: 3510-22-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648-XF436]

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

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

ACTION: Notice; issuance of Letters 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 America (GOA), notification is hereby given that NMFS has issued six separate Letters of Authorization (LOAs) to WesternGeco, LLC (WesternGeco), TGS, Future Energy Consultants (FEC), bp Exploration & Production Inc. (bp), Viridien, and LLOG Exploration Offshore, L.L.C. (LLOG), for the take of marine mammals incidental to geophysical survey activity in the GOA.

DATES: The LOA issued to WesternGeco is effective from April 20, 2026, through August 31, 2026. The LOA issued to TGS is effective from April 20, 2026, through May 31, 2026. The LOA issued to FEC is effective from June 1, 2026, through December 31, 2026. The LOA issued to bp is effective from May 1, 2026, through August 31, 2026. The LOA issued to Viridien is effective from June 1, 2026, through May 31, 2027. The LOA issued to LLOG is effective from June 1, 2026, through April 19, 2031.

ADDRESSES: The LOAs, LOA requests, and supporting documentation are available online at: *https://www.fisheries.noaa.gov/action/incidental-take-authorization-oil-and-*

gas-industry-geophysical-survey. In case of problems accessing these documents, please call the contact listed below (see **FOR FURTHER INFORMATION CONTACT**).

FOR FURTHER INFORMATION CONTACT: Jenna Harlacher, 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 U.S. waters of the GOA[1] 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, and became effective on April 19, 2021.

The regulations at 50 CFR 217.180 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.

NMFS subsequently discovered that the 2021 rule was based on erroneous take estimates. We conducted another rulemaking using correct take estimates and other newly available and pertinent information relevant to the analyses supporting some of the

[1] Pursuant to Executive Order 14172, "Restoring Names That Honor American Greatness," and Department of the Interior Secretarial Order 3423, "The Gulf of America," the body of water formerly known as the Gulf of Mexico is now called the Gulf of America.

findings in the 2021 final rule and the taking allowable under the regulations. We issued a final rule in April 2024, effective May 24, 2024 (89 FR 31488, April 24, 2024).

On August 28, 2025, NMFS Office of Protected Resources (OPR) received a request from NMFS Office of Policy (Policy) for reimplementation of the current Incidental Take Regulation (ITR) to avoid a lapse in ITRs offering incidental take coverage for GOA geophysical survey activities. On October 20, 2025, Bureau of Ocean Energy Management (the original petitioner for the current ITRs) submitted a request to be included in the process as a co-petitioner. In response to these requests, NMFS issued a new final rule, effective April 20, 2026, through April 19, 2031 (91 FR 20784, April 17, 2026).

The reimplementation of the regulations continues the established framework for authorization of incidental take through LOAs. The final rule made no changes to the specified activities or the specified geographical region in which those activities would be conducted, and there are no changes to the associated mitigation, monitoring, and reporting requirements.

Summary of Requests and Analysis

WesternGeco

On December 3, 2025, NMFS previously issued a LOA to WesternGeco under the 2021 ITR (90 FR 56734, December 8, 2025) to take marine mammals incidental to a planned geophysical survey. Western Geco's survey was not completed by the expiration of the 2021 ITR and required issuance of a new LOA to cover survey activity through August 31, 2026. WesternGeco plans to conduct a three-dimensional (3D) ocean bottom node (OBN) survey over 200 lease blocks in the Green Canyon and Walker Ridge areas, with water depths ranging from approximately 1,400 to 3,200 meters (m). WesternGeco will use one of the following source configurations: a conventional airgun array source consisting of 28 elements with a total volume of 5,000 cubic inches (in^3) or a

combination of the conventional airgun array source and a low-frequency tuned pulse source (TPS). The TPS was not included in the acoustic exposure modeling used for the rule. However, NMFS previously reviewed these sources as "new and unusual technologies" and determined that use of TPS is not expected to cause effects beyond those considered in the rulemaking, and that use of modeling results from a traditional airgun array as a proxy for take that may occur incidental to use of the TPS is conservative. Please see WesternGeco's application and original notice of issuance (90 FR 56734, December 8, 2025) for additional details.

