

I am in support of the mitigations proposed by NMFS and Port Dolphin to ensure minimal harm on the Atlantic spotted dolphin and bottlenose dolphin (including all of the following: compliance with regulatory permits, briefings between Port Dolphin construction supervisors and crew, compliance with equipment sound standards, a visual monitoring program, vessel strike avoidance measures, line and cable entanglement avoidance measures, and marine debris and waste management protocols). Yet I suggest the parties more carefully consider including a mitigation that ensures compliance on appropriate temporal (both seasonal and diurnal) scales to further ensure minimal harm on the proposed marine mammals.

For migratory cetaceans with varying diurnal behaviors, there are likely times of the day and year when noise may disproportionately affect marine mammal behavior (Cox et al. 2006, Nowacek and Wells 2001 among many other studies). To most effectively minimize harm, Port Dolphin should maximize activity during periods of inactivity in marine mammals. The parties consider the seasonal fluctuations in abundance of marine mammals when calculating degree of harm on page 55,671 (Estimated Take by Incidental Harassment). Harm is minimized because Port Dolphin appropriately coincides 'louder' activities with seasons when observed abundances are fewer (inshore pipelaying entirely during fall, 60% of offshore pipelaying). Yet there is no binding mitigation that ensures Port Dolphin will complete its tasks during the time scales it used to calculate minimal harm.

On shorter temporal scales, more disruptive activities such as vibratory pile driving are designated to occur for only 8 days (unarguably a duration likely to have minimal impact). Port Dolphin could even further minimize harm by overlapping these activities with periods of likely inactivity of marine mammals on the days when it proposes to conduct these activities. While I do not believe this merits listing under mitigations, this is an example of temporal considerations that were lacking in the proposed ruling.

While changes in durations of high impact noise harassment are unlikely to have a substantial effect on the overall maximum estimated take per year (current estimates are below 0.1% for Atlantic spotted dolphins), this would allow Port Dauphin the opportunity to be a leader in complying with the MMPA by recognizing and accounting for the behavioral lifestyle of the marine mammals at risk.

Cox TM, Ragen TJ, Vos E et al. 2006. Understanding the impacts of anthropogenic sound on beaked whales. *Journal of Cetacean Resource Management*. 7(3): 177-187.

Nowacek SM, and Wells RS. 2001. Short-term effects of boat traffic on bottlenose dolphins, *Tursiops truncatus*, in Sarasota Bay, Florida. *Marine Mammal Science*. 17(4): 673-688.



MARINE MAMMAL COMMISSION

25 October 2012

Mr. P. Michael Payne, Chief
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910-3225

Dear Mr. Payne:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the application from Port Dolphin Energy LLC (Port Dolphin) seeking issuance of regulations under section 101(a)(5)(A) of the Marine Mammal Protection Act. The taking would be incidental to construction and operation of an offshore liquefied natural gas facility, Port Dolphin Deepwater Port, in the Gulf of Mexico. The proposed activities would occur from July 2013 through May 2018. The Commission also has reviewed the National Marine Fisheries Service's 10 September 2012 notice (77 Fed. Reg. 55646) announcing receipt of the application and proposing to issue the authorization, subject to certain conditions.

RECOMMENDATIONS

The Marine Mammal Commission recommends that the National Marine Fisheries Service—

- provide greater assurance that no more than small numbers of each marine mammal species in the area will be taken and that, for each species or stock, the overall impact will be negligible by basing its determinations on (1) the estimated mean number of individuals of each species in the area that may be taken plus some measure of uncertainty for each species or (2) the estimated maximum number of each species in the project area that may be taken;
- require Port Dolphin to expand the size of the Level A harassment zone for buoy installation, pipeline burial, and pipe laying activities to at least 200 m;
- require Port Dolphin to submit the preliminary results of its in-situ sound source measurements to the Service and adjust the size of the Level A and B harassment zones, as necessary, within five days after it initiates construction activities;
- require Port Dolphin to monitor the full extent of the Level A and B harassment zones to detect the presence and characterize the behavior of marine mammals during all construction activities;
- require Port Dolphin to install and maintain passive acoustic monitoring equipment at the proposed port to (1) determine ambient (pre-construction), construction, and operational (post-construction) sound levels and (2) monitor the occurrence of marine mammals in the vicinity of the port; and
- require Port Dolphin to provide the Service with sound measurements collected from passive acoustic recorders as part of its reporting requirements, and also to make that data

available to the Gulf of Mexico Coastal Ocean Observing System for integration with other oceanographic data.

