20 April 2020

Louisiana Trustee Implementation Group
c/o U.S. Fish and Wildlife Service
P.O. Box 49567
Atlanta, Georgia 30345

Dear Trustee Implementation Group Members:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the Louisiana Trustee Implementation Group's (LA TIG) Draft Restoration Plan/Environmental Assessment #5: Living Coastal and Marine Resources – Marine Mammals and Oysters (draft RP/EA)[1]. The draft RP/EA evaluates the LA TIG's alternatives for restoring marine mammals and oysters injured by the Deepwater Horizon (DWH) oil spill.

Background

The LA TIG analyzed two alternatives for restoring injured marine mammals, in addition to the no-action alternative:

- Increasing capacity and expanding partnerships along the Louisiana coastline for marine mammal stranding response (the LA TIG's preferred alternative), and
- Region-wide marine mammal conservation medicine and health program (the LA TIG's non-preferred alternative).

The range of alternatives was developed by the LA TIG through a screening process that evaluated marine mammal projects submitted via the Natural Resource Damage Assessment (NRDA) Trustee portal and other sources. The screening process considered the restoration goals identified for marine mammals in the Deepwater Horizon's NRDA Trustees' Final Programmatic Damage Assessment and Restoration Plan (PDARP) and Final Programmatic Environmental Impact Statement (DWH NRDA Trustees 2016), as well as evaluation factors in the Oil Pollution Act regulations (15 C.F.R. § 990.54) and the availability of funds for marine mammals in the Louisiana restoration areas under the DWH NRDA settlement payment schedule.

In August 2017, the LA TIG announced that it was soliciting ideas for restoration projects for marine mammals. The Commission submitted four projects to the NRDA portal for consideration. The first three were aimed at monitoring the effectiveness of restoration efforts, and the fourth at reducing human-caused mortality and serious injury—

- Expanding and improving marine mammal stranding response and monitoring capabilities;

[1] Notice of availability at 85 Fed. Reg. 16078.

- Bottlenose dolphin health assessments;
- Bottlenose dolphin photo-identification studies; and
- Reducing bycatch of bottlenose dolphins in commercial and recreational fisheries.

In July 2019, the LA TIG announced that it had initiated development of the draft RP/EA #5 for marine mammals and oysters, but did not solicit additional public comments at that time. Instead, it indicated that it would consider projects submitted in response to its August 2017 request, and would focus on only one of the eight restoration strategies for marine mammals identified in the PDARP: increasing marine mammal survival through better understanding of causes of illness and death, as well as early detection and intervention of anthropogenic and natural threats. No further details were provided regarding the LA TIG's plans and priorities with respect to the other seven restoration approaches for marine mammals.

Evaluation of alternatives

Expansion of marine mammal stranding response—The Commission supports the LA TIG's proposal to increase capacity and expand partnerships for marine mammal stranding response as a preferred alternative. Increasing capacity and expanding partnerships for detecting and responding to marine mammal strandings would enable the State and the National Oceanic and Atmospheric Administration (NOAA) to monitor the response and recovery of bottlenose dolphins and other marine mammals injured by the DWH oil spill. It would also directly provide aid for the rescue, rehabilitation, and release[2] of live-stranded or free-swimming dolphins in distress. This proposal addresses all three-restoration goals identified in the PDARP—

- Implement an integrated portfolio of restoration approaches to restore injured bay, sound, and estuary, coastal, shelf, and oceanic marine mammals across the diverse habitats and geographic ranges they occupy.
- Identify and implement restoration activities that mitigate key stressors in order to support resilient populations. Collect and use monitoring information, such as population and health assessments and spatiotemporal distribution information.
- Identify and implement actions that support ecological needs of the stocks; improve resilience to natural stressors; and address direct human-caused threats such as bycatch in commercial fisheries, vessel collisions, noise, industrial activities, illegal feeding and harassment, and hook-and-line fishery interactions.

Information on total human-caused mortality and serious injury was lacking for bottlenose dolphins and other Gulf marine mammals prior to the DWH oil spill (DWH NRDA Trustees 2016) and continues to be a significant data gap (Hayes et al. 2019). Information compiled from stranding networks is used in determining population demographics, stock structure, and vital rates (reproduction and survival). When integrated with other environmental data through programs such as NOAA's Marine Mammal Health Monitoring and Analysis Platform for the Gulf (GulfMAP[3]),

[2] If deemed appropriate upon expert evaluation after a stranding.

[3] https://www.mmc.gov/priority-topics/marine-mammal-health-and-strandings/marine-mammal-health-and-monitoring-analysis-platform-marine-mammal-health-map/

stranding data can help to reveal environmental factors that may be associated with trends in the health of marine mammals and other marine species.

