



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
1305 East West Highway
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August 25, 2022

FROM: Ms. Giannina DiMaio
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TO: Edwin Reyes, Administrator
Guam Coastal Management Program, Bureau of Statistics and Plans
P.O. Box 2950
Hagatna, GU, 96932

REFERENCE: Consistency Determination for National Ocean Service Mapping and Surveying Activities Undertaken in the Guam Coastal Zone, 2023-2027

Mr. Reyes,

This notice serves as the federal Consistency Determination for the referenced action, as required by Section 307 of the Coastal Zone Management Act of 1972, as amended (16 U.S.C. 1451 et seq.) for the implementation of activities that may have reasonably foreseeable effects on coastal uses or resources of Guam's coastal zone.

This Consistency Determination addresses the potential effects on any coastal use or resource of Guam from mapping and surveying activities undertaken by the National Oceanic and Atmospheric Administration's (NOAA) National Ocean Service (NOS) in the 2023-2027 timeframe. The Consistency Determination relies extensively upon the activity descriptions and analyses in the NOS *Programmatic Environmental Impact Statement (PEIS) for Surveying and Mapping Projects in U.S. Waters for Coastal and Marine Data Acquisition* which was prepared in accordance with the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. §§ 4321 et seq.). The Draft PEIS and additional information is available online at <https://oceanservice.noaa.gov/about/environmental-compliance/surveying-mapping.html>.

Based on the information, data, and analysis contained herein and in the Draft PEIS, NOS has determined that the Proposed Action is consistent with the enforceable policies of the Guam Coastal Management Program.

Pursuant to 15 CFR § 930.41(a), Guam has 60 days from the receipt of this letter to concur with or object to this Consistency Determination, or to request an extension under 15 CFR § 930.41(b). Guam's concurrence will be presumed if Guam's response is not received by NOS on the 60th day after receipt of this determination.

Thank you for assisting the National Ocean Service with this important program. Please submit your questions, comments, or other responses by email to the NOS Environmental Compliance Coordinator, Giannina DiMaio at nosaa.ec@noaa.gov or by phone at (240) 339-5565.

1.0 INTRODUCTION

This Consistency Determination (CD) addresses the potential effects on any coastal use or resource of Guam from mapping and surveying activities undertaken by the National Oceanic and Atmospheric Administration's (NOAA) National Ocean Service (NOS). Specifically, this CD considers mapping and surveying activities undertaken in the 2023 - 2027 timeframe.

NOS is one of six line offices within NOAA.¹ Section 2 of this CD provides a detailed description of NOS's mapping and surveying activities. This CD does not address all NOS activities, nor does it address actions undertaken by other NOAA line offices.

NOS prepared this CD pursuant to the Coastal Zone Management Act (CZMA) of 1972, as amended, and 15 Code of Federal Regulations (CFR) Part 930, Subpart C, for the implementation of activities that may have reasonably foreseeable effects on coastal uses or resources of Guam's coastal zone. Under the CZMA, federal agency activities with coastal effects are required to be consistent to the maximum extent practicable with federally approved enforceable policies of a State's Coastal Management Program.

Federal agency activities must be consistent to the maximum extent practicable with the standards that underlie a state's permit requirements. However, federal agencies do not have to apply for or obtain a state permit unless required by another Federal law (2020 OCM Federal Consistency Overview; 65 FR at 77140 (2000); and 15 CFR 930.39(e)). Under the CZMA implementing regulations, "the amount of detail in the evaluation of the enforceable policies, activity description and supporting information shall be commensurate with the expected coastal effects of the activity" 15 CFR 930.39(a).

This CD relies extensively upon the activity descriptions and analyses found in the NOS *Programmatic Environmental Impact Statement (PEIS) for Surveying and Mapping Projects in U.S. Waters for Coastal and Marine Data Acquisition*, which was prepared in accordance with the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. §§ 4321 et seq.). The Draft PEIS is available [here](#)² and is incorporated by reference to this CD. On June 25, 2021, the Draft PEIS was published and a notification was distributed by email to all state coastal management program managers and federal consistency contacts. The public comment period for the Draft PEIS closed on November 22, 2021.

The activities to be implemented by NOS are described in the Draft PEIS, Chapter 2 – Description of the Proposed Action and the Alternatives. Reasonably foreseeable environmental effects are described in Chapter 3 of the Draft PEIS. The list of mitigation measures can be found in Appendix A of this CD. These measures were developed through interagency consultations and coordination after publication of the Draft PEIS and will be incorporated into the Final PEIS.

1.1 PROPOSED ACTION, SCOPE, AND IMPACTS

The Draft PEIS contains a programmatic NEPA analysis covering a five-year period of NOS mapping and surveying activities. The Proposed Action evaluated in the Draft PEIS is to continue NOS's data collection projects in the U.S. territorial sea, the contiguous zone, the U.S. Exclusive Economic Zone (U.S. EEZ), U.S. rivers, and states' offshore waters, and some supporting activities in coastal and riparian lands such as the installation of tide gauges. It was determined that a programmatic approach was appropriate because

¹ <https://www.noaa.gov/about/organization/noaa-organization-chart>

² <https://oceanservice.noaa.gov/about/environmental-compliance/surveying-mapping.html>

NOS conducts, authorizes, permits, and funds a suite of similar, ongoing data collection activities associated with recurring projects across a wide geographic area to characterize underwater features (e.g., habitat, bathymetry, marine debris). This Draft PEIS is a comprehensive document that provides detailed analyses of the environmental impacts of surveying and mapping data collection activities based on regional conditions, habitat types, species, and other factors. However, the Draft PEIS does not identify the specific time or place for individual projects or activities over the next five years. The analysis will be used to inform NOS leadership and the public on the environmental impacts of these activities before a decision is made on how to execute each project. Section 1.3 of the Draft PEIS contains detailed information on the programmatic scope of the analysis.

The geographic scope of the Draft PEIS encompasses the U.S. territorial sea; the contiguous zone; the U.S. Exclusive Economic Zone; rivers; states' coastal waters; and coastal and riparian lands. This includes the U.S. portions of the Great Lakes and internal waters such as Lakes Tahoe, Mead, Champlain, Okeechobee, and parts of major rivers. The action area is organized into five regions: Greater Atlantic Region, Southeast Region, West Coast Region, Alaska Region, and Pacific Islands Region. For the purpose of this CD, NOS mapping and surveying activities should be presumed to take place anywhere in the waters of Guam or in nearshore terrestrial areas, subject to applicable mitigation measures.