RATIONALE

Port Dolphin has proposed to construct and operate the Port Dolphin Deepwater Port facility located off Tampa Bay, Florida, in the Gulf of Mexico. Port Dolphin would install a moored offloading buoy system with two submersible buoys using an impact hammer in water 31 m in depth. It then would install 74 km of pipeline connecting the deepwater port to shoreside facilities at Port Manatee in Tampa using five main techniques—plowing, trenching, dredging, horizontal drilling (with vibratory pile driving of support structures), and covering with concrete mattresses or rock armoring. Use of those techniques would depend on the type of sediment and presence of any physical barriers. Construction activities would begin in June 2013 and would continue for 11 months.

Port Dolphin would begin operations once construction is complete. The operations would involve the maneuvering, docking, regasification, and offloading of liquefied natural gas from up to two shuttle regasification vessels at a time. The vessels would use thrusters to maneuver during these processes and both the thrusters and regasification systems would add additional sound to the marine environment. Both construction and operation activities could occur during day or night, except impact pile driving would be restricted to daylight hours only.

The National Marine Fisheries Service proposes to authorize the taking of bottlenose dolphins and Atlantic spotted dolphins by Level B harassment incidental to construction and operation of the deepwater port. The Service preliminarily has determined that the proposed activities could result in a temporary modification in the behavior of small numbers of those two species, but that the total taking would have a negligible impact on the affected species or stocks. The Service does not anticipate any take of marine mammals by death or serious injury and believes that the potential for disturbance will be at the least practicable level because of the proposed mitigation and monitoring measures. Those measures would include—

- (1) using the minimum power required to drive piles with impact hammers;
- (2) using a Service-approved sound attenuation device for impact pile driving;
- (3) using no more than one impact hammer at any given time;
- (4) conducting in-situ sound propagation measurements during construction and operation activities and during periods of no construction or operation activities;
- (5) using two trained and experienced vessel-based observers to monitor visually the Level A and Level B harassment zones during daylight hours throughout all construction activities, except when poor visibility conditions make observations impossible;
- (6) using ramp-up procedures during pile-driving activities and using shut-down procedures during all construction activities;
- (7) prohibiting impact pile driving during nighttime hours or poor visibility conditions;
- (8) prohibiting operators from ramping up during pile driving unless the entire Level A harassment zone can be monitored;
- (9) monitoring the Level A harassment zone for marine mammals 30 minutes prior to, during, and for 30 minutes after construction activities;

- (10) using sound-muffling devices or engine covers, when appropriate, and turning off engines and equipment when not in use;
- (11) implementing vessel strike mitigation measures;
- (12) using best management practices to avoid impacts from lighting, entanglement in lines and cables, discarded debris, turbidity, anchoring, and seawater intake and discharge;
- (13) reporting injured and dead marine mammals to the Service and the local stranding network using the Service's phased approach and suspending activities, if appropriate;
- (14) requiring an adaptive management process; and
- (15) submitting a report to the Service summarizing all marine mammal monitoring and construction activities at the end of construction activities, annual reports of monitoring and operations activities, and a five-year comprehensive report.

With certain exceptions, the Service's proposed suite of mitigation and monitoring measures appears to be generally thorough and appropriate for the activities being considered. The exceptions are as follows.