The current LOA will cover 92 days of sound source operation, with 11 days planned in Zone 5 and 81 days planned in Zone 7. The monthly distribution of survey days is not known in advance, though we assume that the planned 92 days of source operation would occur contiguously. Take estimates for each species are based on the time period that produces the greatest value and have been updated based on the revised survey plan. There are no other changes to the previously planned survey.

TGS

On December 20, 2024, NMFS issued a LOA to TGS (89 FR 105536, December 27, 2024) to take marine mammals incidental to a planned geophysical survey, effective December 20, 2024, through December 19, 2025. Please see the **Federal Register** notice of issuance for additional detail regarding the LOA and the survey activity.

On July 22, 2025, TGS informed NMFS that its planned survey area and timing had shifted and, accordingly, they requested a modification to the LOA to reflect the new survey area and dates. No survey activity had begun. TGS requested the expiration date be extended to April 19, 2026, and increase the survey to 105 total days of sound source operation in Zone 6. On August 19, 2025, NMFS issued a modified LOA to TGS (90 FR 41060; August 22, 2025).

On November 26, 2025, TGS notified NMFS that the survey area had changed again based on market interest. TGS requested an increase of survey days to 140 total days of sound source operation with 139 days in zone 6 and 1 day in zone 7. On December 29, 2025, NMFS issued a second modified LOA (90 FR 60651) to reflect another change to the survey area. There were no other changes to the planned survey. TGS' survey was not completed by the expiration of the 2021 ITR and required issuance of a new LOA to cover survey activity through May 31, 2026.

TGS plans to conduct a 3D OBN survey over 453 lease blocks in the East Breaks area, with water depths ranging from approximately 1,200 to 2,000 m. TGS anticipates using two source vessels with a low-frequency airgun source known as Gemini (also referred to as a dual barbell source). The Gemini source was not included in the acoustic exposure modeling used for the rule. However, NMFS previously reviewed these sources as "new and unusual technologies" and determined that it is not expected to cause effects beyond those considered in the rulemaking, and that use of modeling results from a traditional airgun array as a proxy for take that may occur incidental to use of the Gemini is conservative. Please see TGS's application and original notice for additional details (89 FR 105536, December 27, 2024).

The current LOA will cover 18 days of sound source operation in Zone 6. The monthly distribution of survey days is not known in advance, though we assume that the planned 18 days of source operation would occur contiguously. Take estimates for each species are based on the time period that produces the greatest value and have been updated based on the revised survey plan. There are no other changes to the previously planned survey.

FEC

FEC plans to conduct a FloatSeis seismic field trial survey in the lease block LA5A, with water depths ranging from approximately 50—180 m. See section F of the

LOA application for a map of the area. FEC plans to use both a 2,450 in^3 airgun array, and a 220 in^3 airgun array. Please see the LOA application for additional details.

Consistent with the preamble to the final rule, the survey effort proposed by FEC in its LOA request was used to develop LOA-specific take estimates based on the acoustic exposure modeling results described in the preamble (91 FR 20784, April 17, 2026). In order to generate the appropriate take number for authorization, the following information was considered: (1) survey type; (2) location (by modeling zone[i]); (3) number of days; (4) source; and (5) month.[ii] The acoustic exposure modeling performed in support of the rule provides 24-hour exposure estimates for each species, specific to each modeled source and survey type in each zone and month.

