



INCIDENTAL HARASSMENT AUTHORIZATION

The Lamont-Doherty Earth Observatory of Columbia University (L-DEO) is hereby authorized under section 101(a)(5)(D) of the Marine Mammal Protection Act (MMPA; 16 U.S.C. 1371(a)(5)(D)) to harass marine mammals incidental to a marine geophysical survey in the southwest Pacific Ocean, when adhering to the following terms and conditions.

1. This incidental harassment authorization (IHA) is valid for a period of one year from the date of issuance.
2. This IHA is valid only for marine geophysical survey activity, as specified in L-DEO's IHA application and using an array aboard the R/V *Langseth* with characteristics specified in the IHA application, in the Pacific Ocean within waters of New Zealand's Exclusive Economic Zone.
3. General Conditions
 - (a) A copy of this IHA must be in the possession of L-DEO, the vessel operator and other relevant personnel, the lead protected species observer (PSO), and any other relevant designees of L-DEO operating under the authority of this IHA.
 - (b) The species authorized for taking are listed in Table 1. The taking, by Level A and Level B harassment only, is limited to the species and numbers listed in Table 1. Any taking exceeding the authorized amounts listed in Table 1 is prohibited and may result in the modification, suspension, or revocation of this IHA.
 - (c) The taking by serious injury or death of any species of marine mammal is prohibited and may result in the modification, suspension, or revocation of this IHA.
 - (d) During use of the airgun(s), if marine mammal species other than those listed in Table 1 are detected by PSOs, the acoustic source must be shut down to avoid unauthorized take.
 - (e) L-DEO shall ensure that the vessel operator and other relevant vessel personnel are briefed on all responsibilities, communication procedures, marine mammal monitoring protocol, operational procedures, and IHA requirements prior to the start of survey activity, and when relevant new personnel join the survey operations.

4. Mitigation Requirements

The holder of this Authorization is required to implement the following mitigation measures:

- (a) L-DEO must use at least five dedicated, trained, National Marine Fisheries Service (NMFS) approved Protected Species Observers (PSOs), including at least four visual PSOs and one acoustic PSO. The PSOs must have no tasks other than to conduct



observational effort, record observational data, and communicate with and instruct relevant vessel crew with regard to the presence of marine mammals and mitigation requirements. PSO resumes shall be provided to NMFS for approval.

- (b) At least two PSOs must have a minimum of 90 days at-sea experience working as PSOs during a high energy seismic survey, with no more than eighteen months elapsed since the conclusion of the at-sea experience. At least one of these must have relevant experience as a visual PSO and at least one must have relevant experience as an acoustic PSO. One “experienced” visual PSO shall be designated as the lead for the entire protected species observation team. The lead PSO shall coordinate duty schedules and roles for the PSO team and serve as primary point of contact for the vessel operator. The lead PSO shall devise the duty schedule such that “experienced” PSOs are on duty with those PSOs with appropriate training but who have not yet gained relevant experience, to the maximum extent practical.
- (c) Visual Observation
 - (i) During survey operations (*e.g.*, any day on which use of the acoustic source is planned to occur; whenever the acoustic source is in the water, whether activated or not), two PSOs must be on duty and conducting visual observations at all times during daylight hours (*i.e.*, from 30 minutes prior to sunrise through 30 minutes following sunset) with the limited exception of meal times during which one PSO may be on duty. PSOs shall monitor the entire extent of the estimated Level B harassment zone (or, as far as they can see, if they cannot see to the extent of the estimated Level B harassment zone).
 - (ii) Visual monitoring must begin not less than 30 minutes prior to ramp-up, including for nighttime ramp-ups of the airgun array, and must continue until one hour after use of the acoustic source ceases or until 30 minutes past sunset.
 - (iii) Visual PSOs shall coordinate to ensure 360° visual coverage around the vessel from the most appropriate observation posts and shall conduct visual observations using binoculars and the naked eye while free from distractions and in a consistent, systematic, and diligent manner.
 - (iv) Visual PSOs shall communicate all observations to the acoustic PSO, including any determination by the PSO regarding species identification, distance, and bearing and the degree of confidence in the determination.
 - (v) Visual PSOs may be on watch for a maximum of four consecutive hours followed by a break of at least one hour between watches.
 - (vi) During good conditions (*e.g.*, daylight hours; Beaufort sea state 3 or less), visual PSOs shall conduct observations when the acoustic source is not operating for comparison of sighting rates and behavior with and without use of the acoustic source and between acquisition periods, to the maximum extent practicable.
- (d) Acoustic Observation – The *R/V Langseth* must use a towed passive acoustic monitoring (PAM) system, which must be monitored beginning at least 30 minutes prior to ramp-up and at all times during use of the acoustic source.