Estimation of takes

Port Dolphin estimated the expected number of takes by Level B harassment using the size of the Level B harassment zone and estimates of marine mammal densities from a U.S. Navy review of available marine mammal survey data for the eastern Gulf of Mexico (U.S. Department of Navy 2003). Although the density data were obtained in the same area and during the same season as the proposed activities, Port Dolphin did not appear to consider the uncertainty (e.g., standard deviation, standard error, or coefficient of variation) in those densities. That information would provide decision-makers with a better sense of the confidence level associated with the take estimates. To address this concern, the Marine Mammal Commission recommends that the National Marine Fisheries Service provide greater assurance that no more than small numbers of each marine mammal species in the area will be taken and that, for each species or stock, the overall impact will be negligible by basing its determinations on (1) the estimated mean number of individuals of each species in the area that may be taken plus some measure of uncertainty for each species or (2) the estimated maximum number of each species in the project area that may be taken.

Mitigation and monitoring measures

The size of the Level A harassment zones proposed for buoy installation, pipeline burial, and pipe laying appears to be inadequate to ensure that Level A harassment is avoided. The proposed rule specified a 250-m Level A harassment zone for impact pile-driving activities and a 91-m Level A harassment zone for all other activities. Table 6 of the *Federal Register* notice indicated that the distances to the 180-dB re 1 μ Pa threshold for buoy installation, pipeline burial, and pipe laying are less than 200 m, but presumably greater than 91 m. To ensure that the size of the Level A harassment zone to be monitored is sufficient to avoid taking dolphins by Level A harassment, the Marine Mammal Commission recommends that the National Marine Fisheries Service require Port Dolphin to expand the size of the Level A harassment zone for buoy installation, pipeline burial, and pipe laying activities to at least 200 m.

The distances to the Level A and B harassment thresholds listed in Table 6 were based on modeled scenarios from representative sound sources used during other projects. Port Dolphin has

indicated that in-situ sound source measurements would be made for all construction and operation activities to verify the appropriate size of the Level A harassment zone for each activity. However, the proposed rule does not indicate when the results of those measurements would be submitted to the Service. For other projects, the Service has required applicants to submit initial sound source analyses within five days of completion of the measurements (e.g., 77 Fed. Reg. 49922). To ensure that adjustments to the sizes of the Level A harassment zones are made in a timely manner, the Marine Mammal Commission recommends that the National Marine Fisheries Service require Port Dolphin to submit the preliminary results of its in-situ sound source measurements to the Service and adjust the size of the Level A and B harassment zones, as necessary, within five days after it initiates construction activities.

The proposed authorization included monitoring by protected species observers to implement shut-down or delay procedures, validate take estimates, and document marine mammal responses. The authorization would require Port Dolphin to visually monitor the marine mammals in the Level A and B harassment zones and, to the extent possible, identify the marine mammals by species. However, the Service indicated that because of the large size of the Level B harassment zones, it will require monitoring only to a maximum line-of-sight distance from established monitoring locations; no further rationale was provided for not monitoring the entire area within the Level B harassment zones. Marine mammal responses to the proposed construction activities are not well studied and monitoring of both the Level A and B harassment zones during all construction activities is the only way to ensure that unexpected responses are detected, documented, and evaluated. Monitoring also is the only way for the Service and Port Dolphin to be confident that they are causing the least practicable impact. The Marine Mammal Commission recommends that the National Marine Fisheries Service require Port Dolphin to monitor the full extent of the Level A and B harassment zones to detect the presence and characterize the behavior of marine mammals during all construction activities.