FEC's survey type was not included in the modeled survey types, and use of existing proxies (*i.e.,* two-dimensional (2D), 3D narrow-azimuth (NAZ), 3D wide-azimuth (WAZ), Coil) is generally conservative for use in evaluation of both types of survey efforts (i.e., survey effort using the 2,450 in^3 and 220 in^3 airgun arrays), largely due to the greater area covered by the modeled proxies. Summary descriptions of these modeled survey geometries are available in the preamble to the proposed rule (91 FR 9014, 9018, February 24, 2026). For the survey effort using the 2,450 in^3 airgun array, the 4,130 in^3 airgun array was selected as the best proxy and coil was selected as the best available proxy survey type in this case because the spatial coverage of the planned survey is most similar to the coil survey pattern.

For the survey effort using the 220 in^3 airgun array, the above proxies are conservative, therefore the exposure modeling results were generated using the single airgun proxy. Because these results assume use of a 90-in^3 airgun, the take numbers authorized for this part of the survey activity are considered the most similar to the 220 in^3 sound source planned for use by FEC, as compared to the other proxies modeled for the rule.

The survey will take place over approximately 5 days, all within Zone 2. The monthly distribution of survey days is not known in advance, though we assume that the planned 5 days of source operation would occur contiguously. Take estimates for each species are based on the time period that produces the greatest value.

bp

Bp plans to conduct a 3D OBN and distributed acoustic sensing (DAS) survey in the Garden Banks and Walker Ridge areas, with water depths ranging from approximately 700 to 2,400 m. See section F of the LOA application for a map of the area. Bp anticipates using a single source vessel towing a triple source airgun array. Each source would have a maximum of 28 elements, and total volume up to 5,110 in^3. Please see the LOA application for additional details.

Consistent with the preamble to the final rule, the survey effort proposed by bp in its LOA request was used to develop LOA-specific take estimates based on the acoustic exposure modeling results described in the preamble (91 FR 20784, April 17, 2026). In order to generate the appropriate take number for authorization, the following information was considered: (1) survey type; (2) location (by modeling zone[i]); (3) number of days; (4) source; and (5) month.[ii] In this case, because bp plans to use up to a 5,110 in^3 airgun array, the 5,110 in^3 airgun array proxy was selected. The acoustic exposure modeling performed in support of the rule provides 24-hour exposure estimates for each species, specific to each modeled source and survey type in each zone and month.

No 3D OBN or DAS 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 3D OBN or DAS survey effort, largely due to the greater area covered by the modeled proxies. Summary descriptions of these modeled survey geometries are available in the preamble to the proposed rule (91 FR 9014, 9018, February 24, 2026).

Coil was selected as the best available proxy survey type in this case because the spatial coverage of the planned survey is most similar to the coil survey pattern. The planned survey will involve a single source vessel, with total survey area coverage of approximately 2,321 kilometers squared (km^2), similar to that assumed for the coil survey proxy of 3,364 km^2. 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. Although bp is not proposing to perform a survey using the coil geometry, the coil proxy is most representative of the effort planned by bp in terms of predicted Level B harassment exposures.

The survey is estimated to include 106 days of sound source operation, with 69 days planned in Zone 5 and 37 days planned in Zone 7. The monthly distribution of survey days is not known in advance, though we assume that the planned 106 days of source operation would occur contiguously. Take estimates for each species are based on the time period that produces the greatest value.

For the Rice's whale, take estimates based on the modeling yielded results that are not realistically likely to occur when considered in light of other relevant information concerning Rice's whale habitat preferences considered during the rulemaking process. NMFS' 2026 proposed rule provided detailed discussion regarding Rice's whale habitat (see, *e.g.*, 91 FR 9014, 9026, February 24, 2026). In summary, recent survey data, sightings, and acoustic data support Rice's whale occurrence in waters throughout the GOA between approximately 100 m and 400 m depth along the continental shelf break, and associated habitat-based density modeling has identified similar habitat (*i.e.*, approximately 100 to 400 m water depths along the continental shelf break) as being Rice's whale habitat (Garrison *et al.*, 2023; Soldevilla *et al.*, 2022, 2024).