- (i) One acoustic PSO (in addition to the four visual PSOs) must be on board to operate and oversee PAM operations. Either the acoustic PSO or a visual PSO with training in the PAM system must monitor the PAM system at all times while airguns are operating, and when possible during periods when the airguns are not operating, in shifts lasting no longer than six hours.
- (ii) Acoustic PSOs shall communicate all detections to visual PSOs, when visual PSOs are on duty, including any determination by the PSO regarding species identification, distance, and bearing and the degree of confidence in the determination.
- (iii) Survey activity may continue for brief periods of time if the PAM system malfunctions or is damaged. Activity may continue for 30 minutes without PAM while the PAM operator diagnoses the issue. If the diagnosis indicates that the PAM system must be repaired to solve the problem, operations may continue for an additional five hours without acoustic monitoring under the following conditions:
 - (A) No marine mammals (excluding delphinids) detected solely by PAM in the exclusion zone in the previous two hours;
 - (B) NMFS is notified via email as soon as practicable with the time and location in which operations began without an active PAM system; and
 - (C) Operations with an active acoustic source, but without an operating PAM system, do not exceed a cumulative total of five hours in any 24 hour period.
- (e) Exclusion Zone and buffer zone – PSOs shall establish and monitor a 500 m exclusion zone (EZ) with a 500 m buffer. The zones shall be based upon radial distance from any element of the airgun array (rather than being based on the center of the array or around the vessel itself). During use of the acoustic source, occurrence of marine mammals within the EZ, or on a course to enter the EZ, shall trigger further mitigation measures as described below.
 - (i) Ramp-up – A ramp-up procedure, involving a step-wise increase in the number of airguns firing and total array volume until all operational airguns are activated and the full volume is achieved, is required at all times as part of the activation of the acoustic source, including following a power down or shutdown of the array, except as described under 4(e)(vi). Ramp-up shall begin by activating a single airgun of the smallest volume in the array and shall continue in stages by doubling the number of active elements at the commencement of each stage, with each stage of approximately the same duration.
 - (ii) If the airgun array has been powered down or shut down due to a marine mammal detection, ramp-up shall not occur until all marine mammals have cleared the EZ. A marine mammal is considered to have cleared the EZ if:
 - (A) It has been visually observed to have left the EZ; or
 - (B) It has not been observed within the EZ, for 15 minutes (in the case of small odontocetes and pinnipeds) or for 30 minutes (in the case of mysticetes and large odontocetes including sperm, pygmy sperm, and beaked whales).