Construction versus operations

Finally, all the mitigation and monitoring measures listed above pertain to construction activities only. Those measures will not provide information on potential changes in habitat use by marine mammals in the area because of the increased vessel presence and noise (i.e., disturbance) during normal operations. The Service noted several sources of natural and human-caused sound in Tampa Bay and the adjoining shelf, but ambient sound levels in the mooring area are not well known. In addition, a failure during normal operations could lead to extensive disturbance of the mooring and pipeline areas. All of these concerns provide reasonable justification for assessing sound levels and the presence of marine mammals over time. Passive acoustic monitoring devices at the port could provide information on sound levels prior to construction, during construction, and during port operations and also on the occurrence and seasonal movements of vocalizing dolphins and other marine mammals in the vicinity of the port. The latter could provide a useful index of marine mammal habitat use and the potential effects of port operations. All of that information is necessary to assess potential long-term effects of the proposed operations. Therefore, the Marine Mammal Commission recommends that the National Marine Fisheries Service require Port Dolphin to install and maintain passive acoustic monitoring equipment at the proposed port to (1) determine ambient (pre-construction), construction, and operational (post-construction) sound levels and (2) monitor the occurrence of marine mammals in the vicinity of the port. The Marine Mammal Commission further recommends that the National Marine Fisheries Service require Port Dolphin

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to provide the Service with sound measurements collected from passive acoustic recorders as part of its reporting requirements, and also to make that data available to the Gulf of Mexico Coastal Ocean Observing System for integration with other oceanographic data.

The Commission hopes you find these recommendations and comments helpful. Please contact me if you have questions concerning them.

Sincerely,

A handwritten signature in blue ink that reads "Timothy J. Ragen". The signature is fluid and cursive, with the first name "Timothy" and last name "Ragen" clearly legible.

Timothy J. Ragen, Ph.D.
Executive Director

Reference

U.S. Department of the Navy. 2003. Estimation of marine mammal and sea turtle densities in the Eastern Gulf of Mexico Operational Region, Technical Report. Naval Facilities Engineering Command, Norfolk, VA. Contract #N62477-00-D-0159, CTO 009.

October 24, 2012

Michael Payne
Chief Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910

RE: 50 CFR Part 217: Taking and Importing Marine Mammals; Taking Marine Mammals
Incidental to Construction and Operation of a Liquefied Natural Gas
Deepwater Port in the Gulf of Mexico; Proposed Rule

Dear Michael Payne,

I would like to thank you for this opportunity to comment on the National Marine Fisheries Service's ("NMFS") proposed rule regarding the incidental taking of marine animals in the Gulf of Mexico (Docket # 110801452-2387-03). I am Lauren MacDonald, a second-year law student at Quinnipiac University School of Law, and am studying the administrative process for rulemaking. I am particularly interested in environmental regulations that affect sea life and the public as a whole. Altogether, I agree that the proposed regulations governing the construction and operation of the Dolphin Deepwater Port ("DWP") are intended to mitigate the incidental taking of marine animals off the coast of Tampa. The critical aspect of this proposed rule is the attention given to the amount of sound affecting the coastal area and the use of qualified protected species observers ("PSOs") that would monitor and record marine mammal activity. However, I believe there are many questions left unanswered by the proposed rule and a lack of attention given to the stock of bay bottlenose dolphins. Also, certain sections could benefit from clarification to the public and other affected entities in order to better comprehend what will be occurring for the next five years.

I. Incidental take should be estimated for the bay, sound, and estuarine stocks of bottlenose dolphins due to increased vulnerability and unique characteristics found in these stocks compared to the coastal stocks.

NMFS states in the negligible impact section of the rule that the estimated number of bay, sound, and estuarine dolphin stock is at 719.¹ This fact means there are an average number of dolphins in that stock and that the amount of takes from the DWP can be estimated. The rule says it is difficult to find the quantitative effects between the coastal stock versus the smaller bay, sound, and estuarine stocks of bottlenose dolphins due to mixing. However, bottlenose dolphins found in Sarasota Bay, FL, Tampa Bay, FL, Charlotte Harbor, FL and Matagorda Bay, TX in the Gulf

¹ Taking and Importing Marine Mammals: Taking Marine Mammals Incidental to Construction and Operation of a Liquefied Natural Gas Deepwater Port in the Gulf of Mexico, 77 Fed. Reg. 175, 556575 (Sept. 10, 2012) (to be codified at 50 CFR pt. 217) *available at* <http://www.regulations.gov/#!documentDetail;D=NOAA-NMFS-2012-0194-0001>.