Although Rice's whales may occur outside of the general depth range expected to provide suitable habitat, we expect that any such occurrence would be rare. Bp's planned activities will occur in water depths of approximately 1,400 to 3,200 m in the central GOA. Thus, NMFS does not expect that take of Rice's whale is likely in association with this survey and, accordingly, does not authorize take of Rice's whale through the LOA.

Viridien

Viridien plans to conduct a long offset sparse OBN survey over 1,061 lease blocks in the Central GOA, with water depths ranging from approximately 600 to 1,500 m. See section F of the LOA application for a map of the area.

Viridien anticipates using two dual-source vessels and would preferentially use the low-frequency TPS. Alternatively, Viridien may use a conventional airgun array source consisting of 42 elements with a total volume of 5,220 in^3. Please see Viridien's application for additional details.

The TPS was not included in the acoustic exposure modeling developed in support of the rule. However, the TPS was previously described and evaluated in support of previous LOAs and we rely on those analyses here (86 FR 37309, 37310, July 15, 2021; 87 FR 55790, 55791, September 12, 2022). For additional details regarding sources, see section C of the LOA application. Based on this information we have determined there will be no effects of a magnitude or intensity different from those evaluated in support of the rule. NMFS therefore expects that use of modeling results supporting the final rule relating to use of airgun arrays is expected to be conservative as a proxy for use in evaluating potential impacts of use of the TPS.

Consistent with the preamble to the final rule, the survey effort proposed by Viridien in its LOA request was used to develop LOA-specific take estimates based on the acoustic exposure modeling results described in the preamble (91 FR 20784, April 17, 2026). In order to generate the appropriate take number for authorization, the following

information was considered: (1) survey type; (2) location (by modeling zone[i]); (3) number of days; (4) source; and (5) month.[ii] To determine the most appropriate proxy array from the exposure modeling, the directionally dependent source level in a plane parallel to the sea surface was compared to the three airgun array sources which were originally modeled, including the 4,130, 5,110, and 8,000 in^3 arrays. Out of these three proxies, the source which had the smallest relative error (arithmetic mean difference taken over the azimuthal or vessel bearing angle) was chosen as the most representative proxy. In this case, the 5,110 in^3 had the lowest mean error (0.3 dB) and was the airgun array proxy that was selected. In this case, because Viridien may also elect to use the specified 42-element, 5,220 in^3 airgun array source, this was used to determine the appropriate proxy. The acoustic exposure modeling performed in support of the rule provides 24-hour exposure estimates for each species, specific to each modeled source and survey type in each zone and month.

No OBN 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 3D OBN survey effort, largely due to the greater area covered by the modeled proxies. Summary descriptions of these modeled survey geometries are available in the preamble to the proposed rule (91 FR 9014, 9018, February 24, 2026). Coil was selected as the best available proxy survey type in this case because the spatial coverage of the planned survey is most similar to the coil survey pattern. The planned OBN survey will involve two source vessels sailing along closely spaced survey lines, with daily survey area coverage of approximately 144 km^2 per day, similar to that assumed for the coil survey proxy. 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. Although Viridien is not proposing to perform a

survey using the coil geometry, the coil proxy is most representative of the effort planned by Viridien in terms of predicted Level B harassment exposures.

The survey will take place over approximately 115 days with 65 days of sound source operation, including 55 days in Zone 6 and 10 days in Zone 7. The monthly distribution of survey days is not known in advance, though we assume that the planned 65 days of source operation would occur contiguously. Take estimates for each species are based on the time period that produces the greatest value.

For the Rice's whale, take estimates based on the modeling yielded results that are not realistically likely to occur when considered in light of other relevant information concerning Rice's whale habitat preferences considered during the rulemaking process. NMFS' 2026 proposed rule provided detailed discussion regarding Rice's whale habitat (see, *e.g.*, 91 FR 9014, 9026, February 24, 2026). In summary, recent survey data, sightings, and acoustic data support Rice's whale occurrence in waters throughout the GOA between approximately 100 m and 400 m depth along the continental shelf break, and associated habitat-based density modeling has identified similar habitat (*i.e.*, approximately 100 to 400 m water depths along the continental shelf break) as being Rice's whale habitat (Garrison *et al.*, 2023; Soldevilla *et al.*, 2022, 2024).