- (iii) Thirty minutes of pre-clearance observation of the 500 m EZ and 500 m buffer zone are required prior to ramp-up following any extended deactivation of the array (i.e. deactivation of longer than 30 minutes). This pre-clearance period may occur during any vessel activity. If any marine mammal (including delphinids) is observed within or approaching the 500 m EZ during the 30 minute pre-clearance period, ramp-up may not begin until the animal(s) has been observed exiting the buffer zone or until an additional time period has elapsed with no further sightings (i.e., 15 minutes for small odontocetes and pinnipeds, and 30 minutes for mysticetes and large odontocetes including sperm, pygmy sperm, and beaked whales).
 - (iv) During ramp-up, PSOs shall monitor the 500 m EZ and 500 m buffer zone. Ramp-up may not be initiated if any marine mammal (including delphinids) is observed within or approaching the 500 m EZ. If a marine mammal is observed within or approaching the 500 m EZ during ramp-up, a power down or shutdown shall be implemented as though the full array were operational. Ramp-up may not begin again until the animal(s) has been observed exiting the 500 m EZ or until an additional time period has elapsed with no further sightings (i.e., 15 minutes for small odontocetes and pinnipeds, and 30 minutes for mysticetes and large odontocetes including sperm, pygmy sperm, and beaked whales).
 - (v) Ramp-up shall only occur at night and at times of poor visibility where operational planning cannot reasonably avoid such circumstances. Ramp-up may occur at night and during poor visibility if the 500 m EZ and 500 m buffer zone have been continually monitored by visual PSOs for 30 minutes prior to ramp-up with no marine mammal detections and if acoustic monitoring has occurred for 30 minutes prior to ramp-up with no acoustic detections during that period.
 - (vi) Ramp-up of the array must not occur at night or at times of poor visibility if the PAM system is not operational.
 - (vii) If the airgun array has been shut down for reasons other than mitigation (e.g., mechanical difficulty) for a period of less than 30 minutes, it may be activated again without ramp-up if PSOs have maintained constant visual and acoustic observation and no visual detections of any marine mammal have occurred within the buffer zone and no acoustic detections have occurred.
 - (viii) The vessel operator must notify a designated PSO of the planned start of ramp-up as agreed-upon with the lead PSO; A designated PSO must be notified again immediately prior to initiating ramp-up procedures and the operator must receive confirmation from the PSO to proceed.
- (f) Power Down Requirements – L-DEO shall power down the airgun array to a single 40-in³ airgun if a PSO detects a marine mammal within, approaching, or entering the 500 m EZ.
- (i) Any PSO on duty has the authority to call for power down of the airgun array (visual PSOs on duty should be in agreement on the need for power down before requiring such action). When there is certainty regarding the need for mitigation action on the basis of either visual or acoustic detection alone, the relevant PSO(s)

must call for such action immediately.

- (ii) When both visual and acoustic PSOs are on duty, all detections must be immediately communicated to the remainder of the on-duty PSO team for potential verification of visual observations by the acoustic PSO or of acoustic detections by visual PSOs and initiation of dialogue as necessary.
- (iii) The operator must establish and maintain clear lines of communication directly between PSOs on duty and crew controlling the airgun array to ensure that power down commands are conveyed swiftly while allowing PSOs to maintain watch.
- (iv) When power down is called for by a PSO, the power down must occur and any dispute resolved only following power down.
- (v) The power down requirement is waived for dolphins of the following species: short-beaked common dolphin, dusky dolphin and southern right whale dolphin. If there is uncertainty regarding identification (*i.e.*, whether the observed animal(s) belongs to the species described above), power down must be implemented.
- (vi) Upon implementation of a power down, the source may be reactivated under the conditions described at 4(e). Where there is no relevant zone (*e.g.*, power down due to observation of a calf), a 30-minute clearance period must be observed following the last observation of the animal(s).
- (vii) When only the acoustic PSO is on duty and a detection is made, if there is uncertainty regarding distance to the vocalizing animal(s) or regarding species identification, such that the acoustic detection may originate from a sperm whale, beaked whale, or *Kogia* spp., the airgun array must be powered down as a precaution.
- (viii) Power down shall occur for no more than a maximum of 30 minutes at any given time. If, after 30 minutes of the array being powered down, marine mammals have not cleared the 500 m Exclusion Zone as described under 4(e)(ii), the array shall be shut down. Operation of the single 40-in³ airgun (*i.e.*, a power-down state) shall not occur for any purpose other than in response to a marine mammal in the exclusion zone (pursuant to relevant requirements herein).
- (g) Shutdown requirements – An exclusion zone of 100 m for the single 40-in³ airgun shall be established and monitored by PSOs. If a marine mammal is observed within, entering, or approaching the 100 m exclusion zone for the single 40-in³ airgun, whether during implementation of a power down or during operation of the full airgun array, all airguns including the 40-in³ airgun shall be shut down.
- (h) If, after 30 minutes of the array being powered down, marine mammals have not cleared the 500 m Exclusion Zone as described under 4(e)(ii), the full array shall be shut down.
 - (i) Upon implementation of a shutdown, the source may be reactivated under the conditions described at 4(e).
 - (ii) Measures described for power downs under 4(f)(i-v) shall also apply in the case of a shutdown.