The importance of timely, well-supported stranding response and reporting capabilities in Louisiana is highlighted by the ongoing investigation of an Unusual Mortality Event by NOAA involving bottlenose dolphins in the northern Gulf[4]. In such cases, information compiled from reports made by local marine mammal stranding networks can help federal resource managers act quickly to prepare for a potential increase in strandings, and to collect associated environmental data needed for a thorough investigation of contributing factors, such as biotoxins, disease, prey availability, water salinity, or habitat degradation.

It is also imperative that there be active, year-round stranding response capabilities in Louisiana to monitor for the potential effects on marine mammals of large-scale restoration projects, such as the proposed mid-Barataria and mid-Breton sediment diversions[5]. The sediment diversions would introduce fresh water and sediments from the Mississippi River into selected marshes with the intent to restore, create, and maintain coastal wetland habitat that has been lost as a result of both natural and human causes, including sea-level rise, land subsidence, hurricane storm surges and other large storm events, oil and gas extraction and infrastructure, river flow obstruction, and coastal development (Morton and Barras 2011, Hudson 2012, Olea and Coleman 2014). The U.S. Army Corps of Engineers (USACOE) and the Louisiana Coastal Protection and Restoration Authority (CPRA) are in the planning stage for these large-scale diversion projects, but they lack information needed to conduct a rigorous evaluation of alternatives required under the National Environmental Policy Act (NEPA) on the physiological and biological effects of low-salinity exposure on marine mammals and food web dynamics[6]. That information could be used to inform design, construction, and operational alternatives to minimize the risks of adverse effects on marine mammals. Once sediment diversion plans are operational, monitoring marine mammal strandings through a well-supported, year-round, statewide stranding response program will be critical to identify and minimize such effects.

The draft RP/EA[7] indicated that the Louisiana Department of Wildlife and Fisheries (LDWF) transitioned much of its responsibility for stranding response to Audubon Nature Institute's Coastal Wildlife Network (CWN) in September 2019. However, this transition appears to have been incomplete, as CWN appears to remain focused on rescue and rehabilitation of live-stranded marine mammals[8] rather than response and investigation of dead-stranded marine mammals. LDWF also began directing the public to report marine mammal strandings to NOAA's Southeast Region Marine Mammal Stranding Network[9], which at present does not have the capacity

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[4] https://www.fisheries.noaa.gov/national/marine-life-distress/2019-2020-bottlenose-dolphin-unusual-mortality-event-along-northern

[5] https://coastal.la.gov/our-work/key-initiatives/diversion-program/about-sediment-diversions/

[6] To address NEPA-related information needs, the LA TIG has initiated a literature review, model development, and an expert elicitation to gather and evaluate available information on physiological and biological responses and potential impacts of low-salinity exposures (https://www.gulfspillrestoration.noaa.gov/project?id=128). However, that project does not involve fieldwork or the collection of new samples from marine mammals or marine mammal habitat.

[7] Section 3.5.11, page 26.

[8] https://audubonnatureinstitute.org/cwn

[9] https://www.wlf.louisiana.gov/index.cfm?action=newsroom.detail&articleID=new-phone-numbers-available-for -sea-turtle-and-marine-mammal-strandings-ldwf-announces

for on-the-ground first response to strandings. LDWF's actions appear to represent a significant shift away from its long-term support for, and involvement in, marine mammal stranding response, particularly its capabilities for detection of, and/or first response to, live- and dead-stranded cetaceans and performance of time-sensitive necropsies. As such, the Commission questions whether the proposed restoration project represents a true *expansion* of current capabilities, or a *replacement*, at least in part, of response capabilities from which LDWF has recently withdrawn. It also raises the question of whether LDWF's decision to withdraw its support for marine mammal stranding response was prompted by, or resulted in, the LA TIG's proposal to have NOAA take over responsibility for on-the-ground stranding response in Louisiana. Regardless, the intended future outcome of expanding the stranding network's capabilities in Louisiana seems at least partly undermined by LDWF's recent decision to withdraw support, including the withdrawal of trained personnel, field resources, and funding for stranding response. Considering LDWF's mission and responsibilities for management of marine resources throughout the state, as well as LDWF's facilities and personnel formerly dedicated to stranding response activities, the Commission is concerned that LDWF's withdrawal of support for marine mammal stranding response could significantly undercut implementation of this alternative.

The LA TIG has proposed to hire a Louisiana-based NOAA stranding coordinator to focus on expanding response capability, outreach, and building new partnerships throughout the state. This is especially important for Barataria Bay, where the resident stock of bottlenose dolphins experienced significant injury as a result of the DWH oil spill (DWH NRDA Trustees 2016), and for which recovery remains elusive (Schwacke et al. 2020). There is also a need to expand coverage in the western part of the state where gaps in stranding response capabilities are a long-standing issue (Fougeres 2015). This alternative would also provide support for hiring and training response personnel, securing equipment and supplies, establishing a centrally located base of operations, and obtaining the trucks and vessels necessary for timely stranding response.

