



MEMORANDUM FOR: Marine Mammal Disaster Response Project File

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SUBJECT: Summary of environmental compliance for “Reducing Impacts to Cetaceans during Disasters by Improving Response Activities” Data Gap Project 1

The Final Open Ocean Restoration Plan/Environmental Assessment 2 (OORP2) identified “Reducing Impacts to Cetaceans during Disasters by Improving Response Activities” (Marine Mammal Disaster Response) as a preferred alternative for implementation. The Marine Mammal Disaster Response project aims to implement a series of actions to enhance marine mammal disaster response preparedness across the Gulf of Mexico states and open water. One aspect of the project is to respond, investigate and assess the health of cetaceans during disasters in the Gulf of Mexico through scientific studies and the development or application of tools, techniques, and standard protocols addressing detection, response, assessment, mitigation, and monitoring. As stated in the OORP2, this portion of the project includes the “development of tools to assess the air water interface.” This effort, now known as Data Gap 1, is ready for implementation. In the OORP2 the Marine Mammal Disaster Response project is described as a “long-range activity” and was evaluated from a programmatic lens. This memo describes the specific implementation methodologies that have been developed during the early planning phase of the project and documents the environmental compliance reviews that have been accomplished for Data Gap 1.

The OORP2 evaluated this project’s potential environmental consequences and compliance requirements. The OORP2 determined that the following regulatory compliance reviews were not applicable to this project:

- Bald and Golden Eagle Protection Act (USFWS)
- Endangered Species Act Section 7 (USFWS)
- Marine Mammal Protection Act (MMPA) (USFWS)
- Migratory Bird Treaty Act (MBTA) (USFWS)
- Rivers and Harbors Act/Clean Water Act (USACE permit)

The OORP2 determined that the following regulatory compliance reviews were complete for this project:

- Coastal Zone Management Act (CZMA)

The OORP2 determined that the following regulatory compliance review was in progress at the time of the Final OORP2 and has subsequently been completed for this project:

- National Historic Preservation Act (NHPA)

The OORP2 determined that the following regulatory compliance reviews would require a phased approach to consultation as implementation methodologies and locations were determined for this project during the planning stages. The compliance determinations for these statutes are discussed below:

- Endangered Species Act - Section 7 (NMFS)
- Magnuson Stevens Act (EFH) (NMFS)
- Marine Mammal Protection Act (MMPA) (NMFS)

### **Data Gap Project 1 Description**

The Marine Mammal Disaster Response project was selected because one of the more direct opportunities to benefit cetaceans is through improvement and enhancement of response and assessment activities during those times when large numbers of animals are threatened by anthropogenic and natural disasters in the Gulf of Mexico. The larger project includes efforts to enhance the ability to respond, investigate and assess the health of cetaceans during disasters in the Gulf of Mexico. The Data Gap Project 1 supports this goal by aiming to characterize the air-water interface and quantify the risk of oil/dispersants inhaled and/or exhaled by cetaceans during oil spills. In 2021, the Marine Mammal Disaster Response project will begin funding the Data Gap Project 1. At the time the OORP2 was developed, the specific implementation methodology was not known. A detailed description of the effort is provided here for reference.

The full scope of the Data Gap Project 1 includes Phase 1a: exposure characterization, Phase 1b: replication of a dolphin breathing event in a controlled oiled environment, and Phase 2: risk characterization. The estimated cost for all phases of Data Gap Project 1 is \$550,000. The Coastal Response Research Center (CRRC), established as a partnership between NOAA and the University of New Hampshire, would execute all portions of Data Gap 1.

#### **Phase 1**

##### *Phase 1a: exposure characterization*

The initial obligation of funds would be for Phase 1a, which entails a sub-contract or sub-award to Johns Hopkins University to examine how bottlenose dolphins breathe at the water's surface and the behavior of vapor, aerosols, and particles during inhalation and exhalation using laser videography. This phase requires the availability of a captive dolphin facility to train dolphins to execute multiple types of breath events (4 months), developing a "dummy rig" which mimics the videography equipment that will be used during dolphin training to desensitize them to the presence of equipment when breathing at the surface, and videography at the training facility to capture "breath events" on camera for analysis (2 months).



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### *Phase 1b: replication of a dolphin breathing event in a controlled oiled environment*

Phase 1b of the project entails the building of an “imitation blowhole” (estimated 3 month construction) guided by the knowledge gained in Phase 1a. This phase would require the same videographer and videography equipment as used in Phase 1a to capture the imitation blow in a controlled oiled environment. A large study tank filled with salt or fresh water and the ability to have different grades and amounts of oil “spilled” in to the tank for examination, preferably with the ability to apply dispersant and to create wave and wind action as well will be required (estimated 1 month of tank work). This phase will characterize and quantify the exposure of dolphins to oil/dispersants when breathing at the surface (estimated 5 months of analysis). This phase will characterize and quantify the exposure of dolphins to oil/dispersants when breathing at the surface lead to exposure characterization (estimated 5 months of analysis).

