

**FINDING OF NO SIGNIFICANT IMPACT  
FOR THE PROGRAMMATIC ENVIRONMENTAL ASSESSMENT  
FOR THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL DATA BUOY CENTER**

**BACKGROUND**

The National Oceanic and Atmospheric Administration (NOAA) National Data Buoy Center (NDBC), a part of the National Weather Service (NWS), designs, develops, operates, and maintains a network of moored buoys and coastal stations throughout the world's oceans, seas, and lakes for the purpose of providing civil earth marine observations. NDBC has prepared a Programmatic Environmental Assessment (PEA) to analyze the continued operation of the NDBC program, including anticipated program decisions over the next five years. The Proposed Action assesses the environmental impacts of current and future NDBC initiatives and decisions. The goal is to provide a baseline for impacts on environmental resources from the continued operation of the NDBC network of buoys and Coastal-Marine Automated Network (C-MAN) stations. The No Action Alternative is included to provide a basis of comparison to the Proposed Action, which is the administration of the current NDBC program without any changes or improvements.

This PEA has been prepared in accordance with the:

- National Environmental Policy Act of 1969 (NEPA), as amended (42 United States Code [U.S.C.] Section 4321, et seq.);
- Council on Environmental Quality's (CEQ) *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (40 Code of Federal Regulations [CFR] Parts 1500-1508);
- NOAA Administrative Order (NAO) 216-6A, *Compliance with the National Environmental Policy Act; Executive Orders 12114, Environmental Effects Abroad of Major Federal Actions; 11988 and 13690, Floodplain Management; and 11990 Protection of Wetlands* (effective April 22, 2016); and
- Companion Manual for NOAA Administrative Order 216-6A (effective January 13, 2017).

**THE IMPORTANCE OF NDBC**

NDBC has provided real-time, oceanographic, and meteorological observations since 1967 to a wide variety of stakeholders and users (e.g., federal, state, academic, and private industry stakeholders). These observations add value to a diverse spectrum of civil use applications including severe and routine weather forecasting; improved coastal ocean circulation models; commercial and recreational marine transportation and fishing; and environmental monitoring and research. The high quality ocean and coastal observations are used in direct support of short range and extended range NWS forecasts, Warnings, and Watches. This valuable data provides users with up to the minute decision-making observations needed for safe commercial and marine recreation activities.

NDBC is responsible for the development, operations, and maintenance of the national data buoy network and serves as an international center of excellence and best practice for data buoys and associated in-situ meteorological and oceanographic environmental monitoring technology. The NDBC network of buoys and C-MAN stations provides high quality meteorological and oceanographic environmental data in real-time from automated observing systems in the open ocean and coastal zones surrounding the United States (NOAA NDBC 2008).

The NDBC program is composed of four formal NOAA Observing Systems of Record: (1) Coastal Weather Buoys (CWB), (2) land-based C-MAN stations, (3) Tropical Atmosphere Ocean Array (TAO), and the Deep-ocean Assessment and Reporting of Tsunamis (DART). Currently NDBC's network consists of 200 buoys and 46 C-MAN stations that transmit observations and data via satellite that are processed and quality-controlled, and disseminated for public release in near real-time. All NDBC CWBs measure sea surface temperature and wave height and period. Additionally, the CWBs and C-MAN stations measure wind speed and direction; barometric pressure; and air temperature. At select TAO stations, conductivity and water currents are also measured.

The *National Plan for Civil Earth Observations* and the *National Strategy for a Sustained Network of Coastal Moorings* identify the Societal Benefit Areas (SBAs) supported by NDBC ocean observations. The societal benefits of ocean observations are interconnected at local, regional, national, and international scales. These SBAs include scientific research, economic activities, and environmental and social domains. Many involve critical government functions, such the protection of life and property. The nine SBAs that are applicable to NDBC are Climate; Coastal and Marine Hazards and Disasters; Ocean and Coastal Energy and Mineral Resources; Human Health; Ocean and Coastal Resources and Ecosystems; Marine Transportation; Water Resources; Coastal and Marine Weather; and Reference Measurements.

## **PURPOSE AND NEED**

The purpose of the analysis in this PEA is to provide a baseline for impacts on environmental resources from the continued operation of the NDBC network of buoys and C-MAN stations. The operation of the NDBC network of buoys and C-MAN stations is needed to fulfill NDBC's mission to provide quality in-situ marine observations in a safe and sustainable manner to support the understanding of and predictions to changes in weather, climate, oceans, and coasts. Additionally, the action is needed to provide continued societal benefits as identified in the *National Plan for Civil Earth Observations*.