Although Rice's whales may occur outside of the general depth range expected to provide suitable habitat, we expect that any such occurrence would be rare. Viridien's planned activities will occur in water depths of approximately 600 to 1,500 m in the central GOA. Thus, NMFS does not expect that take of Rice's whale is likely in association with this survey and, accordingly, does not authorize take of Rice's whale through the LOA.

LLOG

LLOG plans to conduct survey effort at multiple platform locations in the GOA. Survey effort could be conducted as Zero Offset, Offset, or Walkaway vertical seismic

profile (VSP), Salt Proximity Survey, and/or Checkshot surveys. Water depths at the locations where LLOG plans to conduct survey effort range from approximately 366 to 2,300 m. LLOG plans to use either a 12-element, 2,400 in^3 airgun array, or a 6-element, 1,500 in^3 airgun array.

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 (91 FR 20784, April 17, 2026). In order to generate the appropriate take number for authorization, the following information was considered: (1) survey type; (2) location (by modeling zone[i]); (3) number of days; (4) source; and (5) month.[ii] In this case, the 4,130 in^3 airgun array was selected. This proxy selection represents the least impactful modeled airgun array but remains conservative for purposes of evaluating LLOG's planned survey effort (*i.e.,* maximum 12-element, 2,400 in^3 array). The acoustic exposure modeling performed in support of the rule provides 24-hour exposure estimates for each species, specific to each modeled source and survey type in each zone and month.

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, largely due to the greater area covered by the modeled proxies. Summary descriptions of these modeled survey geometries are available in the preamble to the proposed rule (91 FR 9014, 9018, February 24, 2026). Coil was selected as the best available proxy survey type in this case because the spatial coverage of the new survey activity is most similar to the coil survey pattern.

For the survey activity, 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—source moves along a spiral or line swaths towed by a supply vessel; Salt-Proximity—consists typically of a combination of both Zero Offset VSP plus a fixed Offset VSP; or Checkshot—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. The coil survey pattern in the model was assumed to cover approximately 144 km^2 per day (compared with approximately 795 km^2, 199 km^2, and 845 km^2 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 no additional area as a stationary source, the coil proxy is most representative of the effort planned by LLOG in terms of predicted Level B harassment.

The survey will take place over approximately 26 days total, including 9 days in zone 5, 9 days in zone 6, and 8 days in zone 7. The monthly distribution of survey days is not known in advance. Take estimates for each species are based on the month that produces the greatest value.

Based on the results of our analysis, NMFS has determined that the level of taking expected for each survey and authorized through each of the LOAs is consistent with the findings made for the total taking allowable under the regulations. See table 1 in this notice and table 7 of the rule (91 FR 20784, April 17, 2026).

Small Numbers Determination

Under the 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 (see 91 FR 20784, April 17, 2026). For more information please see NMFS' discussion of small numbers in the 2026 final rule (91 FR 20784, April 17, 2026).

For WesternGeco's, bp's, Viridien's and LLOG's respective surveys, the take numbers for authorization are determined as described above in the Summary of Request and Analysis section. Subsequently, the total incidents of harassment for each species are multiplied by scalar ratios (except in the cases where the take estimate has been rounded up to reflect a group size) to produce a derived product that better reflects the number of individuals likely to be taken within a survey (as compared to the total number of instances of take), accounting for the likelihood that some individual marine mammals may be taken on more than 1 day (see 91 FR 20784, April 17, 2026). The output of this scaling, where appropriate, is incorporated into adjusted total take estimates that are the basis for NMFS' small numbers determinations, as depicted in table 1-4.

