



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SERVICE  
National Centers for Coastal Ocean Science  
Silver Spring, Maryland 20910

MEMORANDUM FOR: The Record

FROM: Steven Thur, Ph.D.  
Acting Director

SUBJECT: Categorical Exclusion for RESTORE Act Science Program Award  
#NA17NOS4510101, "Expansion of www.mymobilebay.com for coastal  
Alabama resource management"

NOAA Administrative Order (NAO) 216-6A, Environmental Review Procedures, requires all proposed projects be reviewed with respect to environmental consequences on the human environment. This memorandum addresses the determination that the activities described below for Project #2624003, "Expansion of www.mymobilebay.com for coastal Alabama resource management", qualifies to be categorically excluded from further National Environmental Policy Act review.

### **Project Description**

The RESTORE Act Science program is considering funding a three year project (FY17-19) to Dauphin Island Sea Lab researchers and sub-awardee to expand the temporal and spatial coverage of the mymobilebay.com and Alabama Real-time Coastal Observing System (ARCOS) hydrographic and meteorological data network, including expansion to other coastal and offshore waters. Additional data parameters to be gathered include turbidity and offshore water column hydrography. The tools from the network are used for coastal restoration and conservation, fisheries, research, education, and public health and safety.

The project team will provide an additional three years of real-time, long-term hydrographic and meteorological data from seven stations across Alabama. Meteorological parameters sampled are: wind speed and direction, barometric pressure, precipitation, air temperature, relative humidity, total solar radiation, and photosynthetically active radiation. Current hydrographic parameters include: depth, dissolved oxygen, water temperature and salinity. Data are delivered via various forms of telemetry to online archives and real-time display. Data quality and real-time telemetry will be maintained by field technicians through regular monthly calibrations, site visits, maintenance, and data checks. These involve visits throughout Mobile Bay and adjacent waters by small boat. Additional historical data will be made available online.

With funds from this project, four of the seven nearshore ARCOS stations (Fig. 1) would be upgraded as they break down and are retired. As each station is upgraded they would be outfitted to sample turbidity. Total suspended solids (TSS) would also be sampled during each calibration event to provide context to the turbidity samples. Turbidity and TSS would be available at www.mymobilebay.com for end-users to integrate into decision-making.



An eighth station (FOCAL) off the coast of Alabama (30.0902 N, 88.2116 W) has been sampling relevant data (water column temperature, salinity, and currents) since 2004. The FOCAL station does not currently have the capability to report in real-time. During this project the FOCAL surface buoy would be upgraded to host the hardware required for real-time telemetry and it would be integrated into the ARCOS network. The upgrade would include sensors to collect surface and bottom dissolved oxygen data.

