

**DEPARTMENT OF COMMERCE****National Oceanic and Atmospheric Administration**

[RTID 0648–XD086]

**Taking and Importing Marine Mammals; Taking Marine Mammals Incidental to Geophysical Surveys Related to Oil and Gas Activities in the Gulf of Mexico**

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Notice of issuance of Letter of Authorization.

**SUMMARY:** In accordance with the Marine Mammal Protection Act (MMPA), as amended, its implementing regulations, and NMFS' MMPA Regulations for Taking Marine Mammals Incidental to Geophysical Surveys Related to Oil and Gas Activities in the Gulf of Mexico (GOM), notification is hereby given that a Letter of Authorization (LOA) has been issued to LLOG Exploration Company (LLOG) for the take of marine mammals incidental to geophysical survey activity in the GOM.

**DATES:** The LOA is effective from July 1, 2023, through July 5, 2025.

**ADDRESSES:** The LOA, LOA request, and supporting documentation are available online at: [www.fisheries.noaa.gov/action/incidental-take-authorization-oil-and-gas-industry-geophysical-survey-activity-gulf-mexico](http://www.fisheries.noaa.gov/action/incidental-take-authorization-oil-and-gas-industry-geophysical-survey-activity-gulf-mexico). In case of problems accessing these documents, please call the contact listed below (see **FOR FURTHER INFORMATION CONTACT**).

**FOR FURTHER INFORMATION CONTACT:** Rachel Wachtendonk, Office of Protected Resources, NMFS, (301) 427–8401.

**SUPPLEMENTARY INFORMATION:****Background**

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed authorization is provided to the public for review.

An authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible

impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant), and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth. NMFS has defined “negligible impact” in 50 CFR 216.103 as an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.

Except with respect to certain activities not pertinent here, the MMPA defines “harassment” as: any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

On January 19, 2021, we issued a final rule with regulations to govern the unintentional taking of marine mammals incidental to geophysical survey activities conducted by oil and gas industry operators, and those persons authorized to conduct activities on their behalf (collectively “industry operators”), in Federal waters of the U.S. GOM over the course of 5 years (86 FR 5322, January 19, 2021). The rule was based on our findings that the total taking from the specified activities over the 5-year period will have a negligible impact on the affected species or stock(s) of marine mammals and will not have an unmitigable adverse impact on the availability of those species or stocks for subsistence uses. The rule became effective on April 19, 2021.

Our regulations at 50 CFR 217.180 *et seq.* allow for the issuance of LOAs to industry operators for the incidental take of marine mammals during geophysical survey activities and prescribe the permissible methods of taking and other means of effecting the least practicable adverse impact on marine mammal species or stocks and their habitat (often referred to as mitigation), as well as requirements pertaining to the monitoring and reporting of such taking. Under 50 CFR 217.186(e), issuance of an LOA shall be based on a determination that the level of taking will be consistent with the findings made for the total taking allowable under these regulations and a determination that the amount of take

authorized under the LOA is of no more than small numbers.

**Summary of Request and Analysis**

LLOG plans to conduct one of the following vertical seismic profile (VSP) survey types: Zero Offset, Offset, Walkaway VSP, and/or Checkshots within Alaminos Canyon Block 380. The survey area has water depths of 1,000 to 2,000 m (4,000 to 6,500 feet). LLOG plans to use either a 12-element, 2,400 cubic inch (in<sup>3</sup>) airgun array, or a 6-element, 1,500 in<sup>3</sup> airgun array. The survey is planned to occur for up to five days during the period from July 1, 2023, to July 5, 2025. Please see LLOG's application for additional detail.

Consistent with the preamble to the final rule, the survey effort proposed by LLOG in its LOA request was used to develop LOA-specific take estimates based on the acoustic exposure modeling results described in the preamble (86 FR 5322, January 19, 2021). In order to generate the appropriate take number for authorization, the following information was considered: (1) survey type; (2) location (by modeling zone<sup>1</sup>); (3) number of days; and (4) season.<sup>2</sup> The acoustic exposure modeling performed in support of the rule provides 24-hour exposure estimates for each species, specific to each modeled survey type in each zone and season.

No VSP surveys were included in the modeled survey types, and use of existing proxies (*i.e.*, 2D, 3D NAZ, 3D WAZ, Coil) is generally conservative for use in evaluation of VSP survey effort. Summary descriptions of these modeled survey geometries are available in the preamble to the proposed rule (83 FR 29212, June 22, 2018). Coil was selected as the best available proxy survey type because the spatial coverage of the planned survey is most similar to that associated with the coil survey pattern.

