

FINDING OF NO SIGNIFICANT IMPACT

Environmental Assessment for National Center for Coastal Ocean Science (NCCOS) Surveying and Mapping Cruise Activities in Puerto Rico and the United States Virgin Islands (USVI) for April 5-26, 2016

The National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), National Centers for Coastal Ocean Science (NCCOS) has completed an Environmental Assessment (EA) dated March 31, 2016 to evaluate the potential environmental impacts of a proposed scientific research mission (cruise) on board the NOAA Ship Nancy Foster from April 5 to April 26, 2016 within the territorial waters of St. Thomas, United States Virgin Islands (USVI) and Puerto Rico. During this cruise, NCCOS will survey and map coral reef habitat and fishery resources using sonar, conduct ground truthing activities using an ROV and gliders, and collect oceanographic data and passive acoustic hydrophone information using conductivity, temperature, and depth instruments (CTD). The Environmental Assessment is the basis for NCCOS's finding of no significant impact.

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. Based on the analysis in the environmental assessment NCCOS finds the following:

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?

The proposed action (preferred alternative) is to collect multibeam and split/beam acoustics sonar data and to conduct groundtruthing activities using Slocum Gliders, remotely operated vehicles (ROV) and a towed Conductivity, Temperature and Depth sonde (CTD). The primary objective of this action is to develop high resolution benthic seafloor habitat maps that are integrated with sonar information on fish distribution and biomass for the territorial waters off the coast of St. Thomas, USVI and Puerto Rico. This action supports ongoing conservation and management efforts in the region, and ensures that NCCOS carries out its mission, which is to deliver relevant, accurate, and timely scientific information and tools that decision-makers and scientists use to gain a better understanding of the state of the natural resources and benthic habitat.

As described in the EA and in sections of the *May 2013 Programmatic Environmental Assessment for the Office of Coast Survey Hydrographic Survey Projects (OCSPEA)* that were incorporated by reference, NCCOS determines that the proposed action is not likely to have adverse effects on marine mammals, Endangered Species Act (ESA) listed species, critical habitat or essential fish habitat (EFH), cultural resources or other aspects of the environment.

However, the use of multibeam and split/beam acoustics involves putting sound in the water and other cruise activities such as transit may cause potential adverse effects such as avoidance behavior of Cetaceans or turtles in the presence of the survey vessel during Hydrographic mapping, ROV, CTD or transit activities. These potential effects are reduced due to the minimal overlap in the acoustic sonar frequencies and the functional hearing range of the marine mammals in the region and the downward oriented focus of the sonar. Therefore, NCCOS determines that the acoustics activities and all other activities analyzed for this cruise are not likely to have adverse effects. Further, NCCOS will minimize the risk from all cruise activities (i.e. risk of vessel strike, impacts to EFH) by including best management practices (BMPs), (Appendix A of EA) within the cruise plan that are to be coordinated between the NOAA Ship Nancy Foster crew and the NCCOS scientific staff. Examples of some of the BMPs include:

1. Minimize vessel disturbance and ship strike potential
 - a. Slow speeds (4-8 knots), when mapping;
 - b. Reduced speeds (<13 knots) when transiting through ranges of ESA-listed cetaceans (unless otherwise required, e.g., NOAA Sanctuaries);
 - c. Reduced speeds (<13 knots) while transiting through designated critical habitat (unless slower speeds are required, e.g., < 10 knots in right whale critical habitat and management areas);
 - d. Trained observers aboard all vessels; 100% observer coverage; and
 - e. Species identification keys (for marine mammals, sea turtles, corals, abalone, and seagrasses) available on all vessels.

2. Minimize anchor impact to corals, seagrass or other EFH
 - a. Use designated anchorage area when available;
 - b. Use mapping data to anchor in mud or sand, to avoid anchoring on corals;
 - c. Avoid anchoring in seagrass critical habitat; and
 - d. Minimize anchor drag.

NCCOS requested concurrence with this determination from the NMFS Office of Habitat Conservation on EFH on December 30, 2015 and concurrence was received via e-mail on January 21, 2016, from the Southeast Regional Coordinator that no additional EFH conservation recommendations would be needed as activities were not likely to affect the quantity or quality of EFH.