This product is used by NMFS in making the necessary small numbers determinations through comparison with the best available abundance estimates (see discussion at 91 FR 20784, 20812, April 17, 2026). For this comparison, NMFS' approach is to use the maximum theoretical population, determined through review of current stock assessment reports (SAR; *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments*) and model-predicted abundance information (*https://seamap.env.duke.edu/models/SEFSC/GOM/*). Information supporting the small numbers determinations is provided in tables 1-4.

For TGS' and FEC's respective surveys, the take numbers for authorization, determined as described above in the Summary of Request and Analysis section, are used by NMFS in making the necessary small numbers determinations, through comparison

with the best available abundance estimates (see discussion at 91 FR 20784, 20812, April 17, 2026). For this comparison, NMFS' approach is to use the maximum theoretical population, determined through review of current SARs (*https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments*) and model-predicted abundance information (*https://seamap.env.duke.edu/models/SEFSC/GOM/*). Information supporting the small numbers determinations is provided in table 5-6.

Table 1 -- WesternGeco Survey Take Analysis[1]

Species	Authorized take	Scaled take[1]	Abundance[2]	Percent abundance
Rice's whale	0	-	51	n/a
Sperm whale	527	223	2,451	9.1
Kogia spp.	268[3]	79.6	1,385	7.2
Beaked whales	421	43	1,038	4.1
Rough-toothed dolphin	1,200	344	4,853	7.1
Bottlenose dolphin	336	96	166,538	0.1
Clymene dolphin	488	140	6,136	2.3
Atlantic spotted dolphin	99	28	21,506	0.1
Pantropical spotted dolphin	18,955	5,440	50,209	10.8
Spinner dolphin	239	69	2,991	2.3
Striped dolphin	2,074	595	16,102	3.7
Fraser's dolphin	545	156	1,665	9.4
Risso's dolphin	256	75	1,974	3.8
Blackfish[4]	2,122	626	9,535	6.6
Short-finned pilot whale	130	39	3,277	1.2

[1]Scalar ratios were applied to "Authorized Take" values as described at 91 FR 20784 (April 17, 2026) to derive scaled take numbers shown here.
[2]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 (Garrison *et al.*, 2023). For Rice's whale, Atlantic spotted dolphin, spinner dolphin, and Risso's dolphin, the estimated SAR abundance estimate is used.
[3]Includes 20 takes by Level A harassment and 248 takes by Level B harassment. Scalar ratio is applied to takes by Level B harassment only; small numbers determination made on basis of scaled Level B harassment take plus authorized Level A harassment take.
[4]The "blackfish" guild includes melon-headed whales, false killer whales, pygmy killer whales, and killer whales.

Table 2 -- bp Survey Take Analysis[1]

Species	Authorized take	Scaled take[1]	Abundance[2]	Percent abundance
Rice's whale	0	-	51	n/a
Sperm whale	816	345	2,451	14.1
Kogia spp.	271[3]	82	1,385	7.1
Beaked whales	1,376	139	1,038	13.4
Rough-toothed dolphin	2,037	585	4,853	12.0
Bottlenose dolphin	1,895	544	166,538	0.3
Clymene dolphin	718	206	6,136	3.4
Atlantic spotted dolphin	562	161	21,506	0.8
Pantropical spotted dolphin	21,781	6,251	50,209	12.5
Spinner dolphin	385	111	2,991	3.7
Striped dolphin	2,736	785	16,102	4.9
Fraser's dolphin	795	228	1,665	13.7
Risso's dolphin	548	162	1,974	8.2
Blackfish[4]	3,057	902	9,535	9.5
Short-finned pilot whale	760	224	3,277	6.8

[1]Scalar ratios were applied to "Authorized Take" values as described 91 FR 20784, 20818 (April 17, 2026) to derive scaled take numbers shown here.

[2]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 (Garrison *et al.*, 2023). For Rice's whale, Atlantic spotted dolphin, spinner dolphin, and Risso's dolphin, the estimated SAR abundance estimate is used.