NOS projects would include surveys performed from crewed vessels and remotely operated or autonomous vehicles, operated by NOS field crews, other NOAA personnel on behalf of NOS, contractors, grantees, or permit/authorization holders. NOS may use echo sounders and other active acoustic equipment and employ other equipment, including bottom samplers and conductivity, temperature, and depth instruments to collect the needed data. A project could also involve supporting activities, such as the use of divers and the installation of tide buoys. The only terrestrial activities projects would be the installation, maintenance, and removal of tide gauges and GPS reference stations.

The Draft PEIS assesses three alternatives to the Proposed Action: Alternative A, the No Action Alternative, reflecting the technology, equipment, scope, and methods currently in use by NOS at the current level of effort (i.e., the status quo); Alternative B, under which NOS would increase the adoption of new technologies to more efficiently perform surveying, mapping, charting and related data gathering; and Alternative C, which also includes the adoption of new techniques and technologies and includes an overall funding increase of 20 percent. NOS has identified Alternative B as the preferred alternative in the Draft PEIS. Therefore, this CD provides effects determinations for the Proposed Action under Alternative B. The anticipated impacts from Alternative B would be adverse, ranging from negligible to moderate, and insignificant, except for the environmental consequences to socioeconomic resources which are anticipated to be indirect, beneficial, and moderate.³ NOS would re-initiate the Consistency Determination process if a different alternative is selected.

1.2 OTHER FEDERAL AGENCY CONSULTATIONS

In addition to facilitating reviews under CZMA, NOS is engaging in interagency coordination and consultation on the Endangered Species Act (ESA), Marine Mammal Protection Act (MMPA), Magnuson-Stevens Fishery Conservation and Management Act (MSA) for Essential Fish Habitat (EFH) and National Marine Sanctuaries Act (NMSA). NOS has submitted an application for an Incidental Take Authorization to

³ Significance criteria are defined in detail for each resource in the Draft PEIS.

the National Marine Fisheries Service (NMFS) and a petition for Incidental Take Regulations to the U.S. Fish and Wildlife Service (USFWS) for marine mammal species. NOS will initiate project-specific consultations under Section 106 of the National Historic Preservation Act (NHPA) before commencing any activity with the potential to affect cultural or historic resources.

2.0 DESCRIPTION OF THE PROPOSED ACTIVITIES

NOS would operate a variety of equipment and technologies to gather accurate and timely data on the nature and condition of the marine and coastal environment, including:

- Project-Related Crewed Vessel Operations
- Anchoring
- Operation of Remotely Operated Vehicles (ROVs), Autonomous Surface Vehicles (ASVs), and Autonomous Underwater Vehicles (AUVs)
- Use of Echo Sounders
- Use of Acoustic Doppler Current Profilers (ADCPs)
- Use of Acoustic Communication Systems
- Use of Sound Speed Data Collection Equipment
- Operation of Drop/Towed Cameras, Video Systems, and Magnetometers
- Collection of Bottom Grab Samples
- Use of Passive Listening Systems
- SCUBA Operations
- Installation, Maintenance, and Removal of Tide Gauges and Tide Buoys
- Installation of GPS Reference Stations

A single project typically consists of multiple activities listed above and the nature and scope of projects can vary based on the combination of activities. For example, a single Coast Survey project may include the activities of vessel operation, echo sounder operation, anchor deployment, and sound speed data collection.

3.0 COASTAL EFFECTS OF THE PROPOSED ACTIVITIES

In the Draft PEIS, NOS analyzed potential impacts to habitats; marine mammals; sea turtles; fish; aquatic macroinvertebrates; EFH; seabirds, shorebirds and coastal birds, and waterfowl; cultural and historic resources; socioeconomic resources; and Environmental Justice (EJ). Environmental consequences from the Proposed Action are anticipated to be adverse, ranging from negligible to moderate, and insignificant, except for the environmental consequences to socioeconomic resources which are anticipated to be indirect, beneficial, and moderate. These significance criteria are defined by resource and a more complete description of impacts is provided in Chapter 3 of the Draft PEIS. The Proposed Action would provide the public and private sectors with nautical charts, benthic habitat condition maps, current and tide charts, and other products that could support the management of coastal resources. The data collected by NOS are used to conserve, preserve, and restore ecological resources, including marine/aquatic wildlife and habitat, coral reefs, and cultural and historic resources. The sections below summarize the coastal effects of proposed NOS mapping and surveying activities organized by coastal resources and activities generally addressed by the state enforceable policies.

3.1 AIR AND WATER QUALITY

NOS assessed the potential impacts to air and water quality from vessel operations and equipment used during NOS projects. Vessels would emit a variety of criteria air pollutants including nitrogen oxides (NO_x), sulfur oxides (SO_x), particulate matter, volatile organic compounds (VOCs), carbon monoxide (CO), and GHG emissions (e.g., CO₂). NOS vessels would discharge treated sanitary domestic wastes from United States Coast Guard-approved Marine Sanitation Devices (MSDs). The assessment of these impacts can be found in Section 3.14.1 of the Draft PEIS. The potential impacts to air and water quality from air emissions, vessel discharges, and accidental spills would be minimized through compliance with the International Convention for the Prevention of Pollution by Ships (MARPOL) Annexes I, IV, V, and VI. NOS adheres to NOAA's environmental procedures which comply with the MARPOL annexes and relevant implementing legislation, regulations, and guidance. Overall, the impacts on air and water quality are expected to be imperceptible or undetectable.

3.2 WILDLIFE, FISH, AND HABITAT

NOS assessed the potential impacts to marine mammals; sea turtles; fish; aquatic macroinvertebrates; essential fish habitat; seabirds, shorebirds and coastal birds, and waterfowl; and their habitats. All surveying and mapping activities listed in Section 2.0 could impact these resources. Detailed analysis can be found in the following sections of the Draft PEIS: Section 3.5 (Marine Mammals); Section 3.6 (Sea Turtles); Section 3.7 (Fish); Section 3.8 (Aquatic Macroinvertebrates); Section 3.9 (Essential Fish Habitat); and Section 3.10 (Seabirds, Shorebirds and Coastal Birds, and Waterfowl). Among the impacts assessed, effects to marine mammals are expected to be limited to temporary behavioral disturbances from echosounders used for mapping. Impacts to marine and freshwater habitats would be limited to very small-scale bottom disturbance from anchoring, taking grab samples, and installing buoys. Birds, fish, and marine mammals may also experience temporary behavioral disturbance from vessel movements and presence. Serious injury and death could occur to birds and marine mammals in the unlikely event of a vessel strike. NOS developed mitigation measures in coordination and consultation with expert agencies including NMFS and USFWS to avoid and minimize any potential effects. Mitigation measures to protect wildlife, fish, and habitats include implementing mandatory invasive species prevention procedures, maintaining safe distances from protected species, following vessel speed restrictions in specific protected species habitats (e.g., North Atlantic right whale), and avoiding anchoring on sensitive bottoms. The full list of mitigation measures can be found in Appendix A. The overall impacts to wildlife, fish, and habitat would be adverse, minor and insignificant as defined in the Draft PEIS.