In addition, NCCOS conducted a consultation with NMFS OPR ESA Division requesting a letter of concurrence (LOC) for activities to be conducted on this cruise on January 5, 2016. NCCOS received the Final LOC from NMFS OPR ESA on April 1, 2016 stating that NCCOS proposed activities on this cruise are not likely to adversely affect any ESA-listed whale, sea turtle, fish, or invertebrate or their critical habitat. Activities which are identified as affecting coral critical habitat are those that impact water quality by increasing nutrients or sediments. The proposed action will not entail activities that impair the primary constituent elements of the critical habitat, because the activities will not affect bottom habitat. NCCOS will use designated anchorage areas and use mapping data to only anchor in appropriate areas (e.g., mud or sand). In addition, there will be no

sample collections of any kind during the proposed research cruise, further reducing the likelihood of contact with substrate or corals.

The NCCOS EA for this cruise incorporated by reference several sections of the OCS PEA. However, while the OCS PEA did assess generally the impacts of multibeam echolocators and single beam sonar on the particular marine mammal species found in the action area, there were no behavioral modeling “take estimates” from the Caribbean region in the analysis because at the time of the assessment, no surveys in this region were anticipated.

In January 2013, OCS filed an application with the Office of Protected Resources of the National Marine Fisheries Service (NMFS OPR) requesting a letter of authorization (LOA) for the take of marine mammals incidental to hydrographic surveys excluding coastal waters in the Caribbean, Hawaii, and other Pacific islands. Currently, OCS is in continued consultation with NMFS OPR regarding their LOA request. An LOA is not expected to be completed by time of the NCCOS proposed action.

As the cruise activities described in the EA are unlikely to have adverse effects, NCCOS has determined that delaying the proposed action to wait for completion of behavioral modelling is unwarranted. In addition, the Marine Mammal Protection Act (MMPA) allows action proponents to make a determination without concurrence that the proposed action does not have a reasonable likelihood of resulting in the incidental take of marine mammals.

Beneficial effects from cruise activities include the production of high-resolution maps of the coral reef habitats and fish use patterns and distribution. These habitat maps enhance the ability of coastal managers to assess, protect, and preserve the condition of coral reef ecosystems. Cultural resources, if present, could potentially be affected beneficially as the location and details of an undiscovered resource would be shared with the appropriate State Historic Preservation Officers (SHPOs). After consideration of these factors, the implementation of appropriate BMPs and the limited spatial and temporal scope of the cruise activities NCCOS does not anticipate any adverse impacts. Based on the analysis in the EA, the proposed action is expected to result in a net benefit.

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

No, the proposed action will not have any adverse effects on public health or safety. The limited spatial and temporal scope of the cruise combined with the implementation of BMPs will enhance the safety of the ship (crew and scientific staff) operations during all cruise activities. As a result, NCCOS does not anticipate any impact to public health or safety.

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 proposed action will not have a significant effect on geographic areas with unique characteristics. The cruise activities will be conducted in a limited geographic region that is not in proximity to areas with unique characteristics. Further, NCCOS does not anticipate that the cruise

activities (i.e., hydrographic mapping, CTD casts, ROV and glider activities) would have any adverse effects on sensitive resources if they were in the proximity of the action area for this cruise. The area to be surveyed may include flat areas of unconsolidated calcium-carbonate sediments, interspersed with flat pavement (hardbottom substrate), pavement with sediment channels, and pavement colonized by hard and soft corals to high relief complex coral reef habitats and patch reefs and will not be impacted by the activities proposed. No other unique characteristics of the geographic areas exist, as this action will not take place within a historic or cultural area, park land, farmland, wetland, or wild and scenic river.

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

The proposed action's effects on the human environment are not likely to be highly controversial. The activities analyzed in the EA are routine and the information collected are beneficial to the management of natural resources in the region. BMPs will further decrease any likelihood of controversy.

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

Most of the activities occurring during this cruise do not have unique or uncertain risks and represent routine operations with standard protocols. However, during hydrographic mapping activities high frequency sound is put into the water. The best available scientific data has not linked the use of high frequency sound to permanent adverse effects on marine mammals. Marine mammals may exhibit behavioral avoidance due to vessel presence and noise but there is minimal overlap in the frequency of the acoustic sonar being used and the marine mammals likely to be present in the area. This uncertainty of effect is reduced further due to the downward orientation of the sound and with the implementation of the following BMPs for reducing sound.