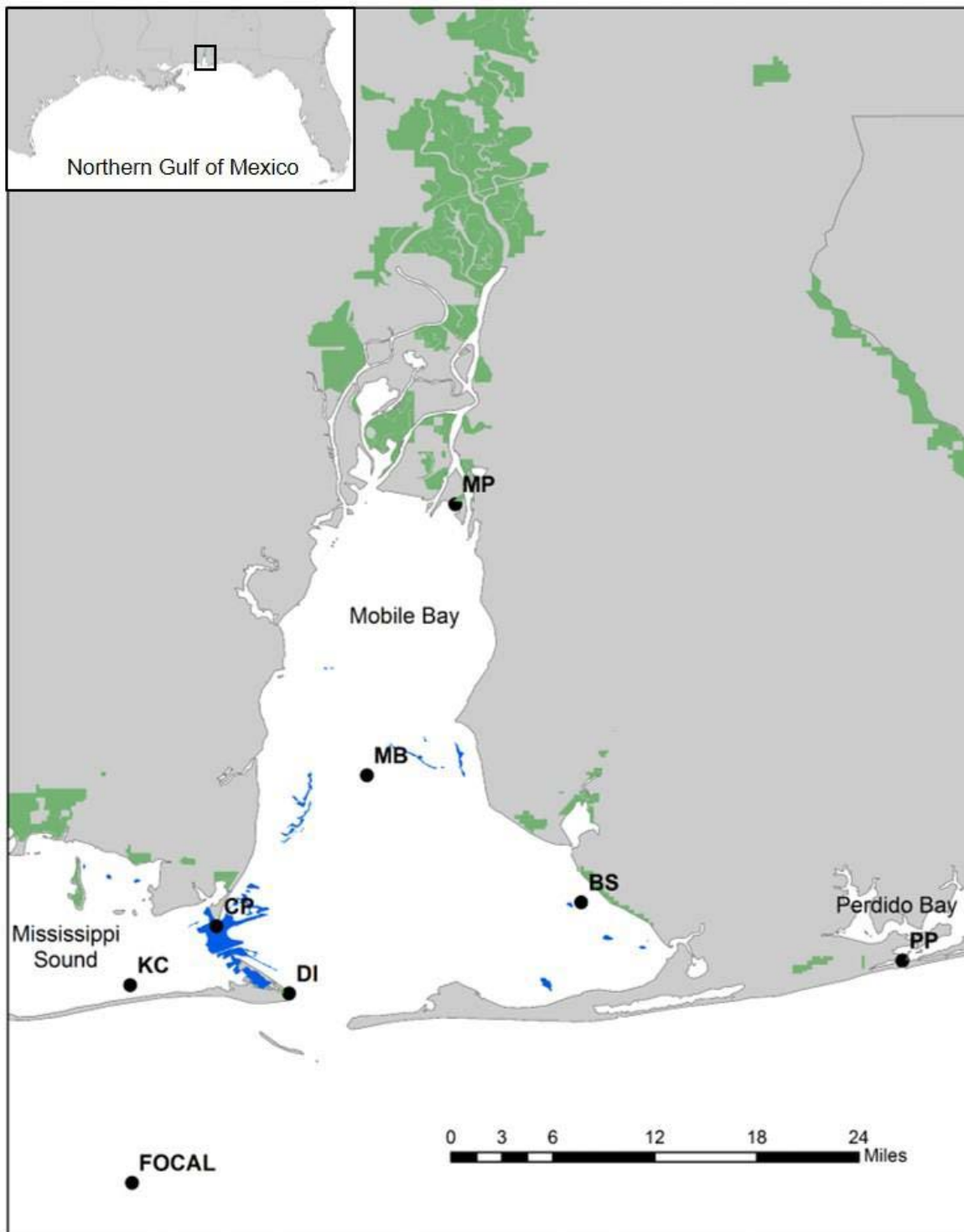


Figure 1. ARCOS Stations. Green areas represent Alabama Department of Conservation and Natural Resources managed lands and the Alabama Forever Wild conservation lands. Blue indicates presence of oysters

## Effects of the Project

Some activities (data compilation, analyses, QA/QC, website maintenance) associated with this project would be conducted in an office setting using data, statistical algorithms and software within existing facilities using existing infrastructure and would have no impact on the human environment.

Routine data buoy maintenance and the replacement of four (4) old data buoys and upgraded telemetry and sensors to measure dissolved oxygen at the surface (year 1) and bottom (year 2, as well as bottom salinity and temperature sensors) to one existing offshore data buoy (FOCAL) would take place off of small (inside Mobile Bay) to medium sized (FOCAL buoy) research boats. Each replacement or upgrade will take less than a day. There would be no disruption of the substrate. The existing mooring structures, one large concrete block (~2000 lbs) per site, would continue to be utilized for the upgrades, reducing environmental impacts.

Currently, the FOCAL station design consists of a standard cable attached to a subsurface buoy. The subsurface buoy is attached to a basic marker surface buoy indicating where the subsurface instrumentation is located. The station upgrades will consist of replacing the existing surface buoy with a larger model that has capabilities for adding telemetry for real-time data reporting, as well as incorporating surface water quality measurements and adding the bottom oxygen, salinity and temperature sensors.