[3]Includes 17 takes by Level A harassment and 254 takes by Level B harassment. Scalar ratio is applied to takes by Level B harassment only; small numbers determination made on basis of scaled Level B harassment take plus authorized Level A harassment take.

[4]The "blackfish" guild includes melon-headed whales, false killer whales, pygmy killer whales, and killer whales.

Table 3 -- Viridien Survey Take Analysis[1]

Species	Authorized take	Scaled take[1]	Abundance[2]	Percent abundance
Rice's whale	0	-	51	n/a
Sperm whale	504	213	2,451	8.7
Kogia spp.	219[3]	66	1,385	2.0
Beaked whales	209	21	1,038	2.0
Rough-toothed dolphin	1,322	379	4,853	7.8
Bottlenose dolphin	1,738	499	166,538	0.3
Clymene dolphin	2,373	681	6,136	11.1

Atlantic spotted dolphin	2,938	843	21,506	3.9
Pantropical spotted dolphin	10,936	3,139	50,209	6.3
Spinner dolphin[4]	152	-	2,991	1.1
Striped dolphin	2,154	10	16,102	3.8
Fraser's dolphin	533	153	1,665	9.2
Risso's dolphin	360	106	1,974	5.4
Blackfish[5]	3,742	1,104	9,535	11.6
Short-finned pilot whale	1,811	534	3,277	16.3

[1]Scalar ratios were applied to "Authorized Take" values as described at 91 FR 20784, 20818 (April 17, 2026) to derive scaled take numbers shown here.

[2]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 (Garrison *et al.*, 2023). For Rice's whale, Atlantic spotted dolphin, spinner dolphin, and Risso's dolphin, the estimated SAR abundance estimate is used.

[3]Includes 13 takes by Level A harassment and 206 takes by Level B harassment. Scalar ratio is applied to takes by Level B harassment only; small numbers determination made on basis of scaled Level B harassment take plus authorized Level A harassment take.

[4] Modeled take of 34 increased to account for potential encounter with a group of average size (Maze-Foley and Mullin, 2006)

[5]The "blackfish" guild includes melon-headed whales, false killer whales, pygmy killer whales, and killer whales.

Table 4 -- LLOG Survey Take Analysis[1]

Species	Authorized take	Scaled take[1]	Abundance[2]	Percent abundance
Rice's whale	0	-	51	n/a
Sperm whale	194	82	2,451	3.3
Kogia spp.	86[3]	26	1,385	2.2
Beaked whales	343	35	1,038	3.3
Rough-toothed dolphin	500	144	4,853	3.0
Bottlenose dolphin	547	157	166,538	0.1
Clymene dolphin	709	203	6,136	3.3
Atlantic spotted dolphin	526	151	21,506	0.7
Pantropical spotted dolphin	4,970	1,426	50,209	2.8
Spinner dolphin[4]	152	-	2,991	5.1
Striped dolphin	1,265	363	16,102	2.3
Fraser's dolphin	199	57	1,665	3.4
Risso's dolphin	143	42	1,974	2.1
Blackfish[5]	1,390	410	9,535	4.3

Short-finned pilot whale	380	112	3,277	3.4

[1]Scalar ratios were applied to "Authorized Take" values as described at 91 FR 20784, 20818 (April 17, 2026) to derive scaled take numbers shown here.
[2]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 (Garrison *et al.*, 2023). For Rice's whale, Atlantic spotted dolphin, spinner dolphin, and Risso's dolphin, the estimated SAR abundance estimate is used.
[3]Includes 5 takes by Level A harassment and 81 takes by Level B harassment. Scalar ratio is applied to takes by Level B harassment only; small numbers determination made on basis of scaled Level B harassment take plus authorized Level A harassment take.
[4] Modeled take of 66 increased to account for potential encounter with a group of average size (Maze-Foley and Mullin, 2006)
[5]The "blackfish" guild includes melon-headed whales, false killer whales, pygmy killer whales, and killer whales.