For the planned survey, the seismic source array will be deployed in one of the following forms: Zero Offset VSP—deployed from a drilling rig at or near the borehole, with the seismic receivers (*i.e.*, geophones) deployed in the borehole on wireline at specified depth intervals; Offset VSP—in a fixed position deployed from a supply vessel on an offset position; Walkaway VSP—attached to a line, or a series of lines, towed by a supply vessel; 3D VSP—moving along a spiral or line swaths towed by a supply vessel or using a

<sup>1</sup> For purposes of acoustic exposure modeling, the GOM was divided into seven zones. Zone 1 is not included in the geographic scope of the rule.

<sup>2</sup> For purposes of acoustic exposure modeling, seasons include Winter (December–March) and Summer (April–November).

source vessel; or Checkshots—similar to Zero Offset VSP, typically hung from a platform and a sensor placed at a few depths in the well, where only the first energy arrival is recorded. All possible source assemblages except for 3D VSP will be stationary. If 3D VSP is used as the survey design, the area that would be covered would be up to three times the total depth of the well centered around the well head. The coil survey pattern in the model was assumed to cover approximately 144 kilometers squared (km<sup>2</sup>) per day (compared with approximately 795 km<sup>2</sup>, 199 km<sup>2</sup>, and 845 km<sup>2</sup> per day for the 2D, 3D NAZ, and 3D WAZ survey patterns, respectively). Among the different parameters of the modeled survey patterns (e.g., area covered, line spacing, number of sources, shot interval, total simulated pulses), NMFS considers area covered per day to be most influential on daily modeled exposures exceeding Level B harassment criteria. Because LLOG's planned survey is expected to cover either no additional area as a stationary source, or at most up to three times the total depth of the well centered around the well head, the coil proxy is most representative of the effort planned by LLOG in terms of predicted Level B harassment.

In addition, all available acoustic exposure modeling results assume use of a 72 element, 8,000 in<sup>3</sup> array. Thus, estimated take numbers for this LOA are considered conservative due to the differences in both the airgun array (maximum 12 elements and 2,400 in<sup>3</sup>), and in daily survey area planned by LLOG (as mentioned above), as compared to those modeled for the rule.

The survey is planned to occur in Zone 6. The survey could take place in any season. Therefore, the take estimates for each species are based on the season that has the greater value for the species (i.e., winter or summer).

Additionally, for some species, take estimates based solely on the modeling yielded results that are not realistically likely to occur when considered in light of other relevant information available during the rulemaking process regarding marine mammal occurrence in the GOM. The approach used in the acoustic exposure modeling, in which seven modeling zones were defined over the U.S. GOM, necessarily averages fine-scale information about marine mammal distribution over the large area of each modeling zone. This can result in unrealistic projections regarding the likelihood of encountering particularly rare species and/or species not expected to occur outside particular habitats. Thus, although the modeling conducted for the rule is a natural starting point for

estimating take, our rule acknowledged that other information could be considered (see, e.g., 86 FR 5322, (January 19, 2021), discussing the need to provide flexibility and make efficient use of previous public and agency review of other information and identifying that additional public review is not necessary unless the model or inputs used differ substantively from those that were previously reviewed by NMFS and the public). For this survey, NMFS has other relevant information reviewed during the rulemaking that indicates use of the acoustic exposure modeling to generate a take estimate for Rice's whales and killer whales produces results inconsistent with what is known regarding their occurrence in the GOM. Accordingly, we have adjusted the calculated take estimates for those species as described below.

NMFS' final rule described a "core habitat area" for Rice's whales (formerly known as GOM Bryde's whales)<sup>3</sup> located in the northeastern GOM in waters between 100–400 m depth along the continental shelf break (Rosel *et al.*, 2016). However, whaling records suggest that Rice's whales historically had a broader distribution within similar habitat parameters throughout the GOM (Reeves *et al.*, 2011; Rosel and Wilcox, 2014). In addition, habitat-based density modeling identified similar habitat (i.e., approximately 100–400 m water depths along the continental shelf break) as being potential Rice's whale habitat (Roberts *et al.*, 2016), although the core habitat area contained approximately 92 percent of the predicted abundance of Rice's whales. See discussion provided at, e.g., 83 FR 29228, 83 FR 29280 (June 22, 2018); 86 FR 5418 (January 19, 2021).