NDBC operations provide a comprehensive, reliable, and sustainable network of in-situ, real-time, meteorological, and oceanographic observations. The observations provided by NDBC are critical to a wide range of federal, state, academic, and private industry stakeholders. These observations add value to a diverse spectrum of applications, including severe and routine weather forecasting; improved coastal ocean circulation models; commercial and recreational marine transportation and fishing; and environmental and ecosystem monitoring and research.

## **SUMMARY OF THE PROPOSED ACTION AND ALTERNATIVES**

NDBC proposes to continue the operation and maintenance of the existing buoys and C-MAN stations and deploy additional buoys and C-MAN stations as operational needs arise. Technology additions to the system, such as acoustic releases, would be used during buoy deployment. Two alternatives were analyzed in the PEA: the Proposed Action and the No Action Alternative.

### **PROPOSED ACTION**

#### ***Facility-based Operations at Stennis Space Center***

Under the Proposed Action, land-based operations would continue at Stennis Space Center as currently executed. The addition of new technology equipment to the buoys would not increase or alter the operations at Stennis Space Center. Components used to construct CWBs and C-MAN stations, and sensors would be stored and tested in existing facilities. In the future, additional facilities would be constructed or renovated to support future operations as the needs arise.

#### ***Marine and Coastal Operations***

Under the Proposed Action, buoy operation and maintenance would continue as currently implemented. Buoys are maintained and serviced on a regular basis to ensure that the sensors are operating properly and that batteries are still functional. The maintenance schedule is developed based on buoy location, type, and vessel availability. In the event of malfunction of a buoy sensor or battery, NDBC will deploy a team to repair or replace the sensor or battery as soon as operationally practicable.

***Buoy Deployment Operations.*** Buoys would continue to be deployed as the operational need arises throughout the world's oceans and the Great Lakes. Once a general area for a new buoy is identified, NDBC would locate any obstructions or hazards in the area, including telecommunication lines, pipelines, navigational waterways, geologic features, biological resources, and cultural resources. If resources are identified in the area, they would be avoided to the maximum extent practicable.

***Improvements to NDBC Moorings.*** Under the Proposed Action, NDBC would continue to seek improvements in mooring materials and mooring design concepts. These improvements, when implemented, have the potential to reduce the number of adrift events, which can reduce the amount of mooring material left behind and reduces the need for replacing mooring materials.

***At-sea Mooring Recovery Operations.*** Under the Proposed Action, NDBC buoys would utilize additional mooring recovery equipment, such as acoustic releases and line cutters to maximize the recovery of the mooring (i.e., rope, chain, or wire), excluding the anchor. Since the acoustic release is located above the seafloor, the anchor and the bottom chain would not be recoverable and would remain on the seafloor.

***Improved Adrift Buoy Recovery Operations.*** Adrift buoys represent both navigational and environmental risks. Under the Proposed Action, NDBC would continue to follow NDBC's

Station Failure Response Policy (Instruction No. 1804-06.04A), adrift buoys or with no position-fixing equipment shall be recovered as soon as possible, practical, and consistent with personnel safety, subject to ship or other asset availability. In all adrift buoy events, NDBC works at local, national, and international levels to notify and inform mariners of adrift buoy locations.

***Improvements to Prevent the Fouling of Buoy Hulls and the Transport of Aquatic Invasive Species.*** NDBC has established processes to prevent the spread of invasive and non-native species to other waters, in accordance with the National Invasive Species Act and Executive Order 13112, Invasive Species. Under the Proposed Action, NDBC would implement cleaning processes (i.e., pressure washing and scraping) to prevent invasive species from being transported to another area. The cleaning occurs in the area that the buoy was recovered from so any species that were attached to the buoy are returned to the water.

***Improvements for Establishing or Relocating C-MAN Stations.*** Under the Proposed Action, NDBC would continue to deploy C-MAN stations and consider various factors to determine an appropriate location. Factors include, whether or not there is an existing structure that could be used to collocate the sensors, as well as natural and biologically important areas (e.g., critical habitat, U.S. Fish and Wildlife Service lands). Using this information, NDBC selects the most suitable location based on mission requirements and environmental factors.