of Mexico have been found to be genetically unique compared to the coastal stocks.² There are differences of reproductive seasonality between the bay, sound and estuary communities and coastal stocks.³ Even though mixing could occur, these facts show distinct characteristics of the communities and show they generally stay in a certain location.⁴ These differences show the necessity of understanding the separate communities of bottlenose dolphins. NMFS states that the taking of bay dolphins will nonetheless be negligible due to limited construction and the sound disruption already occurring in the bay. The fact that Tampa Bay is heavily industrialized and used by recreational boaters does not support the increase in sound pollution. This is not a good policy because these dolphins are already exposed to sound pollution and this does not mean that the increase of noise in their community will not disturb them further. Rather there is a higher probability that these bay dolphins could be injured from the heavy industry in the area and this could reduce their small population even further. In 2006, two bottlenose dolphins were found stranded near Tampa Bay with recreational fishing gear in their stomachs.⁵ Even though the proposed construction should not be contributing to these strandings, it is still important to account for the fact that bay dolphins have other human interactions that put them at a greater risk of injury and death than coastal dolphins.

In the “Negligible Impact and Small Numbers Analysis and Preliminary Determination” section on page 55675, the bay dolphins are only predicted to experience a negligible impact because any takes are likely to represent repeated takes using the area rather than every take being a new individual. The rationale behind this statement seems to be that the numbers affected will be fairly low because it will be the same dolphins in the area. However, this does not make sense concerning the extent of the disturbance that these bay dolphins will be experiencing. According to NOAA Fisheries Service, “human and/or natural impacts are often localized in certain areas creating more potential impacts on the health of that particular stock or smaller community rather than on the larger population.”⁶ The construction and activity in the bay will be more dangerous to the habitat of the bay dolphin stock due to the relatively small population size and therefore it should be looked at more carefully than other communities. When the rule considered negligible impact on the bay dolphins it prioritized having a smaller number of dolphins affected at a much higher rate without explaining why this would be better on the bay dolphins individually or as a species.

Table 7 labeled “Marine Mammals in the Gulf of Mexico” on page 55658 is useful to look at all the types of species in the Gulf of Mexico but is not helpful in understanding which mammals will be affected in the current project area of the DWP. The table does not break down the possible habitats marine mammals live in according to the way the proposed rule does. The rule states that the project area encompasses coastal and shelf waters of the eastern Gulf, which would appear to be the two boxes in the habitat chart, labeled “coastal” and “shelf.” The current

² A.B. Sellas, et. al., *Mitochondrial and nuclear DNA analyses reveal fine scale geographic structure in bottlenose dolphins (*Tursiops truncatus*) in the Gulf of Mexico*, 6(5) CONSERV. GENET. 715-28 (2005).

³ K.W. Urian, et.al., *Seasonality of reproduction in bottlenose dolphins, *Tursiops truncatus**, 77 J. MAMM. 394-403 (1996).

⁴ NOAA Fisheries Service, Southeast Regional Office, *FAQ's - Bottlenose Dolphin Stealing Behavior and Deaths Associated with Recreational Fishing Gear*, available at <http://sero.nmfs.noaa.gov/pr/mm/dolphins/bdconservation.htm>.

⁵ *Id.* at 9.

⁶ *Id.*

project area predominantly affects bottlenose dolphin and Atlantic spotted dolphin but it is confusing why there are many other marine mammals listed as occurring commonly in the shelf but are not included in the rule. If the rule wants to specifically look at the marine animals in the project area of the northern and eastern Gulf, then a chart describing the animals only found in that location should be used to clarify this.

II. Monitoring and shutdown protocols need to be clarified in order to achieve the policy of preventing any further unnecessary marine animal takes.