Although Rice's whales may occur outside of the core habitat area, we expect that any such occurrence would be limited to the narrow band of suitable habitat described above (i.e., 100–400 m) and that, based on the few available records, these occurrences would be rare. LLOG's planned activities will occur in water depths of approximately 1,000–2,000 m in the central GOM. Thus, NMFS does not expect there to be the reasonable potential for take of Rice's whale in association with this survey and, accordingly, does not authorize take of Rice's whale through the LOA.

<sup>3</sup> The final rule refers to the GOM Bryde's whale (*Balaenoptera edeni*). These whales were subsequently described as a new species, Rice's whale (*Balaenoptera ricei*) (Rosel *et al.*, 2021).

Killer whales are the most rarely encountered species in the GOM, typically in deep waters of the central GOM (Roberts *et al.*, 2015; Maze-Foley and Mullin, 2006). As discussed in the final rule, the density models produced by Roberts *et al.* (2016) provide the best available scientific information regarding predicted density patterns of cetaceans in the U.S. GOM. The predictions represent the output of models derived from multi-year observations and associated environmental parameters that incorporate corrections for detection bias. However, in the case of killer whales, the model is informed by few data, as indicated by the coefficient of variation associated with the abundance predicted by the model (0.41, the second-highest of any GOM species model; Roberts *et al.*, 2016). The model's authors noted the expected non-uniform distribution of this rarely-encountered species (as discussed above) and expressed that, due to the limited data available to inform the model, it "should be viewed cautiously" (Roberts *et al.*, 2015).

NOAA surveys in the GOM from 1992–2009 reported only 16 sightings of killer whales, with an additional 3 encounters during more recent survey effort from 2017–2018 (Waring *et al.*, 2013; [www.boem.gov/gommapps](http://www.boem.gov/gommapps)). Two other species were also observed on fewer than 20 occasions during the 1992–2009 NOAA surveys (Fraser's dolphin and false killer whale<sup>4</sup>). However, observational data collected by protected species observers (PSOs) on industry geophysical survey vessels from 2002–2015 distinguish the killer whale in terms of rarity. During this period, killer whales were encountered on only 10 occasions, whereas the next most rarely encountered species (Fraser's dolphin) was recorded on 69 occasions (Barkaszi and Kelly, 2019). The false killer whale and pygmy killer whale were the next most rarely encountered species, with 110 records each. The killer whale was the species with the lowest detection frequency during each period over which PSO data were synthesized (2002–2008 and 2009–2015). This information qualitatively informed our rulemaking process, as discussed at 86 FR 5322, 86 FR 5334 (January 19, 2021), and similarly informs our analysis here.

The rarity of encounter during seismic surveys is not likely to be the product of high bias on the probability of detection. Unlike certain cryptic species

<sup>4</sup> However, note that these species have been observed over a greater range of water depths in the GOM than have killer whales.

with high detection bias, such as *Kogia* spp. or beaked whales, or deep-diving species with high availability bias, such as beaked whales or sperm whales, killer whales are typically available for detection when present and are easily observed. Roberts *et al.* (2015) stated that availability is not a major factor affecting detectability of killer whales from shipboard surveys, as they are not a particularly long-diving species. Baird *et al.* (2005) reported that mean dive durations for 41 fish-eating killer whales for dives greater than or equal to 1 minute in duration was 2.3–2.4 minutes, and Hooker *et al.* (2012) reported that killer whales spent 78 percent of their time at depths between 0–10 m. Similarly, Kvadsheim *et al.* (2012) reported data from a study of 4 killer whales, noting that the whales performed 20 times as many dives 1–30 m in depth than to deeper waters, with an average depth during those most common dives of approximately 3 m.

In summary, killer whales are the most rarely encountered species in the GOM and typically occur only in particularly deep water. This survey would take place in deep waters that would overlap with depths in which killer whales typically occur. While this information is reflected through the density model informing the acoustic exposure modeling results, there is relatively high uncertainty associated with the model for this species, and the acoustic exposure modeling applies mean distribution data over areas where the species is in fact less likely to occur. In addition, as noted above in relation to the general take estimation methodology, the assumed proxy source (72-element, 8,000-in<sup>3</sup> array) results in a significant overestimate of the actual potential for take to occur. NMFS' determination in reflection of the information discussed above, which informed the final rule, is that use of the generic acoustic exposure modeling results for killer whales will generally

result in estimated take numbers that are inconsistent with the assumptions made in the rule regarding expected killer whale take (86 FR 5322, 86 FR 5403, January 19, 2021). In this case, use of the acoustic exposure modeling produces an estimate of two killer whale exposures. Given the foregoing, it is unlikely that any killer whales would be encountered during this 5-day survey, and accordingly no take of killer whales is authorized through this LOA.