3.3 CULTURAL AND HISTORIC RESOURCES

NOS assessed the potential impacts to cultural and historic resources. Anchoring, the collection of bottom grab samples, and the installation/maintenance/removal of tide gauges and GPS reference stations could impact cultural and historic resources; however, all effects are anticipated to be avoided or minimized through NHPA consultation which will occur prior to commencing an individual project. Detailed analysis can be found in Section 3.11 of the Draft PEIS. NOS developed mitigation measures in coordination and consultation with expert agencies including NMFS and USFWS to avoid and minimize any potential effects. Mitigation measures to protect cultural and historic resources include not collecting bottom samples on coral reefs, shipwrecks, obstructions, or hard bottom areas and selecting anchoring locations for which data have already been collected.

NOS will initiate project-specific consultations under Section 106 of the National Historic Preservation Act (NHPA) before commencing any activity with the potential to affect cultural or historic resources. Since NOS will continue to coordinate with SHPOs/THPOs, NHOs, and tribes in compliance with Section 106 of the NHPA, the impacts to cultural and historic resources would be adverse, moderate and insignificant as defined in the Draft PEIS.

3.4 FISHERIES

NOS assessed the potential impacts to fisheries, including fish, aquatic macroinvertebrates, EFH, and socioeconomic resources. Socioeconomic resources include commercial fishing, fish hatcheries and aquaculture, seafood processing, and seafood markets industries. All surveying and mapping activities listed in Section 2.0 could impact fisheries. Detailed analysis can be found in the following sections of the Draft PEIS: Section 3.7 (Fish), Section 3.8 (Aquatic Macroinvertebrates), Section 3.9 (Essential Fish Habitat), and Section 3.12 (Socioeconomic Resources). Among the impacts assessed, effects to fish include some stress responses without permanent physiological damage, and some disturbance to breeding, feeding, or other activities, but without any impacts on population levels; additionally, there would not be long-term changes in habitat availability and use or in fish behavior. NOS also assessed the impact of interactions with fishing gear and survey equipment on the fishing industry. The effects to commercial and recreational fishing from gear interaction is very unlikely. Data collected by NOS would have beneficial effects as that data is used to conserve, preserve, and restore ecological resources, including wildlife, fish, and habitat. The data would provide the public and private sectors with nautical charts, benthic habitat condition maps, current and tide charts, and other products that could support the management of fisheries. These products allow federal, state, and local governments to make informed decisions about fishing areas and other natural resource management issues. NOS developed mitigation measures in coordination and consultation with expert agencies including NMFS and USFWS to avoid and minimize any potential effects. Mitigation measures to protect fisheries include implementing mandatory invasive species prevention procedures and following MARPOL discharge protocols. NOS communicates with the public on future survey projects through announcements such as the annual [Office of Coast Survey story map](#)⁴ and, when appropriate, public “Notices to Mariners” to provide general information on timing and locations. This helps minimize interference with commercial and recreational fishing and reduces the potential for interactions with fishing gear like lobster traps. The full list of mitigation measures can be found in Appendix A of this CD. Overall, the impacts to fishery resources would be adverse, minor and insignificant as defined in the Draft PEIS. NOS data collection and the resulting improvements in charting and mapping are expected to have indirect, beneficial, and moderate impacts on the ocean economy.

3.5 SHORELINE/TERRESTRIAL CONSTRUCTION AND DEVELOPMENT

Some NOS projects under the Proposed Action would include the installation, maintenance, and removal of tide gauges and GPS reference stations, most of which are affixed to existing docks and piers or secured to rocks in more remote locations. Only very small areas would be disturbed, and any affected habitat components would be expected to recover post-installation. NOS developed mitigation measures in coordination and consultation with expert agencies including NMFS and USFWS to avoid and minimize any potential effects from the installation, maintenance, and removal of tide gauges and GPS reference stations. Before commencing any installation, NOS considers the presence of protected species, and

⁴ <https://storymaps.arcgis.com/stories/33758b0990bb4e23a7b61323db3ae670> [accessed 8/11/2022]

assesses potential impacts on known cultural or historic resources in the area. Overall, the installation, maintenance, and removal of tide gauges and GPS reference stations are anticipated to have adverse, negligible to minor, and insignificant impacts on wildlife, fish, and habitat and cultural and historic resources as defined in the Draft PEIS.

3.6 IN-WATER CONSTRUCTION AND DEVELOPMENT

Some projects under the Proposed Action would include the installation of new moorings for tide buoys or the installation of measuring devices on submerged lands. This would require the installation of equipment on the seafloor and cause relatively small amounts (less than one square meter) of bottom substrate disturbance. NOS developed mitigation measures in coordination and consultation with expert agencies including NMFS and USFWS to avoid and minimize any potential effects from the installation of new moorings for tide buoys. NOS would ensure that all instruments in contact with the seafloor are properly secured to minimize bottom disturbance. Moorings would not be installed on coral reefs, vegetated bottoms, or other sensitive habitats. Overall, the installation of new moorings for tide buoys is anticipated to have adverse and negligible to minor and insignificant impacts on wildlife, fish, habitat, and cultural and historic resources as defined in the Draft PEIS.

3.7 DREDGING, REMOVAL, AND RELOCATION OF SEDIMENTS

The Proposed Action does not include dredging; however, it does include disturbance of small amounts of sediment. Collection of bottom grab samples typically involves disturbing a negligible amount of sediment from a 6" by 6" grab sampler. NOS developed mitigation measures in coordination and consultation with expert agencies including NMFS and USFWS to avoid and minimize any potential effects from the collection of bottom grab samples. NOS would pay particularly close attention to sensitive bottom habitats and avoid sampling these areas. Overall, the collection of bottom grab samples is anticipated to have adverse, negligible to minor, and insignificant impacts on wildlife, fish, habitat, and cultural and historic resources as defined in the Draft PEIS.

4.0 CONSISTENCY DETERMINATION FOR THE ENFORCEABLE POLICIES OF THE GUAM COASTAL PROGRAM

Guam's Coastal Management Program was approved in 1979 and is overseen by the Bureau of Statistics and Plans. The primary goal for Guam's coastal management program is to guide the use, protection, and development of land and ocean resources within Guam's coastal zone. Guam's comprehensive planning enabling legislation, Seashore Protection Act, and several executive orders are among the key legislation that encompass the coastal management program. Since Guam itself is a small island, the entire land area is included within its coastal zone.