- (iii) Shutdown of the acoustic source shall occur upon observation of a large whale (*i.e.*, sperm whale or any baleen whale) with calf at any distance, with “calf” defined as an animal less than two-thirds the body size of an adult observed to be in close association with an adult. Ramp up shall not begin until the whale with calf has not been observed for at least 30 minutes at any distance.
- (iv) Shutdown of the acoustic source shall occur upon observation of an aggregation (*i.e.*, six or more animals) of large whales of any species (*i.e.*, sperm whale or any baleen whale) at any distance. Ramp up shall not begin until the aggregation of whales has not been observed for at least 30 minutes at any distance.
- (v) Shutdown of the acoustic source shall occur upon any observation (visual or acoustic) of a beaked whale or *Kogia* spp., at any distance. Ramp up shall not begin until the beaked whale or *Kogia* spp. has not been observed (visually or acoustically) for at least 30 minutes at any distance.
- (vi) Shutdown of the acoustic source shall occur upon acoustic detection of a sperm whale, unless the location of the sperm whale can be definitively localized and the location is beyond 500 m from the airgun array. If there is any uncertainty regarding the distance or location of an acoustically detected sperm whale, shutdown of the acoustic source shall occur. Ramp up shall not begin until the sperm whale has not been acoustically detected for at least 30 minutes.
- (vii) Shutdown of the acoustic source shall occur upon visual observation of a Hector’s or Maui dolphin, at any distance. Shutdown of the acoustic source shall occur upon acoustic observation of a Hector’s or Maui dolphin, if the acoustic detection can be definitively identified as originating from a Hector’s or Maui dolphin. Ramp up shall not begin until the Hector’s or Maui dolphin has not been observed (visually or acoustically) for at least 15 minutes at any distance.
- (i) Vessel Strike Avoidance – Vessel operator and crew must maintain a vigilant watch for all marine mammals and slow down or stop the vessel or alter course to avoid striking any marine mammal. These requirements apply when the vessel is in transit and do not apply in any case where compliance would create an imminent and serious threat to a person or vessel or to the extent that a vessel is restricted in its ability to maneuver and, because of the restriction, cannot comply. A visual observer aboard the vessel must monitor a vessel strike avoidance zone around the vessel according to the parameters stated below. Visual observers monitoring the vessel strike avoidance zone can be either third-party observers or crew members, but crew members responsible for these duties must be provided sufficient training to distinguish marine mammals from other phenomena. Vessel strike avoidance measures shall be followed during surveys and while in transit.
 - (i) The vessel must maintain a minimum separation distance of 100 m from large whales (*i.e.*, baleen whales and sperm whales). The following avoidance measures must be taken if a large whale is within 100 m of the vessel:
 - (A) The vessel must reduce speed and shift the engine to neutral, and must not engage the engines until the whale has moved outside of the vessel’s path and the minimum separation distance has been established.