In addition, in this case, use of the exposure modeling produces results that are smaller than average GOM group sizes for multiple species (Maze-Foley and Mullin, 2006). NMFS' typical practice in such a situation is to increase exposure estimates to the assumed average group size for a species in order to ensure that, if the species is encountered, exposures will not exceed the authorized take number. However, other relevant considerations here lead to a determination that increasing the estimated exposures to average group sizes would likely lead to an overestimate of actual potential take. In this circumstance, the very short survey duration (maximum of 5 days) and relatively small Level B harassment isopleths produced through use of the (at most) 12-element, 2,400-in<sup>3</sup> airgun array (compared with the modeled 72-element, 8,000 in<sup>3</sup> array) mean that it is unlikely that certain species would be encountered at all, much less that the encounter would result in exposure of a greater number of individuals than is estimated through use of the exposure modeling results. As a result, in this case NMFS has not increased the estimated exposure values to assumed average group sizes in authorizing take.

Based on the results of our analysis, NMFS has determined that the level of taking expected for this survey and authorized through the LOA is consistent with the findings made for the total taking allowable under the regulations for the affected species or stocks of marine mammals. See Table 1

in this notice and Table 9 of the rule (86 FR 5322, January 19, 2021).

#### Small Numbers Determination

Under the GOM rule, NMFS may not authorize incidental take of marine mammals in an LOA if it will exceed "small numbers." In short, when an acceptable estimate of the individual marine mammals taken is available, if the estimated number of individual animals taken is up to, but not greater than, one-third of the best available abundance estimate, NMFS will determine that the numbers of marine mammals taken of a species or stock are small. For more information please see NMFS' discussion of the MMPA's small numbers requirement provided in the final rule (86 FR 5322, 86 FR 5438, January 19, 2021).

The take numbers for authorization, which are determined as described above, are used by NMFS in making the necessary small numbers determinations through comparison with the best available abundance estimates (see discussion at 86 FR 5322, 86 FR 5391, January 19, 2021). For this comparison, NMFS' approach is to use the maximum theoretical population, determined through review of current stock assessment reports (SAR; [www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments](http://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments)) and model-predicted abundance information (<https://seamap.env.duke.edu/models/Duke/GOM/>). For the latter, for taxa where a density surface model could be produced, we use the maximum mean seasonal (*i.e.*, 3-month) abundance prediction for purposes of comparison as a precautionary smoothing of month-to-month fluctuations and in consideration of a corresponding lack of data in the literature regarding seasonal distribution of marine mammals in the GOM. Information supporting the small numbers determinations is provided in Table 1.

TABLE 1—TAKE ANALYSIS

Species	Authorized take <sup>1</sup>	Abundance <sup>2</sup>	Percent abundance
Rice's whale .....	0	51	n/a
Sperm whale .....	121	2,207	5.5
<i>Kogia</i> spp .....	<sup>3</sup> 27	4,373	0.6
Beaked whales .....	454	3,768	12.1
Rough-toothed dolphin .....	86	4,853	1.8
Bottlenose dolphin .....	253	176,108	0.1
Clymene dolphin .....	329	11,895	2.8
Atlantic spotted dolphin .....	104	74,785	0.1
Pantropical spotted dolphin .....	761	102,361	0.7
Spinner dolphin .....	<sup>4</sup> 18	25,114	0.1
Striped dolphin .....	84	5,229	0.1
Fraser's dolphin .....	<sup>4</sup> 29	1,665	1.8
Risso's dolphin .....	63	3,764	1.7

TABLE 1—TAKE ANALYSIS—Continued

Species	Authorized take <sup>1</sup>	Abundance <sup>2</sup>	Percent abundance
Melon-headed whale .....	163	7,003	2.3
Pygmy killer whale .....	38	2,126	1.8
False killer whale .....	63	3,204	2.0
Killer whale .....	0	267	n/a
Short-finned pilot whale .....	96	1,981	4.8

<sup>1</sup> Scalar ratios were not applied in this case due to brief survey duration.