4.1 SUMMARY OF FINDINGS

NOS has identified the enforceable policies of the Guam Coastal Management Program that are applicable to the Proposed Action. Table 1 presents a brief summary of the consistency determinations for each enforceable coastal policy.

Table 1. Summary of Findings

Enforceable Coastal Policy	Consistency Determination
Development Policies (DP)	-
DP 1. Shore Area Development	Consistent
DP 2. Urban Development	Not Relevant
DP 3. Rural Development	Not Relevant
DP 4. Major Facility Siting	Not Relevant
DP 5. Hazardous Areas	Not Relevant
DP 6. Housing	Not Relevant
DP 7. Transportation	Not Relevant
DP 8. Erosion and Siltation	Not Relevant
Resources Policies (RP)	-
RP 1. Air Quality	Consistent
RP 2. Water Quality	Consistent
RP 3. Fragile Area	Consistent
RP 4. Living Marine Resources	Not Relevant
RP 5. Visual Quality	Consistent
RP 6. Recreation Areas	Not Relevant
RP 7. Public Access	Not Relevant
RP 8. Agricultural Lands	Not Relevant

4.2 GUAM STANDARDS AND CRITERIA FOR REVIEW

4.2.1 Development Policies (DP)

4.2.1.1 DP 1. Shore Area Development

Intent: To ensure environmental and aesthetic compatibility of shore area land uses.

Policy: Only those uses shall be located within the Seashore Reserve which: enhance, are compatible with or do not generally detract from the surrounding coastal area's aesthetic and environmental quality and beach accessibility; or can demonstrate dependence on such a location and the lack of feasible alternative sites.

Determination for NOS Activities: Consistent. The Proposed Action is not expected to detract from the surrounding coastal area's aesthetic and environmental quality and beach accessibility. The only terrestrial activities included in the Proposed Action involve the installation, maintenance, and removal of tide gauges and GPS reference stations. The majority of on-shore installations would occupy only a small portion of terrestrial habitat, and any affected area would likely recover post-installation.

4.2.1.2 DP 2. Urban Development

Intent: To cluster high impact uses such that coherent community design, function, infrastructure support and environmental compatibility are assured.

Policy: Commercial, multi-family, industrial and resort-hotel zone uses and uses requiring high levels of support facilities shall be concentrated within appropriate zone as outlined on the Guam Zoning Code.

Determination for NOS Activities: Not relevant. The Proposed Action does not involve construction or development.

4.2.1.3 DP 3. Rural Development

Intent: To provide a development pattern compatible with environmental and infrastructure support suitability and which can permit traditional lifestyle patterns to continue to the extent practicable.

Policy: Rural districts shall be designated in which only low density residential and agricultural uses will be acceptable. Minimum lot size for these uses should be one-half acre until adequate infrastructure including functional sewerage is provided.

Determination for NOS Activities: Not relevant. The Proposed Action does not involve residential development or agricultural uses.

4.2.1.4 DP 4. Major Facility Siting

Intent: To include the national interest in analyzing the siting proposals for major utilities, fuel and transport facilities.

Policy: In evaluating the consistency of proposed major facilities with the goals, policies, and standards of the Comprehensive Development and Coastal Management Plans, Guam shall recognize the national interest in the siting of such facilities, including those associated with electric power production and transmission, petroleum refining and transmission, port and air installations, solid waste disposal, sewage treatment, and major reservoir sites.

Determination for NOS Activities: Not relevant. The Proposed Action does not involve construction or siting of major utilities, fuel, or transport facilities.

4.2.1.5 DP 5. Hazardous Areas

Intent: Development in hazardous areas will be governed by the degree of hazard and the land use regulations.

Policy: Identified hazardous lands, including flood plains, erosion-prone areas, air installations' crash and sound zones and major fault lines shall be developed only to the extent that such development does not pose unreasonable risks to the health, safety or welfare of the people of Guam, and complies with the land use regulations.

Determination for NOS Activities: Not relevant. The Proposed Action does not involve and would not affect development in hazardous areas.

4.2.1.6 DP 6. Housing

Intent: To promote efficient community design placed where the resources can support it.

Policy: The government shall encourage efficient design of residential areas, restrict such development in areas highly susceptible to natural and manmade hazards, and recognize the limitations of the island's resources to support historical patterns of residential development.

Determination for NOS Activities: Not relevant. The Proposed Action does not involve residential development.

4.2.1.7 DP 7. Transportation

Intent: To provide transportation systems while protecting potentially impacted resources.

Policy: Guam shall develop an efficient and safe transportation system, while limiting adverse environmental impacts on primary aquifers, beaches, estuaries, coral reefs and other coastal resources.

Determination for NOS Activities: Not relevant. The Proposed Action does not include the development of transportation systems.

4.2.1.8 DP 8. Erosion and Siltation

Intent: To control development where erosion and siltation damage is likely to occur.

Policy: Development shall be limited in areas of 15% or greater slope by requiring strict compliance with erosion, sedimentation, and land use regulations, as well as other related land use guidelines for such areas.

Determination for NOS Activities: Not relevant. The Proposed Action is not expected to result in erosion and/or siltation. The only terrestrial activities included in the Proposed Action involve the installation, maintenance, and removal of tide gauges and GPS reference stations. The majority of on-shore installations would occupy only a small portion of terrestrial habitat, and any affected area would likely recover post-installation.

4.2.1 Resources Policies (RP)

4.2.2.1 RP 1. Air Quality

Intent: To control activities to ensure good air quality.

Policy: All activities and uses shall comply with all local air pollution regulations and all appropriate Federal air quality standards in order to ensure the maintenance of Guam's relatively high air quality.

Determination for NOS Activities: Consistent. The Proposed Action would require the use of vessels. The potential impacts to air quality from vessel air emissions are minimized through compliance with comprehensive maritime protocols, namely the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78 Annexes). NOS adheres to NOAA's environmental procedures which comply with MARPOL 73/78 and relevant air quality implementing legislation, regulations, and guidance. In the Draft PEIS, the effects from air emissions from project vessel engines are briefly analyzed where the impacts may be detectable in the context of other resources. The Proposed Action would not have a demonstrable negative impact on Guam's air quality.

4.2.2.2 RP 2. Water Quality

Intent: To control activities that may degrade Guam's drinking, recreational, and ecologically sensitive waters.

Policy: Safe drinking water shall be assured and aquatic recreation sites shall be protected through the regulation of uses and discharges that pose a pollution threat to Guam's waters, particularly in estuaries, reef and aquifer areas.