1. Minimize noise

- a. Reduced speed (see details above);
- b. Multibeam surveys using ≥ 50 kHz frequencies, lowest possible power and ping-rate;
- c. Single beam surveys using ≥ 30 kHz frequencies, lowest possible power and ping-rate, and 12° beam angle; and
- d. Reduce use of active acoustics as much as possible. Active acoustic sources should be used only when required for navigation or data collection and should be used at the lowest source level and highest frequency available that is suitable for the purpose.

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?

The proposed project activities are routine and similar to those previously conducted in other areas of Puerto Rico and the USVI. Therefore, the proposed activities do not set a precedent for future similar actions. Any future activities that could result in significant effects would undergo further NEPA analysis on a case-by-case basis.

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

The proposed action will not have any significant impacts, nor will it cause cumulatively significant impacts when considered together or with other related activities. In the EA, NCCOS included other NOAA hydrographic cruises from the previous two (2) years, information on oil/gas platforms, and other potential sources of sound (i.e., vessel activity, sources of seismic noise) in the area. NCCOS concluded that given the limited duration, infrequent occurrence and geographic scope of this cruise, the cumulative effects of these activities or reasonably foreseeable activities are minimal and insignificant. In addition, any future activities that could result in cumulative significant effects would undergo further NEPA analysis on a case-by-case basis.

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 activities are not expected to adversely affect any districts, sites, highways, structures or objects listed in or eligible for listing in the National Register of Historic Places, as cruise activities will not occur in proximity to these areas. In addition, based on NCCOS previous experience in the area, it is unlikely that there are any underwater resources of cultural significance present. However, NCCOS concludes that cruise activities would not cause the loss or destruction of any previously undiscovered scientific, cultural or historical resource. NCCOS notified SHPO contacts of the proposed action and received informal concurrence on March 25, 2016.

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?

No. NCCOS initiated a consultation with NMFS OPR ESA Division on January 05, 2016 requesting a LOC for proposed activities to be conducted on this cruise. NCCOS received a the Final Draft LOC from NMFS OPR ESA on April 1, 2016 stating that NCCOS proposed activities on this cruise are not likely to adversely affect any ESA-listed whale, sea turtle, fish, or invertebrate or their critical habitat. NCCOS incorporated additional BMPs in the EA to reduce or minimize the effect of sound and vessel strike risk on marine mammals per the LOC. These BMPs will also be incorporated in the cruise plan.

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

NCCOS completed consultations and received concurrence for the proposed activities for EFH under the Magnuson-Stevens Fishery Consultation and Management Act and for Section 7 of the Endangered Species Act. As a result of the consultation process, additional BMPs have been incorporated into the EA and will be added to the cruise plan. Although no consultation was requested pursuant to the MMPA, the act allows that action proponents (i.e., NCCOS) to make a determination without concurrence that the proposed action does not have a reasonable likelihood of resulting in the incidental take of marine mammals. Therefore, NCCOS does not expect the proposed action to threaten to violate or violate any Federal, state or local law or requirements imposed for environment protection.

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

The proposed action is not likely to result in the introduction or spread of a nonindigenous species. Sufficient precautionary measure will be taken to ensure that no introduction or spread of a nonindigenous species occurs, such as rinsing gear with a bleach solution before transporting between water bodies. BMPs to be employed include:

1. Minimize vessel discharges (including aquatic nuisance species)
 - a. Meet all EPA Vessel General Permits and Coast Guard requirements;
 - b. Avoid discharge of ballast water in designated critical habitat;
 - c. Use anti-fouling coatings;
 - d. Clean hull regularly to remove aquatic nuisance species;
 - e. Avoid cleaning of hull in critical habitat;
 - f. Avoid cleaners with nonylphenols; and
 - g. Rinse anchor with high-powered hose after retrieval.

DETERMINATION

In view of the information presented in this document and the analysis contained in the supporting Environmental Assessment prepared for the NCCOS Surveying and Mapping Cruise in Puerto Rico and St Thomas USVI, April 5-26, 2016, and in applicable sections of the *May 2013 Programmatic Environmental Assessment for the Office of Coast Survey Hydrographic Survey Projects* incorporated by reference, it is hereby determined that the NCCOS Surveying and Mapping Cruise in Puerto Rico and St Thomas USVI planned for April 5-26, 2016, 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 impact. Accordingly, preparation of an environmental impact statement for this action is not necessary.



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3/31/16

Date