## **NO ACTION ALTERNATIVE**

CEQ regulations specify the inclusion of the No Action Alternative in the alternatives analysis (40 CFR 1502.14). Under the No Action Alternative, the NDBC would continue operations as currently performed. No additional buildings or facilities would be constructed at Stennis Space Center. No additional buoys or C-MAN stations would be deployed. However, the buoys that are currently deployed would continue to be operated and maintained. If a buoy were to become untethered from its mooring and go adrift in the ocean, it would be recovered when operationally practicable. Buoys and their associated moorings that become adrift could pose navigational risks and environmental risks to sensitive and protected marine areas, habitat, and marine life.

NDBC would continue to provide real-time meteorological and oceanographic data to the various groups of stakeholders. Weather forecasters and Federal, State, and Local Emergency Managers would continue to use data provided by NDBC to aid in the prediction of tsunamis, hurricanes, and other large weather events. However, without the deployment of additional buoys and C-MAN stations in the future, additional research data needed to support the SBAs would not be realized.

## **SUMMARY OF POTENTIAL IMPACTS**

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 Companion Manual for NAO 216-6A provides sixteen criteria, the same ten as the CEQ Regulations and six 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.

**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?***

NDBC considered both adverse and beneficial effects of the Proposed Action and No Action Alternative. The continued operation of the NDBC program under the Proposed Action would have short-term, negligible to minor, adverse impacts on the physical and biological resources within the specified regions. The presence of cables and anchors may enhance the physical complexity of marine habitats and provide settling or sheltering locations for marine organisms, resulting in long-term, indirect, negligible to minor, beneficial impacts. However, the adverse and beneficial impacts of the Proposed Action would not be significant.

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

The Proposed Action would not be expected to result in any adverse impacts to public health and safety. The Proposed Action is for the continued operation of NDBC assets (i.e., a network of moored buoys and C-MAN stations) and the deployment of additional assets as the needs arise. The assets already in use do not significantly affect public health or safety, therefore significant impacts would not be expected in the future.

**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 would not be expected to result in significant impacts to unique characteristics in a geographic area. The Proposed Action is for the continued operation of NDBC assets (i.e., a network of moored buoys and C-MAN stations) and the deployment of additional assets as the needs arise. The assets already in use do not significantly affect unique characteristics, therefore significant impacts would not be expected in the future.

Currently there are seven buoys operated in National Marine Sanctuaries (NMSs). These buoys are operated under a permit through the NOAA, Office of National Marine Sanctuaries (see Appendix D of the PEA). The continued operation and maintenance of buoys within NMSs would be in compliance with the permitted activities included in the permit and would not be expected to result in additional adverse impacts.

Prior to deploying a NDBC buoy, a tiered site-specific analysis of potential impacts on physical, biological, and cultural resources would be completed, if necessary, prior to any infrastructure installation. If a new buoy would be sited in an marine protected area, NOAA NMS, or a national park, consultation with, and permits from the appropriate agency would be completed prior to infrastructure deployment.

**4. *Are the proposed actions effects on the quality of the human environment likely to be highly controversial?***

Impacts from the Proposed Action on the quality of the human environment are not likely to be highly controversial. The buoys and C-MAN stations currently deployed and maintained by NDBC do not pose any highly controversial impacts; therefore, the

continued operation of NDBC assets is not anticipated to result in any highly controversial impacts.

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

The effects of the Proposed Action are not likely to be highly uncertain or involve unique or unknown risks. The current deployment of NDBC assets has not resulted in highly uncertain or unique, unknown risks, therefore, it is unlikely that the continued operation would result such risks. Additionally, NDBC has initiated consultation with the National Marine Fisheries Service (NMFS) to avoid adverse effects on Endangered Species Act (ESA)-listed species and designated critical habitat; and avoid harassment of marine mammals. Mitigation measures and best management practices would be implemented as recommended to reduce or limit any known adverse effects.

**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 PEA analyzes the activities associated with the continued operation of the NDBC Program and does not establish a precedent for future actions or represent a decision in principle about a future consideration. Additionally, prior to deploying a NDBC buoy in the future, a tiered site-specific analysis would be completed in accordance with Federal, state, tribal, and local laws and regulations.

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

No, the Proposed Action will not result in cumulatively significant impacts. The Proposed Action would have long- and short-term, negligible to minor, adverse impacts when combined with the cumulative impacts discussed in the PEA.