<sup>2</sup> Best abundance estimate. For most taxa, the best abundance estimate for purposes of comparison with take estimates is considered here to be the model-predicted abundance (Roberts *et al.*, 2016). For those taxa where a density surface model predicting abundance by month was produced, the maximum mean seasonal abundance was used. For those taxa where abundance is not predicted by month, only mean annual abundance is available. For Rice's whale and killer whale, the larger estimated SAR abundance estimate is used.

<sup>3</sup> Includes 1 take by Level A harassment and 26 takes by Level B harassment.

<sup>4</sup> Modeled exposure estimate less than assumed average group size (Maze-Foley and Mullin, 2006).

Based on the analysis contained herein of LLOG's proposed survey activity described in its LOA application and the anticipated take of marine mammals, NMFS finds that small numbers of marine mammals will be taken relative to the affected species or stock sizes (*i.e.*, less than one-third of the best available abundance estimate) and therefore the taking is of no more than small numbers.

**Authorization**

NMFS has determined that the level of taking for this LOA request is consistent with the findings made for the total taking allowable under the incidental take regulations and that the amount of take authorized under the LOA is of no more than small numbers. Accordingly, we have issued an LOA to LLOG authorizing the take of marine mammals incidental to its geophysical survey activity, as described above.

Dated: June 23, 2023.

**Kimberly Damon-Randall,**

*Director, Office of Protected Resources, National Marine Fisheries Service.*

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**DEPARTMENT OF COMMERCE**

**National Oceanic and Atmospheric Administration**

[RTID 0648-XC903]

**Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Marine Site Characterization Surveys Off New Jersey and New York**

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Notice; proposed incidental harassment authorization; request for

comments on proposed authorization and possible renewal.

**SUMMARY:** NMFS has received a request from Atlantic Shores Offshore Wind Bight, LLC (Atlantic Shores) for authorization to take marine mammals incidental to marine site characterization surveys offshore of New Jersey and New York in the Bureau of Ocean Energy Management (BOEM) Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf (OCS) Lease Area OCS-A 0541 and associated export cable route (ECR) area. NMFS is requesting comments on its proposal to issue an incidental harassment authorization to incidentally take marine mammals during the specified activities. NMFS is also requesting comments on a possible one-time, 1-year renewal that could be issued under certain circumstances and if all requirements are met, as described in the Request for Public Comments at the end of this notice. NMFS will consider public comments prior to making any final decision on the issuance of the requested MMPA authorization and agency responses will be summarized in the final notice of our decision.

**DATES:** Comments and information must be received no later than July 28, 2023.

**ADDRESSES:** Comments should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service. Written comments should be submitted via email to [ITP.Taylor@noaa.gov](mailto:ITP.Taylor@noaa.gov).

*Instructions:* NMFS is not responsible for comments sent by any other method, to any other address or individual, or received after the end of the comment period. Comments, including all attachments, must not exceed a 25-megabyte file size. All comments received are a part of the public record and will generally be posted online at <https://www.fisheries.noaa.gov/permit/>

*incidental-take-authorizations-under-marine-mammal-protection-act* without change. All personal identifying information (*e.g.*, name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information.

Electronic copies of the original application and supporting documents (including NMFS **Federal Register** notices of the original proposed and final authorizations, and the previous IHA), as well as a list of the references cited in this document, may be obtained online at: <https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act>. In case of problems accessing these documents, please call the contact listed below.

**FOR FURTHER INFORMATION CONTACT:** Jessica Taylor, Office of Protected Resources, NMFS, (301) 427-8401.

**SUPPLEMENTARY INFORMATION:**

**Background**

The activities described in Atlantic Shores' request, the overall survey duration, the project location, and the acoustic sources proposed for use are identical to what was previously analyzed in support of the IHA issued by NMFS to Atlantic Shores for 2022 site characterization surveys (2022 IHA) (87 FR 38067, June 27, 2022; 87 FR 50293, August 16, 2022). All proposed mitigation, monitoring, and reporting requirements remain the same. While Atlantic Shores' planned activity would qualify for renewal of the 2022 IHA, due to the availability of updated marine mammal density data (<https://seamap.env.duke.edu/models/Duke/EC/>), which NMFS has determined represents the best available scientific data, NMFS has determined to proceed with a new IHA process rather than a renewal, providing a 30-day period for