One major issue with the “Monitoring and Shutdown” and “Monitoring Protocols” sections is that some of the policy set forth contradicts the purpose of these sections. The rule states, “PSOs will be on watch at all times during daylight hours when in-water operations are being conducted, unless conditions (e.g., fog, rain, darkness) make observations impossible.”⁷ It is understandable that observations of marine animals cannot occur when sight is hindered, however the in-water operations are not halted when there is low visibility. The whole purpose of the “Monitoring and Shutdown” section is to protect marine mammals that are too close to the in-water construction and cease operations if marine animals are seen. Clearly this goal cannot be accomplished if weather conditions do not allow the PSOs to monitor and alert the staff to cease operations when a marine animal is spotted approaching the shutdown zone. Also, it is not clear as to who makes the determination that observations are impossible. Is this the PSO’s duty, vessel staff, or another official in charge?

Another clarification is needed regarding whether operations will be conducted after daylight hours. The rule does not make clear whether PSOs will only be observing during daylight hours while operations continue into the night or if “operating hours” are only daylight hours.⁸ In previous regulations NMFS has stated that certain activities (e.g. pile removal) can, only occur during daylight hours.⁹ In the current rule there is no specification as to certain activities only occurring during daylight hours. Certain activities of a high vibratory sound like pile driving should only be done in daylight hours when a PSO can monitor the encroachment of possible marine mammals in the disturbance zone.

Another issue in this section found on page 55666, describes a scenario when a whole fleet of vessels would be working on the construction project. In this instance, the shutdown and disturbance zone will be measured from the central vessel or the vessel with the most noise. This rule seems to try to protect marine animals in the instance of a fleet, however if all the vessels make the same amount of disrupting sound then the zone is only measured from the central one. This poses a problem if a marine animal is approaching too closely to the outermost vessel but is not technically in the shutdown/disturbance zone because it is only measured from the central vessel.

⁷ Taking and Importing, *supra* note 1 at 55666.

⁸ *Id.*

⁹ Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to a Pile Replacement Project, 77 Fed. Reg. 141, 43057 (July 23, 2012), *available at* <http://www.gpo.gov/fdsys/pkg/FR-2012-07-23/html/2012-17638.htm>.

In the “Monitoring and Shutdown” section, the rule states that the shutdown requirements do not apply during bow riding when dolphins voluntarily choose to get close to the vessel while it is moving.¹⁰ This is a practical rule however it does not make clear how it defines voluntarily. Would this apply only in instances of bow riding? Or does this apply in all instances when dolphins are in the area? This rule has the potential to be very broad if it applies “voluntarily” as whenever a dolphin is in the affected area because the dolphin “chose” to be in the area. Other marine animals, like whales, can choose to approach the shutdown zone and are still protected by the rule. The same protection should be afforded to dolphins as long as they are not intentionally following the vessel and causing unnecessary delay of operations.

I believe this rule should be clarified to increase the level of understanding to affected entities while also reexamining critical stocks of bay, sound, and estuarine stocks of dolphins. I appreciate the opportunity to comment on this NMFS rule and am open to discussing my views in the future.

Sincerely,

\s/

Lauren MacDonald
J.D. Candidate ‘14
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¹⁰ Taking and Importing, *supra* note 1 at 55666.



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October 23, 2012

Michael Payne, Chief
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910

Re: Comments on the Proposed Rule of Taking Marine Mammals Incidental to Construction and Operation of a Liquefield Natural Gas Deepwater Port in the Gulf of Mexico

Dear Mr. Payne:

The Department of the Interior (Department) has reviewed the Proposed Rule of Taking Marine Mammals Incidental to Construction and Operation of a Liquefield Natural Gas Deepwater Port in the Gulf of Mexico. We have no comments at this time.

If you have questions or need additional information, I can be reached on (404) 331-4524 or via email at joyce_stanley@ios.doi.gov.

Sincerely,

Joyce Stanley, MPA
Regional Environmental Protection Specialist

cc: Jerry Ziewitz - FWS
Brenda Johnson - USGS
David Vela - NPS
Chester McGhee - BIA
Tommy Broussard - BOEMRE
OEPC - WASH