Phase 2 of the project involves the development, design, and testing of one or more measurement technologies for use in margins of the air/water interface, at depths approximately -12 inches to +12 inches. The goal is to test these technologies’ ability to measure the levels of oil, dispersant, and related chemicals in various parts of the air-water interface at an active spill site. Potential locations for measurements/data collection being considered include the current Taylor Energy oil spill site, the current Santa Barbara leak, the federally run oil spill test site, or the planned spill site in Arctic waters by Canada and Norway. This phase will characterize risks for marine mammals but a better understanding of the air/water interface may benefit damage assessments for additional animals as well (sea turtles, birds).

### **Compliance Determinations for Data Gap Project 1**

The project team coordinated with both the DWH Environmental Compliance and NEPA Coordinators on the Data Gap Project 1 described above and made the determinations below for statutes that were reevaluated based on these details.

#### **NEPA**

Data Gap 1 activities are adequately described in Section 2.6.3.1 and 3.7.1.2 of the OORP2. Data Gap Project 1 is included in the OORP2’s description of activities that would enhance the ability to respond, investigate and assess the health of cetaceans during disasters in the Gulf of Mexico through scientific studies and the development or application of tools, techniques, and standard protocols addressing detection, response, assessment, mitigation, and monitoring; specifically referred to as the “development of tools to assess the air water interface.” Potential impacts of these activities are addressed in Section 4.4.5.1.

Environmental consequences of the activities proposed in Data Gap Project 1 fall within those evaluated in OORP2 and the PDARP/PEIS, specifically. No additional NEPA review is necessary based on the analysis already completed in OO RP2 and the activities included in Data Gap Project 1.

#### **Endangered Species Act Section 7 – NMFS jurisdiction**

Phase 1a and 1b take place inside a laboratory or aquarium, therefore no ESA-listed species or habitats would be affected. Phase 2 involves minimal field work and sample collection but this limited collection of data around the water's surface would not affect ESA-listed species or habitats under NMFS jurisdiction. These activities will have no effect, thus no ESA consultation with NMFS is required.

#### **Magnuson-Stevens Fishery Conservation and Management Act**

The Data Gap Project 1 would not result in direct or indirect physical, chemical, or biological alterations to any designated essential fish habitat (EFH). These activities will have no effect, thus no EFH consultation with NMFS is required.

#### **Marine Mammal Protection Act – NMFS jurisdiction**

Phase 1a involves videography of captive dolphins currently in the care of the Baltimore Aquarium. No other interactions with marine mammals will occur as part of Phase 1b or Phase 2 of this project. The Baltimore Aquarium is a U.S. Department of Agriculture (USDA)-licensed facility authorized to hold these animals in captivity for public display purposes compliant with the requirements of the MMPA<sup>1</sup>. A scientific research permit under the MMPA is not required because the activities do not meet the definition of intrusive research<sup>2</sup>, as defined at 50 CFR 216.3, and the attending veterinarian has determined these activities would not constitute a risk to the health or welfare of the captive animals. An MMPA scientific research permit is only required for animals in captivity if the activity would fall under the definition of intrusive research.

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<sup>1</sup> MMPA Section 104(c)(2)(A): These requirements include: (i) offering a program for education or conservation based on professionally recognized standards of the public display community; (ii) being registered or holding a license issued under the AWA; and (iii) maintaining facilities open to the public on a regularly scheduled basis and that access to is not limited or restricted other than by charging of an admission fee.

<sup>2</sup> 50 CFR 216.3: Intrusive research means a procedure conducted for bona fide scientific research involving: A break in or cutting of the skin or equivalent, insertion of an instrument or material into an orifice, introduction of a substance or object into the animal's immediate environment that is likely either to be ingested or to contact and directly affect animal tissues (i.e., chemical substances), or a stimulus directed at animals that may involve a risk to health or welfare or that may have an impact on normal function or behavior (i.e., audio broadcasts directed at animals that may affect behavior). For captive animals, this definition does not include: (1) A procedure conducted by the professional staff of the holding facility or an attending veterinarian for purposes of animal husbandry, care, maintenance, or treatment, or a routine medical procedure that, in the reasonable judgment of the attending veterinarian, would not constitute a risk to the health or welfare of the captive animal; or (2) A procedure involving either the introduction of a substance or object (i.e., as described in this definition) or a stimulus directed at animals that, in the reasonable judgment of the attending veterinarian, would not involve a risk to the health or welfare of the captive animal.