Given the importance of a fully functional stranding network in Louisiana to track recovery of marine mammals injured by the DWH oil spill, identify factors that may be hindering their recovery, rescue and rehabilitate marine mammals in distress, and develop and implement targeted mitigation measures to minimize adverse effects of human activities, the Commission recommends that the LA TIG implement its proposal to increase the capacity of the marine mammal stranding network in Louisiana and expand partnerships throughout the state to ensure timely response to marine mammal stranding events. Given the size and complexity of the Louisiana coastline and the challenge of building a new stranding response network from the ground up, the Commission recommends that the LA TIG implement its preferred alternative to increase capacity and expand partnerships along the Louisiana coastline for marine mammal stranding response; however, the Commission further recommends that the LA TIG increase the funding amount proposed for the project[10] to ensure successful project implementation. The Commission would be willing to work with the LA TIG to develop a more appropriate budget for implementation of its preferred

[10] The LA TIG has proposed allocating $3.1M for the project, as compared to the Alabama TIG's budget of $2.4M for "Enhancing capacity for the Alabama Marine Mammal Stranding Network," which relied on access to existing personnel, facilities, equipment, and supplies at Dauphin Island Sea Lab for stranding response along a much smaller and more accessible coastline. Given the lack of access to existing stranding response resources at LDWF, a more realistic budget would be considerably larger than what has been proposed.

alternative. The Commission also recommends that the LA TIG consider establishing an advisory team comprised of experts in marine mammal stranding response that can help with project implementation and assist in monitoring project performance.

Region-wide conservation medicine and health program—The Commission also supports implementation of the LA TIG's second alternative, establishing a region-wide marine mammal conservation medicine and health program. This project would develop a region-wide health program to identify risks of illness and death for marine mammals and mitigate potential impacts. This would involve support for federal and state agency coordination to identify needs for the stranding network and its partners, and for research on causes of illness and death in both stranded and free-ranging marine mammals. The project would also establish an expert working group to identify risks specific to marine mammals in Louisiana, including impacts of both natural and human-caused threats. This working group would also assess and implement future health intervention techniques, such as vaccinations, rapid point-of-care tools, and improved real-time diagnostic instrumentation. The project would involve training and workshops in health monitoring and the development of a study plan for capture-release health assessments of free-ranging cetaceans, tagging (and tracking) to evaluate health changes over time, and behavioral responses to new and emerging threats including ecological perturbations.

The Commission acknowledges that immediate implementation of a comprehensive medicine and health program may not be cost-effective at present, given the immediate challenge of re-establishing a marine mammal stranding network in Louisiana. However, the Commission believes that there are many aspects of the medicine and health program that could and should be implemented without delay as part of the ongoing and proposed monitoring efforts for priority restoration areas in Louisiana, specifically Barataria Bay. This includes the continuation of periodic capture-release health assessments and the use of satellite-linked tags for tracking of bottlenose dolphins to monitor health parameters and, ultimately, restoration and recovery at the population level. Health assessments of bottlenose dolphins in Barataria Bay have demonstrated that recovery of the resident bottlenose dolphin population has been slower than expected (Schwacke et al. 2020), with sustained maternal illness and continued low reproductive success rates (Smith et al. 2020). Those findings warrant continued monitoring of this population to determine factors that may be inhibiting its long-term recovery. Advances in assessment techniques and a better understanding of human-caused effects made possible through bottlenose dolphin capture-release health assessments in Barataria Bay and elsewhere (Barratclough et al. 2019) have become an important tool for conservation of free-ranging dolphins. As noted herein, establishing an expert working group to advise the stranding network on health parameters to monitor and protocols to follow would enhance the quality and usefulness of the data collected for informing recovery efforts.

Delaying the implementation of this alternative until the capacity of the Louisiana stranding network has been expanded and disaster response planning has been conducted in the Gulf[11] would significantly hinder the recovery of bottlenose dolphins in Barataria Bay. Although those activities would be informative, they are not a necessary precursor for health assessments, which have been conducted successfully for bottlenose dolphins on several occasions in Louisiana since 2011

[11] Under the Open Ocean Restoration Plan #2; https://www.gulfspillrestoration.noaa.gov/sites/default/files/2019-12%20OO%20TIG_RP2EA_PublicFinal_2019_signatures.pdf

(Schwacke et al. 2017), in other areas of the Gulf, and off the east coast of the United States since 1979 (Barratclough et al. 2019). Even a fully functioning stranding network would only provide information on causes of morbidity and mortality for the relatively small portion of the population that strands, whereas health assessments can be conducted on a random sample of the entire population, thereby providing a better indicator of health status of the population as a whole. For these reasons, the Commission recommends that the LA TIG also implement certain components of its second (non-preferred) alternative, the region-wide marine mammal conservation medicine and health program, specifically the capture-release health assessments, satellite-linked tagging and tracking, and the establishment of an expert working group to ensure comprehensive, ongoing monitoring of the Barataria Bay bottlenose dolphin population to monitor recovery and identify factors that may be hindering recovery.