The water quality instrumentation would be serviced by divers every 4 – 6 weeks, as they currently are now, and annually the surface buoy would be removed for maintenance (~1 week out of water per annual haul).

Endangered Species Act (ESA) Section 7 (a)(2) requires that each Federal agency, in consultation with NMFS and/or the U.S. Fish and Wildlife Service (USFWS), ensure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat.

The field research activities potentially occur in the range of one ESA listed species under the authority of USFWS. That species is the West Indian manatee (*Trichechus manatus*). The West Indian manatee is currently listed as threatened. NCCOS determines that research activities and vessel transit would not adversely affect West Indian manatees as encounters with manatees in this area are rare.

There are a total of three (3) species of corals, five (5) marine mammal species (details under MMPA section below), five (5) turtle species and five (5) fish species listed under ESA within the Gulf of Mexico (GOM) (Table 1). These species are listed as either endangered, threatened, candidate, or proposed. The distribution of corals is not expected to overlap with the research action area and vessel transit will have no adverse impacts on these species. Therefore, corals will not be analyzed further in this memorandum. The research activities and vessel transit are not expected to have adverse impacts on the listed fish species.

Research activities are not expected to have adverse impacts on turtles. The primary concern is a boat strike during transit between stations and to the various ports. Best Management Practices (see below) are included, including avoiding transiting through loggerhead sea turtle critical habitat, so vessel strike and harm to turtles is thus highly unlikely.

Loggerhead sea turtles (*Caretta caretta*) have critical habitat designated throughout the Gulf and at the mouth of Mobile Bay ([see here](#)). The only component of critical habitat that overlaps the research area is the nearshore reproductive habitat. The physical and biological features of nearshore reproductive habitat is “a portion of the nearshore waters adjacent to nesting beaches that are used by hatchlings to egress to the open-water environment as well as by nesting females to transit between beach and open water during the nesting season.” Primary Constituent Elements that support this habitat are “the following:

- (1) Nearshore waters directly off the highest density nesting beaches and their adjacent beaches as identified in 50 CFR 17.95(c) to 1.6 km (1 mile) offshore;
- (2) Waters sufficiently free of obstructions or artificial lighting to allow transit through the surf zone and outward toward open water; and
- (3) Waters with minimal manmade structures that could promote predators (i.e., nearshore predator concentration caused by submerged and emergent offshore structures), disrupt wave patterns necessary for orientation, and/or create excessive longshore currents.

The proposed research activities would not affect any of the PCEs and would involve no intrusions into the critical habitat areas. Therefore, NCCOS determines that research activities and vessel transit would not adversely affect sea turtles or destroy or adversely modify designated critical habitat for loggerhead sea turtles.

Marine Mammal Protection Act (MMPA) - All marine mammals are protected under the MMPA. Sections 101 (a)(5)(A) and (D) allow the incidental take of marine mammals only under special circumstances, where “take is defined as “to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal” (16 U.S.C. §1361-1421h). Harassment includes any annoyance which has the potential to injure a marine mammal or stock (Level A) or disrupt its behavioral patterns (Level B). Similar to the risk of vessel strike for turtles, cruise research activities are not expected to have adverse impacts on any marine mammal species. The primary concern is for a vessel strike during ship transit between stations or to and from the various ports.

There are five (5) total species of threatened and endangered marine mammals whose potential ranges overlap with the action area of the research activities (Table 1). These include, Humpback Whale (*Megaptera novaeangliae*), Fin Whale (*Balaenoptera physalus*), Sei Whale (*Balaenoptera borealis*), Sperm Whale (*Physeter microcephalus*), and Bryde’s Whale (*Balaenoptera edonii*). The proposed research activities do not overlap with the typical habitat of these species. Protective measures incorporated into this project include maintaining safe distances from marine mammals spotted during the course of research, maintaining safe speeds and avoiding entanglement risks (see below).