Determination for NOS Activities: Consistent. The potential impacts to water quality from wastewater discharges and accidental spills are minimized through compliance with comprehensive maritime protocols, namely the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78 Annexes). NOS adheres to NOAA's environmental procedures which comply with MARPOL 73/78 and relevant water quality implementing legislation, regulations, and guidance. In the Draft PEIS, the effects from accidental leakage or spillage of oil, fuel, and chemicals are briefly analyzed where the impacts may be detectable in the context of other resources. The Proposed Action would not have a demonstrable negative impact on Guam's water quality.

4.2.2.3 RP 3. Fragile Area

Intent: To protect significant cultural areas, and natural marine and terrestrial wildlife and plant habitats.

Policy: Development in the following types of fragile areas including Guam's Marine Protected Areas (MPA) shall be regulated to protect their unique character.

- Hand archeological sites
- Wildlife habitats
- Pristine marine and terrestrial communities
- Limestone forests
- Mangrove stands and other wetlands
- Coral reefs

Determination for NOS Activities: Consistent. The Proposed Action includes activities that could affect marine and terrestrial habitats. The Proposed Action would be conducted in accordance with the National Historic Preservation Act (NHPA), Endangered Species Act (ESA), Magnuson-Stevens Fishery Conservation and Management Act (MSA), and other laws and regulations to protect the unique character of habitats and archeological sites. NOS will coordinate with the Guam State Historic Preservation Officer (SHPO) to identify any historic and/or archaeologically significant sites that may be impacted by the Proposed Action.

4.2.2.4 RP 4. Living Marine Resources

Intent: To protect marine resources in Guam's waters.

Policy: All living resources within the waters of Guam, particularly fish, shall be protected from over harvesting and, in the case of corals, sea turtles and marine mammals, from any taking whatsoever.

Determination for NOS Activities: Not relevant. The Proposed Action would not involve the harvesting of any fish, corals, sea turtles, or other marine mammals.

4.2.2.5 RP 5. Visual Quality

Intent: To protect the quality of Guam's natural scenic beauty

Policy: Preservation and enhancement of, and respect for the island's scenic resources shall be encouraged through increased enforcement of and compliance with sign, litter, zoning, subdivision, building and related land-use laws. Visually objectionable uses shall be located to the maximum extent practicable so as not to degrade significant views from scenic overlooks, highways and trails.

Determination for NOS Activities: Consistent. The Proposed Action would not affect the quality of Guam's natural scenic beauty.

4.2.2.6 RP 6. Recreation Areas

Intent: To encourage environmentally compatible recreational development.

Policy: The Government of Guam shall encourage development of varied types of recreational facilities located and maintained so as to be compatible with the surrounding environment and land uses, adequately serve community centers and urban areas and protect beaches and such passive recreational areas as wildlife, marine conservation and marine protected areas, scenic overlooks, parks, and historical sites. Developments, activities and uses shall comply with the Guam Recreational Water Use Management Plan (RWUMP).

Determination for NOS Activities: Not relevant. The Proposed Action does not involve development of recreational facilities.

4.2.2.7 RP 7. Public Access

Intent: To ensure the right of public access.

Policy: The public's right of unrestricted access shall be ensured to all non-federally owned beach areas and all Guam recreation areas, parks, scenic overlooks, designated conservation areas and their public lands. Agreements shall be encouraged with the owners of private and federal property for the provision of releasable access to and use of resources of public nature located on such land.

Determination for NOS Activities: Not relevant. The Proposed Action is not expected to restrict public access to the coastal zone.

4.2.2.8 RP 8. Agricultural Lands

Intent: To stop urban types of development on agricultural land.

Policy: Critical agricultural land shall be preserved and maintained for agricultural use.

Determination for NOS Activities: Not relevant. The Proposed Action does not include urban development on agricultural lands.

4.3 DETERMINATION

Based on the information, data, and analysis contained herein and in the Draft PEIS, NOS has determined that the Proposed Action is consistent with the enforceable policies of the Guam Coastal Management Program.

Pursuant to 15 CFR § 930.41(a), Guam has 60 days from the receipt of this letter to concur with or object to this CD, or to request an extension under 15 CFR § 930.41(b). Guam's concurrence will be presumed if Guam's response is not received by NOS on the 60th day after receipt of this determination.

Thank you for assisting the National Ocean Service with this important program. Please submit your questions, comments, or other responses by email to the NOS Environmental Compliance Coordinator, Giannina DiMaio at nosaa.ec@noaa.gov or by phone at (240) 339-5565.

APPENDIX A: MITIGATION MEASURES CURRENTLY PROPOSED BY NOS

Mitigation Measures for the Protection of NMFS Species During NOS Mapping and Surveying Activities

General Note: These requirements do not apply when (1) compliance would create an imminent threat to a person or vessel, or (2) to the extent that a vessel cannot comply because it is restricted in its ability to maneuver.

Triggering Event	Crew Response
General	
Vessel and equipment maintenance	All NOS projects would implement mandatory invasive species prevention procedures including, but not limited to, vessel and equipment washdown (including diving equipment), cleaning, and de-ballasting (exchange of ballast water in open ocean waters for those vessels used by NOS that have ballast tanks).
At all times while in transit or on-project	Do not attempt to feed, touch, ride, or otherwise intentionally interact with any marine protected species.
At all times while in transit or on-project	Vessel crew must maintain at least one Protected Species Observer at all times. This individual may perform other duties simultaneously. PSOs should use all means necessary to enhance visibility (e.g., spotlights, night vision, Forward Looking Infrared), and will be trained according to NOS Standard Operating Procedures.
Project Planning / Coordination	
Project planning and coordination	NOS would internally coordinate the location and timing of a given project, wherever possible, to ensure that areas are not repeatedly surveyed, except as needed to achieve research or monitoring goals.
	NOS would not perform surveys on or near ongoing Navy exercises.
General Area Restrictions for Vessel and Vehicle Movement	
Entry into North Atlantic right whale critical habitat	Report into the Mandatory Ship Reporting System.
Before proceeding with operations onboard a vessel 65 feet or longer in any right whale seasonal management areas, when those areas are active. See maps and coordinates on https://www.fisheries.noaa.gov/national/angered-species-conservation/reducing-vessel-strikes-north-atlantic-right-whales#:~:text=PDF%2C%201197%20pages)-	<p>Maintain a vessel speed of 10 knots or less.</p> <p>Check with various communication media for general information regarding avoiding ship strikes and specific information regarding North Atlantic right whale sighting locations. These include NOAA weather radio, U.S. Coast Guard NAVTEX broadcasts, the WhaleAlert app (www.whalealert.org), and Notices to Mariners. Commercial mariners calling on United States ports should view the most recent version of the NOAA/USCG produced training CD entitled “A Prudent Mariner’s Guide to Right Whale Protection” (contact the NMFS Southeast Region, Protected Resources Division for more information regarding the CD). For North Pacific right whales, contact the Alaska stranding hotline by sat phone, 877-925-7773.</p>

Mitigation Measures for the Protection of NMFS Species During NOS Mapping and Surveying Activities

General Note: These requirements do not apply when (1) compliance would create an imminent threat to a person or vessel, or (2) to the extent that a vessel cannot comply because it is restricted in its ability to maneuver.