**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 be expected to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places (NRHP). The assets already in use do not adversely affect NRHP-listed or objects eligible for listing, therefore impacts would not be expected in the future. Prior to deploying a NDBC buoy, a tiered site-specific analysis of potential impacts on cultural resources would be completed, if necessary, prior to any infrastructure installation. Additionally, NDBC has initiated consultation with the State Historic Preservation Offices in accordance with the National Historic Preservation Act, and would continue consultation efforts for future deployment activities.

**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?***

The Proposed Action would not be reasonably expected to have a significant impact on threatened or endangered species, or their critical habitat as defined under the ESA.

NDBC has initiated consultation with the NMFS to avoid adverse effects on ESA-listed species and designated critical habitat. Short-term, negligible adverse impacts on threatened and endangered species would be expected under the Proposed Action, however mitigation measures and best management practices would be implemented as recommended to reduce or limit any known adverse effects. Additionally, prior to deployment of a buoy, the area would be surveyed by a biological monitor for the presence of threatened or endangered species. If species are present within the area, deployment would not take place until the species have vacated the area.

***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 would not be reasonably expected to violate a Federal, state, or local law or requirements imposed for environmental protection. NDBC would continue to adhere to all applicable Federal, state, and local environmental laws and requirements.

***11. Can the proposed action reasonably be expected to adversely affect stocks of marine mammals as defined in the Marine Mammal Protection Act?***

The Proposed Action would not be reasonably expected to adversely affect stocks of marine mammals as defined in the Marine Mammal Protection Act. Additionally, NDBC has initiated consultation with the NMFS, Office of Protected Resources in accordance with the Marine Mammal Protection Act, and would continue consultation efforts for future deployment activities.

***12. Can the proposed action reasonably be expected to adversely affect managed fish species?***

The Proposed Action would not be reasonably expected to adversely affect managed fish species. Additionally, NDBC has initiated consultation with the NMFS, Office of Habitat Conservation in accordance with the Magnuson-Stevens Fishery Conservation and Management Act, and would continue consultation efforts for future deployment activities.

***13. Can the proposed action reasonably be expected to adversely affect essential fish habitat as defined under the Magnuson-Stevens Fishery Conservation and Management Act?***

The Proposed Action would not be reasonably expected to adversely affect essential fish habitat protected under the Magnuson-Stevens Fishery Conservation and Management Act. Additionally, NDBC has initiated consultation with the NMFS, Office of Habitat Conservation in accordance with the Magnuson-Stevens Fishery Conservation and Management Act, and would continue consultation efforts for future deployment activities.

***14. Can the proposed action reasonably be expected to adversely affect vulnerable marine or coastal ecosystems, including but not limited to, deep coral ecosystems?***

The Proposed Action would not be reasonably expected to adversely affect vulnerable marine or coastal ecosystems, including but not limited to, deep coral ecosystems. Once a general area is identified for the deployment of a new buoy or C-MAN station, NDBC identifies any obstructions or hazards in the area, including biological resources (i.e., coral reef systems, vulnerable or critical habitats). If resources are identified in the area, they would be avoided to the maximum extent practicable.

**15. Can the proposed action reasonably be expected to adversely affect biodiversity or ecosystem functioning (e.g., benthic productivity, predator-prey relationships, etc.)?**

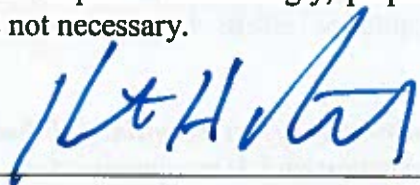
The Proposed Action would not be reasonably expected to adversely affect biodiversity or ecosystem functioning. The placement of moorings and anchors could have the potential to affect benthic communities if non-mobile species are crushed and benthic area is no longer productive; however, these impacts would be avoided to the maximum extent possible by avoiding known benthic communities. If an adverse impact were to occur, the magnitude would be negligible when compared to the overall size and complexity of the ocean's ecosystem.

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

The Proposed Action would not be reasonably expected to adversely affect to result in the introduction or spread of nonindigenous species. NDBC has established processes to prevent the spread of invasive and non-native species to other waters, in accordance with the National Invasive Species Act and Executive Order 13112, Invasive Species. Future deployment of NDBC assets would comply with these regulations to prevent the introduction or spread of nonindigenous species.

**DETERMINATION**

In view of the information presented in this document and the analysis contained in the supporting PEA prepared for NDBC, NOAA has determined the Proposed Action to continue the deployment, operation, and maintenance of NDBC's network of buoys and C-MAN stations would not significantly impact the quality of the human environment. 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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1/2/2028

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Date