Magnuson-Stevens Fishery Conservation and Management Act (see [this](#)) requires that Federal agencies consult with NMFS on actions that “may adversely affect” Essential Fish Habitat (EFH) (16 U.S.C. §1855(b)(2)).

NCCOS examined two sources from the NOAA Office of Habitat Conservation (OHC) to conduct this analysis of potential impacts to EFH. NCCOS consulted the NOAA OHC, [EFH mapper](#) and the 2015 [Final Essential Fish Habitat 5-Year Review for Atlantic Highly Migratory Species](#). The EFH Mapper sources indicated that there is no coral EFH within the research activity area. However, both sources indicated the following species groups or taxa potentially have EFH designated within the research activity area (Figure 1) as follows:

Species or Taxa within Research area:

1. Red Drum

2. Shrimp
3. Coastal Migratory Pelagics
4. Reef fish
5. Blacktip shark
6. Bull shark
7. Atlantic sharpnose shark
8. Tiger shark
9. Sandbar shark
10. Blacknose shark
11. Bonnethead shark
12. Finetooth shark
13. Greater Hammerhead
14. Scalloped hammerhead shark
15. Spinner shark

In addition, no Habitat Areas of Particular Concern (HAPC) overlap with the area of research activities (Figure 1). No EFH areas closed to fishing overlap with vessel transit or research activity areas, except the FOCAL buoy is just inside the Bottom trawl weak link requirement area.

Based on research activities and the potential EFH that could be encountered, NCCOS determines that no adverse effects to EFH, either direct or indirect, would occur within the proposed research action or transit area as the work is of short duration, would not affect the substrate and would cover a limited area of habitat. NCCOS would use BMPs (last section) when or if anchoring is needed to avoid impacting EFH.

Table 1. Gulf of Mexico's Threatened and Endangered Species (Florida Bay to Texas border, includes Flower Gardens Banks) ([http://sero.nmfs.noaa.gov/protected\\_resources/section\\_7/threatened\\_endangered/Documents/gulf\\_of\\_mexico.pdf](http://sero.nmfs.noaa.gov/protected_resources/section_7/threatened_endangered/Documents/gulf_of_mexico.pdf))

Status	Species Name	Critical Habitat (in Gulf of Mexico)
<b>Corals</b>		
T	Lobed Star Coral ( <i>Orbicella annularis</i> )	N/A
T	Boulder Star Coral ( <i>Orbicella franksi</i> )	N/A
T	Mountainous Star Coral ( <i>Orbicella faveolata</i> )	N/A
<b>Mammals</b>		
E	Humpback Whale ( <i>Megaptera novaeangliae</i> )	N/A
E	Fin Whale ( <i>Balaenoptera physalus</i> )	N/A
E	Sei Whale ( <i>Balaenoptera borealis</i> )	N/A
E	Sperm Whale ( <i>Physeter macrocephalus</i> )	N/A
PE	Bryde's Whale ( <i>Balaenoptera edonii</i> )	N/A

<b>Sea Turtles</b>		
T <sup>2</sup>	Green Turtle ( <i>Chelonia mydas</i> )	N/A
E	Hawksbill Turtle ( <i>Eretmochelys imbricata</i> )	N/A
E	Kemp's Ridley Turtle ( <i>Lepidochelys kempii</i> )	N/A
E	Leatherback Sea Turtle ( <i>Dermochelys coriacea</i> )	N/A
E, T*	Loggerhead Sea Turtle ( <i>Caretta caretta</i> )	Yes linked <a href="#">here</a> 38 designated marine areas in the southeast (includes GOM)
<b>Fishes</b>		
T	Gulf Sturgeon ( <i>Acipenser oxyrinchus desotoi</i> )	Yes, <a href="#">linked here</a>
E	smalltooth sawfish ( <i>Pristis pectinata</i> )	Yes, <a href="#">linked here</a>
PT	Giant Manta ( <i>Manta birostris</i> )	N/A
C	Dwarf Seahorse ( <i>Hippocampus zosterae</i> )	N/A
PT	Oceanic Whitetip Shark ( <i>Carcharinus longimanus</i> )	N/A

E = Endangered, T = Threatened, C = Candidate, P = Proposed.