Other marine mammal restoration alternatives

The Commission is concerned that restoration of injured marine mammal stocks in the Louisiana restoration area has been hampered by the narrow scope of criteria being used to evaluate potential restoration projects and the delay in proposing more extensive actions that would facilitate recovery from the DWH oil spill. The LA TIG evaluated a total of 193 projects submitted to the DWH Natural Resource Damage Assessment and Louisiana portals, and after a multi-step screening process, narrowed and consolidated its alternatives down to two projects, only one of which was identified as preferred. The Commission notes that the second stage of the process, eligibility screening, limited projects to those that aligned with the PDARP's restoration approach of "increasing marine mammal survival through better understanding of causes of illness and death, as well as early detection and intervention of anthropogenic and natural threats." Although the Commission agrees that this is a high-priority restoration approach, there was no discussion of why only this approach was chosen for the initial restoration plan. Further, as noted herein, the LA TIG gave no indication of how any of the other seven approaches to marine mammal restoration identified in the PDARP may (or may not) align with the LA TIG's restoration priorities.

As noted herein, the Commission submitted four potential restoration projects for Louisiana through the NRDA portal. Two of them are reflected in the LA TIG's range of alternatives. The other two involve reducing bycatch in Louisiana commercial and recreational fisheries and conducting photo-identification studies. Both warrant additional consideration by the LA TIG in future restoration plans. Photo-identification studies are used to estimate population size and vital rates, and also provide information on distribution, seasonal movements, habitat use, behavior, body condition, health of individuals, and human interactions (e.g. wounding and scarring rates). As noted in the project summary, information gained from multi-year photo-identification studies would be an indicator of the effectiveness of efforts to restore bottlenose dolphin populations in Louisiana waters. Efforts to reduce bycatch of marine mammals in commercial and recreational fishing gear could involve placing observers on commercial fishing vessels or charter boats[12] to document interaction rates and factors associated with interactions, research and field studies to identify and test alternative observation methods[13], and research on alternative fishing gear and/or alternative

[12] Including shrimp trawl, menhaden purse seine, coastal gillnet, pelagic longline, trap/pot, and charter boat/head boat fisheries.

[13] Such as alternate platforms, electronic monitoring, or aerial surveillance.

fishing methods. Other restoration projects submitted to the portal that would monitor recovery of injured marine mammals and/or minimize adverse effects include habitat use studies, research on prey species and their availability, implementation of the Gulf of Mexico Dolphin Identification System (to share information from photo-identification studies among researchers and stranding network members throughout the Gulf), development and testing of alternative survey techniques (i.e., unmanned aerial vehicles (e.g., drones) and passive acoustic monitoring), removal of debris and other harmful materials from high-use habitat, documenting and preventing illegal feeding and harassment, encouraging timely reporting of unusual or out-of-habitat marine mammal sightings in phone-based apps (such as Whale Alert), developing and distributing appropriate outreach materials for anglers and recreational boaters[14], and enforcement of protection measures.

Although we recognize the enormity of the impact of the oil spill on Louisiana's natural resources, and acknowledge the LA TIG's assertion that additional approaches to marine mammal restoration would be addressed in future RP/EAs, the process for developing restoration plans for marine mammals seems unnecessarily slow, restrictive, and inefficient. It has also delayed funding of projects to facilitate restoration of marine mammals in an area that suffered significant injury. The proposed budget of $3,095,628 for the LA TIG's preferred alternative represents only 6 percent of the $50 million[15] in total funding available for marine mammals in the Louisiana restoration area. As such, the Commission recommends that the LA TIG immediately (1) identify which of the seven other restoration approaches for marine mammals identified in the PDARP are priorities for restoration in Louisiana, (2) initiate restoration planning to address other high-priority restoration approaches for marine mammals, and (3) publish a schedule for development of subsequent marine mammal restoration plans and allocation of the remaining restoration funds for marine mammals.

The Commission appreciates the opportunity to review the draft RP/EA and hopes that the LA TIG finds these comments helpful. Please contact me if you have any questions concerning any issues raised in this letter.

Sincerely,

Peter O. Thomas, Ph.D.,
Executive Director

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[14] The Louisiana Sea Grant office could be a useful partner in the development of outreach materials for the public and specifically commercial and recreational fishermen.

[15] Additional funding (beyond the $50 million for marine mammals) was allocated under the NRDA settlement agreement for other restoration categories and types, monitoring and adaptive management, planning, and administrative oversight (DWH NRDA Trustees 2016).

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