Table 5 -- TGS Survey Take Analysis[1]

Species	Authorized take	Abundance[2]	Percent abundance
Rice's whale	0	51	n/a
Sperm whale	105	2,451	4.3
Kogia spp.	39[3]	1,385	2.8
Beaked whales	35	1,038	3.4
Rough-toothed dolphin	341	4,853	7.0
Bottlenose dolphin	389	166,538	0.2
Clymene dolphin	469	6,136	7.6
Atlantic spotted dolphin	794	21,506	3.7
Pantropical spotted dolphin	1441	50,209	2.9
Spinner dolphin	152[4]	2,991	5.1
Striped dolphin	220	16,102	1.4
Fraser's dolphin	137	1,665	8.2
Risso's dolphin	39	1,974	2.0
Blackfish[5]	773	9,535	8.1
Short-finned pilot whale	265	3,277	8.1

[1]Scalar ratios were not applied in this case due to brief survey duration.
[2]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 (Garrison *et al.*, 2023). For Rice's whale, Atlantic spotted dolphin, spinner dolphin, and Risso's dolphin, the estimated SAR abundance estimate is used.
[3]Includes 2 takes by Level A harassment and 37 takes by Level B harassment. Scalar ratio is applied to takes by Level B harassment only; small numbers determination made on basis of authorized Level B harassment take plus authorized Level A harassment take.
[4]Modeled take of 1 increased to account for potential encounter with a group of average size (Maze-Foley and Mullin, 2006)

[5]The "blackfish" guild includes melon-headed whales, false killer whales, pygmy killer whales, and killer whales.

Table 6 -- FEC Survey Take Analysis[1]

Species	Authorized take	Abundance[2]	Percent abundance
Rice's whale	0	51	n/a
Sperm whale	0	2,451	n/a
Kogia spp.	0	1,385	n/a
Beaked whales	0	1,038	n/a
Rough-toothed dolphin	14	4,853	0.1
Bottlenose dolphin	1,570	166,538	0.9
Clymene dolphin	0	6,136	n/a
Atlantic spotted dolphin	95	21,506	0.4
Pantropical spotted dolphin	0	50,209	n/a
Spinner dolphin	0	2,991	n/a
Striped dolphin	0	16,102	n/a
Fraser's dolphin	0	1,665	n/a
Risso's dolphin	0	1,974	n/a
Blackfish[3]	0	9,535	n/a
Short-finned pilot whale	0	3,277	n/a

[1]Scalar ratios were not applied in this case due to brief survey duration.
[2]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 (Garrison *et al.*, 2023). For Rice's whale, Atlantic spotted dolphin, spinner dolphin, and Risso's dolphin, the estimated SAR abundance estimate is used.
[3]The "blackfish" guild includes melon-headed whales, false killer whales, pygmy killer whales, and killer whales.

Based on the analysis contained herein of WesternGeco's, TGS', FEC's, bp's, Viridien's, and LLOG's planned survey activities described in their respective LOA applications and the anticipated take of marine mammals, NMFS finds that for each LOA 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 for each LOA.

Authorization

NMFS has determined that the level of taking for each 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 each LOA is of no more than small numbers. Accordingly, we have issued LOAs to WesternGeco, TGS, FEC, bp, Viridien, and LLOG, authorizing the take of marine mammals incidental to its geophysical survey activity, as described above.

Dated: May 4, 2026.

Kimberly Damon-Randall,

Director, Office of Protected Resources,

National Marine Fisheries Service.

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[i] For purposes of acoustic exposure modeling, the GOA was divided into seven zones. Zone 1 is not included in the geographic scope of the rule.

[ii] Acoustic propagation modeling was performed for two seasons: Winter (December-March) and Summer (April-November). Marine mammal density data is generally available on a monthly basis, and therefore further refines take estimates temporally.