- (B) If the vessel is stationary, the vessel must not engage engines until the whale(s) has moved out of the vessel's path and beyond 100 m.
- (ii) The vessel must maintain a minimum separation distance of 50 m from all other marine mammals, with an exception made for animals described in 4(f)(v) that approach the vessel. If an animal is encountered during transit, the vessel shall attempt to remain parallel to the animal's course, avoiding excessive speed or abrupt changes in course.
- (iii) Vessel speeds must be reduced to 10 knots or less when mother/calf pairs, pods, or large assemblages of cetaceans are observed near the vessel.
- (j) Miscellaneous Protocols
 - (i) The airgun array must be deactivated when not acquiring data or preparing to acquire data, except as necessary for testing. Unnecessary use of the acoustic source shall be avoided. Notified operational capacity (not including redundant backup airguns) must not be exceeded during the survey, except where unavoidable for source testing and calibration purposes. All occasions where activated source volume exceeds notified operational capacity must be noticed to the PSO(s) on duty and fully documented. The lead PSO must be granted access to relevant instrumentation documenting acoustic source power and/or operational volume.
 - (ii) Testing of the acoustic source involving all elements requires normal mitigation protocols (*e.g.*, ramp-up). Testing limited to individual source elements or strings does not require ramp-up but does require pre-clearance.

5. Monitoring Requirements

The holder of this Authorization is required to conduct marine mammal monitoring during survey activity. Monitoring shall be conducted in accordance with the following requirements:

- (a) The operator must provide bigeye binoculars (*e.g.*, 25 x 150; 2.7 view angle; individual ocular focus; height control) of appropriate quality (*i.e.*, Fujinon or equivalent) solely for PSO use. These shall be pedestal-mounted on the deck at the most appropriate vantage point that provides for optimal sea surface observation, PSO safety, and safe operation of the vessel. The operator must also provide a night-vision device suited for the marine environment for use during nighttime ramp-up pre-clearance, at the discretion of the PSOs. At minimum, the device should feature automatic brightness and gain control, bright light protection, infrared illumination, and optics suited for low-light situations.
- (b) PSOs must also be equipped with reticle binoculars (*e.g.*, 7 x 50) of appropriate quality (*i.e.*, Fujinon or equivalent), GPS, digital single-lens reflex camera of appropriate quality (*i.e.*, Canon or equivalent), compass, and any other tools necessary to adequately perform necessary tasks, including accurate determination of distance and bearing to observed marine mammals.
- (c) PSO Qualifications
 - (i) PSOs must have successfully completed relevant training, including completion of all required coursework and passing a written and/or oral examination

developed for the training program.

- (ii) PSOs must have successfully attained a bachelor's degree from an accredited college or university with a major in one of the natural sciences and a minimum of 30 semester hours or equivalent in the biological sciences and at least one undergraduate course in math or statistics. The educational requirements may be waived if the PSO has acquired the relevant skills through alternate experience. Requests for such a waiver must include written justification. Alternate experience that may be considered includes, but is not limited to (1) secondary education and/or experience comparable to PSO duties; (2) previous work experience conducting academic, commercial, or government-sponsored marine mammal surveys; or (3) previous work experience as a PSO. The PSO should demonstrate good standing and consistently good performance of PSO duties.
- (d) Data Collection – PSOs must use standardized data forms, whether hard copy or electronic. PSOs shall record detailed information about any implementation of mitigation requirements, including the distance of animals to the acoustic source and description of specific actions that ensued, the behavior of the animal(s), any observed changes in behavior before and after implementation of mitigation, and if shutdown was implemented, the length of time before any subsequent ramp-up of the acoustic source to resume survey. If required mitigation was not implemented, PSOs should submit a description of the circumstances. NMFS requires that, at a minimum, the following information be reported:
 - (i) PSO names and affiliations
 - (ii) Dates of departures and returns to port with port name
 - (iii) Dates and times (Greenwich Mean Time) of survey effort and times corresponding with PSO effort
 - (iv) Vessel location (latitude/longitude) when survey effort begins and ends; vessel location at beginning and end of visual PSO duty shifts
 - (v) Vessel heading and speed at beginning and end of visual PSO duty shifts and upon any line change
 - (vi) Environmental conditions while on visual survey (at beginning and end of PSO shift and whenever conditions change significantly), including wind speed and direction, Beaufort sea state, Beaufort wind force, swell height, weather conditions, cloud cover, sun glare, and overall visibility to the horizon
 - (vii) Factors that may be contributing to impaired observations during each PSO shift change or as needed as environmental conditions change (*e.g.*, vessel traffic, equipment malfunctions)
 - (viii) Survey activity information, such as acoustic source power output while in operation, number and volume of airguns operating in the array, tow depth of the array, and any other notes of significance (*i.e.*, pre-ramp-up survey, ramp-up, shutdown, testing, shooting, ramp-up completion, end of operations, streamers, etc.)
 - (ix) If a marine mammal is sighted, the following information should be recorded:

- (A) Watch status (sighting made by PSO on/off effort, opportunistic, crew, alternate vessel/platform)
 - (B) PSO who sighted the animal
 - (C) Time of sighting
 - (D) Vessel location at time of sighting
 - (E) Water depth
 - (F) Direction of vessel's travel (compass direction)
 - (G) Direction of animal's travel relative to the vessel
 - (H) Pace of the animal
 - (I) Estimated distance to the animal and its heading relative to vessel at initial sighting
 - (J) Identification of the animal (*e.g.*, genus/species, lowest possible taxonomic level, or unidentified); also note the composition of the group if there is a mix of species
 - (K) Estimated number of animals (high/low/best)
 - (L) Estimated number of animals by cohort (adults, yearlings, juveniles, calves, group composition, etc.)
 - (M) Description (as many distinguishing features as possible of each individual seen, including length, shape, color, pattern, scars or markings, shape and size of dorsal fin, shape of head, and blow characteristics)
 - (N) Detailed behavior observations (*e.g.*, number of blows, number of surfaces, breaching, spyhopping, diving, feeding, traveling; as explicit and detailed as possible; note any observed changes in behavior)
 - (O) Animal's closest point of approach and/or closest distance from the center point of the acoustic source;
 - (P) Platform activity at time of sighting (*e.g.*, deploying, recovering, testing, shooting, data acquisition, other)
 - (Q) Description of any actions implemented in response to the sighting (*e.g.*, delays, shutdown, ramp-up, speed or course alteration, etc.); time and location of the action should also be recorded
- (x) If a marine mammal is detected while using the PAM system, the following information should be recorded:
- (A) An acoustic encounter identification number, and whether the detection was linked with a visual sighting
 - (B) Time when first and last heard
 - (C) Types and nature of sounds heard (*e.g.*, clicks, whistles, creaks, burst pulses, continuous, sporadic, strength of signal, etc.)

- (D) Any additional information recorded such as water depth of the hydrophone array, bearing of the animal to the vessel (if determinable), species or taxonomic group (if determinable), and any other notable information.

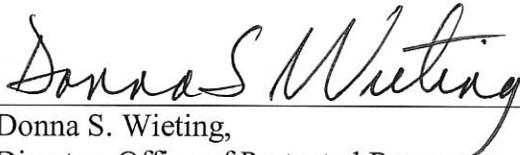
6. Reporting

- (a) L-DEO shall submit a draft comprehensive report on all activities and monitoring results within 90 days of the completion of the survey or expiration of the IHA, whichever comes sooner. The report must describe all activities conducted and sightings of marine mammals near the activities, must provide full documentation of methods, results, and interpretation pertaining to all monitoring, and must summarize the dates and locations of survey operations and all marine mammal sightings (dates, times, locations, activities, associated survey activities). Geospatial data regarding locations where the acoustic source was used must be provided. In addition to the report, all raw observational data shall be made available to NMFS. The report must summarize the data collected as required under condition 5(d) of this IHA. The report must also provide an estimate of the number (by species) of marine mammals with known exposures to seismic survey activity at received levels greater than or equal to thresholds for Level A and Level B harassment (based on visual observation) including an estimate of those on the trackline but not detected. The draft report must be accompanied by a certification from the lead PSO as to the accuracy of the report, and the lead PSO may submit directly to NMFS a statement concerning implementation and effectiveness of the required mitigation and monitoring. A final report must be submitted within 30 days following resolution of any comments from NMFS on the draft report.
- (b) Reporting injured or dead marine mammals:
 - (i) In the event that the specified activity clearly causes the take of a marine mammal in a manner not permitted by this IHA, such as serious injury or mortality, L-DEO shall immediately cease the specified activities and immediately report the incident to the NMFS Office of Protected Resources (301-427-8401) and the New Zealand Department of Conservation (0800-362-468). The report must include the following information:
 - (A) Time, date, and location (latitude/longitude) of the incident;
 - (B) Vessel's speed during and leading up to the incident;
 - (C) Description of the incident;
 - (D) Status of all sound source use in the 24 hours preceding the incident;
 - (E) Water depth;
 - (F) Environmental conditions (*e.g.*, wind speed and direction, Beaufort sea state, cloud cover, and visibility);
 - (G) Description of all marine mammal observations in the 24 hours preceding the incident;
 - (H) Species identification or description of the animal(s) involved;
 - (I) Fate of the animal(s); and