Triggering Event	Crew Response
Vessel%20Speed%20Restrictions,endangered%20North%20Atlantic%20right%20whales.	
Transit areas cross North Pacific right whale critical habitat	Avoid transit through North Pacific right whale critical habitat. For unavoidable transits, vessels must maintain a speed of 10 knots or less.
Entry into Rice's whale areas (Core Distribution Area and the 100 - 400m isobath in the Gulf of Mexico).	a. minimize all transits b. do not exceed 10 knots c. do not enter at night. If vessels are present in the CDA/isobath at night, the vessel must be anchored, moored, or otherwise immobile.
Use of HRG sources in all areas north of the Forelands in Cook Inlet, Alaska. HRG surveys are defined as surveys using an electromechanical source that operates at frequencies less than 180 kHz, other than those defined at § 217.184(c)(1) (i.e., side-scan sonar, multibeam echosounder, or CHIRP sub-bottom profiler) per the 2020 BOEM BiOp on the Federally Regulated Oil and Gas Program Activities in the Gulf of Mexico.	The Forelands in Cook Inlet are described as 60°43'10.9"N 151°24'35.8"W (east side of the Inlet, Nikiski, AK) and West Foreland (60°42'48.1"N 151°42'38.3"W). For dedicated mapping and surveying work north of this area (i.e., a specific project involving the use of echo sounders), contact the Alaska Region (akr.prd.section7@noaa.gov) for instructions on how to proceed.
Entry into sensitive Steller sea lion areas	Maintain a vessel separation distance three nautical miles from Steller sea lion critical habitat, rookeries listed in (per 50 CFR 223.202), and other haulouts/rookeries as observed during operations. In areas of mandated charting, contact akr.prd.section7@noaa.gov on how to proceed.

Mitigation Measures for the Protection of NMFS Species During NOS Mapping and Surveying Activities

General Note: These requirements do not apply when (1) compliance would create an imminent threat to a person or vessel, or (2) to the extent that a vessel cannot comply because it is restricted in its ability to maneuver.

Triggering Event	Crew Response
<p>Entry into sturgeon and sawfish critical habitat (see https://www.fisheries.noaa.gov/resource/map/atlantic-sturgeon-critical-habitat-map-and-gis-data, https://www.fisheries.noaa.gov/resource/map/smalltooth-sawfish-critical-habitat-map-and-gis-data, and https://data.noaa.gov/dataset/dataset/green-sturgeon-critical-habitat-gis-data1)</p>	<p>All vessels in coastal waters will operate in a manner to minimize propeller wash and seafloor disturbance, and transiting vessels should follow deep-water routes (e.g., marked channels), as practicable, to reduce disturbance to sturgeon and sawfish critical habitat.</p>
Vessel Movement Restrictions	
<p>An ESA-listed whale is identified within 500 yards of the forward path of the vessel.</p>	<p>All vessels must steer a course that increases the distance from the whale at a speed of 10 knots (18.5 km/hr) or less until the 500 yard minimum separation distance has been established.</p>
<p>An ESA-listed whale is sighted within 100 yards of the forward path of a vessel.</p>	<p>The vessel operator must reduce speed and shift the engine to neutral. Engines must not be engaged until the whale has moved outside of the vessel's path and beyond 500 yards. If stationary, the vessel must not engage engines until the large whale has moved beyond 500 yards. A single cetacean at the surface may indicate the presence of submerged animals in the vicinity of the vessel; therefore, precautionary measures should always be exercised.</p>
<p>One or more cetaceans (whales, dolphins, or porpoises) are sighted while a vessel is underway.</p>	<p>Attempt to remain parallel to the animal's course if feasible. Avoid excessive speed or abrupt changes in direction until the cetacean has left the area.</p>
<p>One or more sea turtles are sighted while the vessel is underway.</p>	<p>Attempt to maintain a distance of 50 yards (45 meters) or greater whenever possible.</p>
<p>Nighttime vessel operation</p>	<p>Vessel operators on project vessels operating at night would use the appropriate lighting to comply with navigation rules and best safety practices. All project areas would be continually monitored for protected species by posted crewmembers during vessel operations.</p>
Reporting Requirements	

Mitigation Measures for the Protection of NMFS Species During NOS Mapping and Surveying Activities

General Note: These requirements do not apply when (1) compliance would create an imminent threat to a person or vessel, or (2) to the extent that a vessel cannot comply because it is restricted in its ability to maneuver.

Triggering Event	Crew Response
Sighting of any injured, dead, or entangled right whales	Report sighting immediately to the U.S. Coast Guard via VHF Channel 16.
Sighting of any injured, dead, or entangled ESA-listed species	Immediately report to NMFS at: https://www.fisheries.noaa.gov/report
Sightings of critically endangered cetaceans including North Atlantic right whale, North Pacific right whale, Southern Resident killer whale, Main Hawaiian Island insular false killer whale, and Rice’s whale	Report sighting within two hours of occurrence when practicable and no later than 24 hours after occurrence (to https://www.fisheries.noaa.gov/report) . Right whale sightings in any location may also be reported to the U.S. Coast Guard via VHF channel 16 and through the WhaleAlert App (http://www.whalealert.org/) .
Discharge Restrictions	
Sighting of any protected marine species within 100 yards of the vessel	Do not discharge
Operating or maintaining a vessel	Follow the International Convention for the Prevention of Pollution from Ships (MARPOL) discharge protocols
	Meet all Environmental Protection Agency (EPA) Vessel General Permits and Coast Guard requirements.
	Use anti-fouling coatings.
	Clean hull regularly to remove aquatic nuisance species.
	Avoid cleaning of hull in critical habitat.
Avoid cleaners with nonylphenols.	
Restrictions on Instrument / Autonomous System Deployment	
Sighting of any protected marine species within 100 yards of the work area	Suspend deployment of all instruments, divers, and autonomous systems. Work already in progress may continue if that activity is not expected to adversely affect the animal(s).
AUV operation	Equipment such as AUVs would be programmed and operated to avoid sea floor disturbance.
Bottom sampling for sediment verification	NOS would not collect bottom samples for sediment verification on coral reefs, shipwrecks, obstructions, or hard bottom areas.
Instrument Deployment	NOS would ensure that all instruments placed in contact with the seafloor are properly secured to minimize bottom disturbance. NOS would use retrievable instruments, when possible, to avoid abandoning deployed equipment on the seafloor.