<sup>1</sup> Colonies at Flower Gardens Banks

<sup>2</sup> Florida's colonies listed as endangered.

\*Some populations are considered threatened and others are considered endangered

## **Protective Measures and Best Management Practices Incorporated into the Action**

The following protective measures and BMPs will be incorporated into the research plan and are listed below. These include all applicable BMPs set forth by DUSO VADM Michael Devany's memo of August 22, 2014, concerning entanglement measures and habitat impact precautions.

1. Minimize vessel disturbance and ship strike potential
  - a. Reduced speeds (<13 knots) when transiting through ranges of ESA-listed cetaceans (unless otherwise required, e.g., NOAA Sanctuaries)
  - b. Reduced speeds (<13 knots) while transiting through designated critical habitat (unless slower speeds are required, e.g., < 10 knots in West Indian manatee critical habitat and management areas)
  - c. Trained observers aboard all vessels; 100% observer coverage
2. Minimize noise
  - a. Reduced speed (see above)
3. Minimize vessel discharges (including aquatic nuisance species)
  - a. Meet all Coast Guard requirements.
  - b. Clean hull regularly to remove aquatic nuisance species.
  - c. Avoid cleaning of hull in critical habitat.
  - d. Avoid cleaners with nonylphenols.
4. 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. Minimize anchor drag
5. Cetaceans
  - a. Avoid approaching within 200 yards (182.9 m)
6. Sea Turtles and Manatees
  - a. Avoid approaching within 50 yards.
7. Habitat Protection
  - a. Avoid unnecessary contact of gear, towed or lowered, with the sensitive bottom habitat (e.g. submerged aquatic vegetation (SAV) and hard bottom).

## **Extraordinary Circumstances and Applicable Environmental Statutes**

No activities would be conducted in areas where children may congregate. The proposed project does not involve air, noise, or water quality impacts; and does not otherwise have a significant impact on the human environment that is not negligible or discountable. There are no adverse effects on an area with unique environmental characteristics that are not negligible or discountable. There are no adverse effects on species or habitats protected by the ESA, the MMPA, the MSA, NMSA, or the Migratory Bird Treaty Act that are not negligible or discountable. The proposed project has no potential to generate, use, store, transport, or dispose of hazardous or toxic substances in a manner that may have a significant effect on the environment. There are no adverse effects on properties listed or eligible for listing on the National Register of Historic Places authorized by the National Historic Preservation Act of 1966, National Historic Landmarks designated by the Secretary of the Interior, or National Monuments designated through the Antiquities Act of 1906; Federally recognized Tribal lands, cultural or natural resources, or religious or cultural sites. The proposed project does not have a disproportionately high and adverse effect on the health or the environment of minority or low-income communities, compared to the impacts on other communities (EO 12898). The project would not contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or involve actions that may promote the introduction, growth, or expansion of the range of the species. There is no potential to violate Federal, State, or local law or requirements imposed for protection of the environment. There are no highly controversial environmental effects. These activities are not the subject of controversy based on potential environmental consequences and do not establish a precedent or decision in principle about future proposals. Thus, there are no extraordinary circumstances present that may require further analysis in an EA or EIS.

## **Categorical Exclusion Determination**

This action would not result in any changes to the human environment. As Defined in Section 4 and Appendix E of NAO 216-6A Companion Manual E3. – Activities to collect aquatic, terrestrial, and atmospheric data in a nondestructive manner, the proposed project falls within the scope of the E3 categorical exclusion; the project will maintain 3 existing data gathering buoys and will maintain and then upgrade 5 additional buoys. Other activities (data compilation, QA/QC and website activities) are conducted in an office setting where practices and safeguards prevent environmental impacts. Cumulative effects are negligible. As such, project activities are categorically excluded from further NEPA review.