Safety Management System Manual and would follow all prescribed protocols and procedures when necessary to the health and safety of all crewmembers and passengers onboard the vessel.

3. Can the proposed action reasonably be expected to result in significant impacts to unique characteristics of the geographic area, such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas?

The PMNM contains one of the healthiest coral reef ecosystems in the world. However, the proposed action is to be conducted well away from coral reef habitats; the proposed activities would be conducted in deep water (300-600 m), outside of the NWHI Hawai'i State Marine Refuge. The AUV would not land on or touch the seafloor and would, to the maximum extent possible, drop all ballast in areas of sandy substrate and away from sensitive areas known to contain deep-sea coral colonies. The *Sikuliaq* would anchor only in emergency situations away from sensitive locations and would comply with all Monument discharge regulations and policies.

4. Are the proposed action's effects on the quality of the human environment likely to be highly controversial?

None of the effects on the quality of the human environment are controversial. AUV and vessel operations have been ongoing in the NWHI and in other locations with no controversy or adverse impacts on the environment. The environmental assessment prepared for this research was posted on the Monument website (http://papahanaumokuakea.gov/) for public comment for fifteen days starting on October 7, 2014. No comments were received.

5. Are the proposed action's effects on the human environment likely to be highly uncertain or involve unique or unknown risks?

The procedures, methods, and mitigation measures that are used in the existing research are accepted standard operating procedures in the scientific community and proven to be effective with minimal adverse impact to wildlife or individuals. Therefore, the effects of this action have a low degree of uncertainty or unknown risk.

6. Can the proposed action reasonably be expected to establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration?

Research, conservation and management activities similar to the ones described in this proposed action are ongoing in the PMNM. This action does not constitute a new precedent in any way.

7. Is the proposed action related to other actions that when considered together will have individually insignificant but cumulatively significant impacts?

The proposed research activities, when considered together with other actions, will not have individually insignificant nor cumulatively significant impacts. All other vessels entering the PMNM would require a permit and as a condition of such permit would adhere to Monument regulations and policies. Therefore, no significant adverse cumulative impact is anticipated.

8. Can the proposed action reasonably be expected to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources?

The proposed action would not adversely affect areas listed in or eligible for listing in the National Register of Historic Places, or cause loss or destruction of significant scientific, cultural or historic places. Implementation of the proposed action would have no effect on archaeological, social, or cultural resources, as all research would be conducted in the deeper ocean where few, if any shipwrecks or downed planes would be found or affected.

9. Can the proposed action reasonably be expected to have a significant impact on endangered or threatened species, or their critical habitat as defined under the Endangered Species Act of 1973?

On August 19, 2014, PMNM initiated an informal consultation with NMFS Pacific Islands Regional Office (PIRO) on the proposed action – procedures which included operation of R/V *Sikuliaq*, deployment of the AUV *Sentry*, water sampling and deployment of a current meter data logger. In the analysis, NMFS PIRO concurred with the determination by ONMS PMNM that the proposed action may affect, but is not likely to adversely affect ESA-listed marine species or designated critical habitat. NMFS' concurrence was received on September 12, 2014 and was based on the finding that the effects of the proposed action are expected to be insignificant, discountable, or beneficial as defined in the joint USFWS-NMFS Endangered Species Consultation Handbook (1998).

Although six species of cetaceans listed under the Endangered Species Act (ESA) are in the Western Pacific Ocean, no reported or observed adverse interactions with the *Sikuliaq* or AUV *Sentry* have been observed or reported in the past and no future adverse interactions are anticipated. Therefore, no impact to listed species of cetaceans is expected. The same is expected for the remaining seventeen species protected under the Marine Mammal Protection Act. All research, conservation and management activities and vessel operations would temporarily cease, should the researchers encounter any endangered species, including the Hawaiian monk seal.

10. Can the proposed action reasonably be expected to threaten a violation of Federal, state, or local law or requirements imposed for environmental protection?

The proposed action does not threaten a violation of federal, state, or local law requirements imposed for the protection of the environment. The captain of the *Sikuliaq* and FSU researchers and affiliates would operate with all necessary and required permits and approvals from Federal, state, and local agencies.

11. Can the proposed action reasonably be expected to result in the introduction or spread of a nonindigenous species?

Mitigation measures to prevent the spread of invasive species to the PMNM, including marine algae *Hypnea musciformis* as recommended by Dr. Isabella Abbott of the University of Hawai'i Department Of Botany, would be continually implemented, making it unlikely that any invasive species would be introduced into the Monument. These measures include hull inspection and

cleaning of the *Sikuliaq*, disinfection of all scientific collecting equipment, and wipe down of all the subs with Simple Green™ after each dive.

DETERMINATION

In view of the information presented in this document and the analysis contained in the supporting Environmental Assessment prepared for the Proposed Action, it is hereby determined that the Proposed Action will not significantly impact the quality of the human environment as described above and in the supporting Environmental Assessment. In addition, all beneficial and adverse impacts of the proposed action have been addressed to reach the conclusion of no significant impacts. Accordingly, preparation of an environmental impact statement for this action is not necessary.

Daniel J. Basta
Director
Office of National Marine Sanctuaries
National Oceanic and Atmospheric Administration

10/30/14
Date