Mitigation Measures for the Protection of NMFS Species During NOS Mapping and Surveying Activities

General Note: These requirements do not apply when (1) compliance would create an imminent threat to a person or vessel, or (2) to the extent that a vessel cannot comply because it is restricted in its ability to maneuver.

Triggering Event	Crew Response
Anchoring	Do not anchor in coral critical habitat or other known areas of coral.
	Avoid anchoring in abalone habitat as defined at https://www.fisheries.noaa.gov/resources/maps?title=&term_node_tid_depth%5B1000000069%5D=1000000069&field_species_vocab_target_id=black+abalone&sort_by=created
	Avoid anchoring in seagrass.
	Vessel operators would not drag anchor chains.
	Vessel operators would select the anchor location based on depth, protection from seas and wind, and bottom type. Preferred bottom types are sticky mud or sand, as those characteristics allow the flukes of the anchor to dig into the bottom and hold the chain in place. When working in an un-surveyed area or in an area that has not been surveyed in many years, the ship would try to anchor in bays where data have already been collected, providing the ship with better information on where to drop the anchor.
Equipment/Autonomous Systems Deployment	Stiffer line materials should be used for towing and kept taut during operations to reduce the potential for entanglement in bottom features such as coral habitats and shipwrecks.
SCUBA/ Snorkeling Restrictions	
When using a boat or platform to conduct SCUBA or snorkeling operations	At least one person should maintain a visual watch for mobile protected species to ensure none are sighted within the working area. If a listed species moves into the area of work, cessation of operation of any moving equipment within 50 ft of animal should occur. Activities may resume once the species has departed the project area of its own volition.
Diving on or near coral	Divers/snorkelers/swimmers should not stand or rest on live corals/coral reefs. Bottom contact should only be in unconsolidated areas or non-living hardbottom.

Mitigation Measures for the Protection of NMFS Species During NOS Mapping and Surveying Activities

General Note: These requirements do not apply when (1) compliance would create an imminent threat to a person or vessel, or (2) to the extent that a vessel cannot comply because it is restricted in its ability to maneuver.

Triggering Event	Crew Response
At all times during SCUBA or snorkel operations	SCUBA divers/snorkelers involved in in-water activities should have proper training and be capable of responsible dive/snorkel practices (e.g., proper buoyancy) such that they minimize injury to organisms, avoid unnecessary habitat impacts, and avoid injury to sensitive archaeological materials. It is the responsibility of NOAA or grantees/contractors to ensure that divers/snorkelers are trained to a level commensurate with the type and conditions of the diving activity being undertaken. Divers shall use appropriate dive equipment and tools, expert boat anchoring (e.g., hand placement by divers/snorkelers or verified non-living bottom habitat before deployment), and have diver awareness. The organization must have the capacity (appropriate insurance, safety policies, etc.) to oversee all proposed diving/snorkeling activities. SCUBA divers will avoid inadvertent disturbance to the sea floor.
Restrictions on Buoy Deployment, Maintenance, and Retrieval	
At all times during buoy deployment, maintenance, or retrieval of a buoy	Ensure that any buoys attached to the sea floor use the best available mooring systems: all mooring lines and ancillary attachment lines must use one or more of the following measures to reduce entanglement risk: shortest practicable line length, rubber sleeves, weak-links, chains, cables or similar equipment types that prevent lines from looping, wrapping, or entrapping protected species. Buoys, lines (chains, cables, or coated rope systems), swivels, shackles, and anchor designs must prevent any potential entanglement of listed species while ensuring the safety and integrity of the structure or device. When possible, field crews should use retrievable equipment to avoid abandoning material on the seafloor.
	During all buoy deployment and retrieval operations, buoys should be lowered and raised slowly to minimize risk to listed species and benthic habitat. Additionally, PSOs or trained project personnel (if PSOs are not required) should monitor for listed species in the area prior to and during deployment and retrieval and work should be stopped if listed species are observed in the area to minimize entanglement risk.
	All buoys must be properly labeled with owner and contact information.

Mitigation Measures for the Protection of NMFS Species During NOS Mapping and Surveying Activities

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Triggering Event	Crew Response
A live or dead marine protected species becomes entangled in buoy lines	Immediately contact the applicable NMFS stranding coordinator using the reporting contact details (see Reporting Requirements section) and provide any on-water assistance requested.

Mitigation Measures for the Protection of USFWS Species During NOS Mapping and Surveying Activities

General Note: These requirements do not apply when (1) compliance would create an imminent threat to a person or vessel, or (2) to the extent that a vessel cannot comply because it is restricted in its ability to maneuver.

Triggering Event	Crew Response
Vessel Operation	
Operating vessels in polar bear habitat	Ensure that vessels maintain a 1.6-km (1-mi) separation distance from polar bears observed on ice, land, or water.
	Be alert to potential presence of polar bears, visually monitor the area and adjacent waters. Be especially vigilant for swimming bears. If a swimming bear(s) is encountered, allow it to continue unhindered. Never approach, herd, chase, or attempt to lure swimming bear(s). Reduce speed when visibility is low and avoid sudden changes in travel direction.
	Navigate slowly, steer around polar bears, and do not approach, circle, pursue or otherwise force bears to change direction when observed in the water.
	Avoid multiple changes in direction and speed and do not restrict bears' movements on land or sea.
	Do not conduct activities within 1 mile (1.6 km) of known or suspected polar bear dens.
Operating vessels in Pacific walrus habitat	Maintain an appropriate minimum distance from walrus haulouts on ice or land: Marine vessels less than 50 feet (15 m) in length – 0.5 nm (1 km); Marine vessels 50 feet or more but less than 100 feet (30 m) in length – 1 nm (1.8 km); and Marine vessels 100 feet (30 m) or more in length – 3 nm (5.5 km).
	Reduce noise levels near haulouts. Avoid abrupt maneuvers, sudden changes in engine noise, using loudspeakers, loud deck equipment or other operations that produce noise when in the vicinity of walrus haulouts. Note that sound carries a long way across the water and often reverberates off of cliffs and bluffs adjacent to coastal walrus haulouts, amplifying noise. Do not operate the vessel in such a way as to separate members of a group of walrus from other members of the group.
	Reduce speed and maintain a minimum distance of 0.5 miles (0.8 km) from groups of walrus in the water.
	If walrus approach the vessel or are found to be in close proximity, place boat engines in neutral and allow the animals to pass. If vessel safety considerations prevent this, carefully steer around animals.