(J) Photographs or video footage of the animal(s).

Activities shall not resume until NMFS is able to review the circumstances of the prohibited take. NMFS will work with L-DEO to determine what measures are necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. L-DEO may not resume their activities until notified by NMFS.

- (ii) In the event that L-DEO discovers an injured or dead marine mammal, and the lead observer determines that the cause of the injury or death is unknown and the death is relatively recent (*e.g.*, in less than a moderate state of decomposition), L-DEO shall immediately report the incident to the NMFS Office of Protected Resources (301-427-8401) and the New Zealand Department of Conservation (0800-362-468). The report must include the same information identified in condition 6(b)(i) of this IHA. Activities may continue while NMFS reviews the circumstances of the incident. NMFS will work with L-DEO to determine whether additional mitigation measures or modifications to the activities are appropriate.
- (iii) In the event that L-DEO discovers an injured or dead marine mammal, and the lead observer determines that the injury or death is not associated with or related to the specified activities (*e.g.*, previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), L-DEO shall report the incident to the NMFS Office of Protected Resources (301-427-8401) and the New Zealand Department of Conservation (0800-362-468) within 24 hours of the discovery. L-DEO shall provide photographs or video footage or other documentation of the sighting to NMFS.
7. This Authorization may be modified, suspended or withdrawn if the holder fails to abide by the conditions prescribed herein, or if NMFS determines the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals.



Donna S. Wieting,
Director, Office of Protected Resources,
National Marine Fisheries Service.

OCT 27 2017

Date

Table 1. Numbers of Potential Incidental Take of Marine Mammals Authorized.

Species	Authorized Level A Takes	Authorized Level B Takes	Total Authorized Takes
Southern right whale	3	51	54
Pygmy right whale	1	20	21
Humpback whale	3	48	51
Bryde's whale	1	22	23
Common minke whale	2	31	33
Antarctic minke whale	2	31	33
Sei whale	2	31	33
Fin whale	3	52	55
Blue whale	0	8	8
Sperm whale	2	654	656
Cuvier's beaked whale	2	591	593
Arnoux's beaked whale	2	591	593
Southern bottlenose whale	0	394	394
Shepard's beaked whale	0	394	394
Hector's beaked whale	0	394	394
True's beaked whale	0	197	197
Gray's beaked whale	2	788	790
Andrew's beaked whale	0	394	394

Strap-toothed whale	2	591	593
Blainville's beaked whale	0	197	197
Spade-toothed whale	0	197	197
Bottlenose dolphin	3	1135	1138
Short-beaked common dolphin	5	1956	1961
Dusky dolphin	3	1323	1326
Southern right-whale dolphin	2	680	682
Risso's dolphin	0	454	454
False killer whale	3	680	683
Killer whale	0	433	433
Long-finned pilot whale	5	1869	1874
Short-finned pilot whale	2	783	785
Pygmy sperm whale	15	377	392
Hourglass dolphin	37	904	941
Hector's dolphin	0	2	2
Spectacled porpoise	6	120	126
New Zealand fur seal	11	5084	5095
New Zealand sea lion	1	591	592
Southern elephant seal	7	1011	1018
Leopard seal	3	506	509