Mitigation Measures for the Protection of USFWS Species During NOS Mapping and Surveying Activities

General Note: These requirements do not apply when (1) compliance would create an imminent threat to a person or vessel, or (2) to the extent that a vessel cannot comply because it is restricted in its ability to maneuver.

Triggering Event	Crew Response
	When weather conditions require, such as when visibility drops, adjust speed accordingly to avoid the likelihood of injury to walrus.
Operating vessels in northern sea otter habitat	Do not operate vessels in such a way as to separate sea otters from other members of their group.
	If northern sea otters are observed in groups of fewer than 10 animals, do not approach within 100 m. If the group size is greater than 10, do not approach within 500 m.
Operating vessels in manatee habitat (U.S. Gulf coast and Atlantic Coast as far north as the Chesapeake Bay).	All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee shall advise all personnel that there are civil and criminal penalties for harming, harassing, or killing manatees.
	All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
	All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shut down if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.
	Any collision with or injury to a manatee shall be reported immediately to the Texas Marine Mammal Stranding Network (TMMSN) Hotline at 1-888-9-MAMMAL. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Houston (1-281-286-8282).
Aircraft/UAS Operation	
Flying aircraft above Alaska waters and shorelines	Maintain an altitude of at least 205m (1000 ft) when flying over northern sea otters.
	Maintain an altitude of at least 457 m (1500 ft) when flying within 805 m (0.5 mi) of polar bears.

Mitigation Measures for the Protection of USFWS Species During NOS Mapping and Surveying Activities

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Triggering Event	Crew Response
Operating crewed aircraft in polar bear areas.	Unless taking off from or landing at an airport/airstrip, pilots should maintain a minimum of 1,500 feet (457 m) flight altitude and 0.5-mile (0.8 km) horizontal distance from polar bears in the water, and on ice or land. Avoid circling or turning aircraft near polar bears.
Operating aircraft near walrus haulout (Aircraft guidelines to reduce likelihood of walrus take)	Do not fly autonomous system devices or single engine fixed wing aircraft over or within 0.5 miles (0.8 km) of walrus hauled out on land or ice
	If weather or aircraft safety require flight operations within 0.5 miles (0.8 km) of a haulout site, maintain a 2,000 feet (610 m) minimum altitude.
	Do not fly helicopters over or within 1 mile (1.6 km) of walrus hauled out on land or ice.
	If weather or aircraft safety require crewed flight operations within 1 mile (1.6 km) of a haulout site, maintain a 3000 feet (915 m) minimum altitude.
	Landings, take-offs, and taxiing of autonomous system devices or single engine fixed wing aircraft should not occur within 0.5 miles (0.8 km) of hauled out walrus, or within 1 mile (1.6 km) for helicopters.
	Avoid circling or turning near walrus hauled out on land or ice.
Shore Party Activities	
Operating on land in polar bear areas.	Avoid polar bears on land, ice, and water. Conduct activities at the maximum distance possible from polar bears.
	Be prepared. Have a human-bear safety plan that includes information on how to avoid and respond to bear encounters. Carry deterrents, and practice/know how to use them.
	Avoid surprise encounters. Travel in groups, make noise, and be vigilant - especially on barrier islands, in river drainages, along bluff habitat or ice leads/polynyas, near whale or other marine mammal carcasses, or in the vicinity of fresh tracks.
	Minimize attractants. Avoid carrying strongly scented attractants such as meat or fish while away from camp, or place them in air-tight containers to minimize odor transmission.

Mitigation Measures for the Protection of USFWS Species During NOS Mapping and Surveying Activities

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Triggering Event	Crew Response
	<p>Avoid disturbing denning bears. Between November and April, special care is needed to avoid disturbance of denning bears. If activities are to take place during that time period, USFWS should be contacted to determine if any additional mitigation is required. In general, activities are not permitted within one mile of known den sites.</p>
<p>If a polar bear is encountered</p>	<p>Prepare deterrent(s). Do not run from or approach polar bears. If the bear is unaware of you, allow it to continue what it was doing before you encountered it. Move to safe shelter (e.g., vehicle or building) if available, and wait until it is safe to proceed.</p> <p>Group up. If no safe shelter is available, group up with others and stand positioned to allow for safe deployment of deterrents (e.g., firearm, pistol launcher, bear pepper spray) – until the bear leaves.</p> <p>Observe bear behavior. Polar bears that stop what they are doing to turn their head or sniff the air in your direction have likely become aware of your presence. These animals may exhibit various behaviors: 1) Curious polar bears typically move slowly, stopping frequently to sniff the air, moving their heads around to catch a scent, or holding their heads high with ears forward. They may also stand up. 2) A threatened or agitated polar bear may huff, snap its jaws together, stare at you (or the object of threat) and lower its head to below shoulder level, pressing its ears back and swaying from side to side. 3) A predatory bear may sneak up on an object it considers prey. It may also approach in a straight line at constant speed without exhibiting curious or threatened behavior.</p>
<p>If a polar bear approaches</p>	<p>Defend your group. Any bear that approaches within range of your deterrents should be deterred. Stand your ground; do not run. Defend your group, increasing the intensity of your deterrence efforts as necessary. Be aware that lethal take of polar bears is permissible if such taking is imminently necessary in defense of human life. Defense of life kills must be reported to the USFWS within 48 hours.</p> <p>If a bear makes physical contact, fight back. If deterrence/lethal efforts have failed and a polar bear attacks (i.e., makes physical contact), do not “play dead”. Fight back using any deterrents available, aiming fists or objects at the bear’s nose and face.</p>

Mitigation Measures for the Protection of USFWS Species During NOS Mapping and Surveying Activities

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Triggering Event	Crew Response
Construction Projects	
<p>Construction projects taking place along the shorelines in manatee habitat (U.S. Gulf coast and Atlantic Coast as far north as the Chesapeake Bay).</p>	<p>Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.</p>
	<p>All personnel associated with the project shall be instructed about the presence of manatees. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees.</p>
	<p>All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shut down if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.</p>
	<p>Any collision with or injury to a manatee shall be reported immediately to the Texas Marine Mammal Stranding Network (TMMSN) Hotline at 1-888-9-MAMMAL. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Houston (1-281-286-8282).</p>
	<p>Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the permittee upon completion of the project. Temporary signs that have already been approved for this use by the FWC must be used. One sign which reads Caution: Boaters must be posted. A second sign measuring at least 8 ½" by 11" explaining the requirements for "Idle Speed/No Wake" and the shut down of in-water operations must be posted in a location prominently visible to all personnel engaged in water-related activities.</p>