



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

Meagan J. Cummings / Jeff Rupert
Marine Environmental & Safety Coordinator
Department of Marine Operations
Lamont-Doherty Earth Observatory
P.O. Box 1000
Palisades, New York 10964-8000

APR 08 2013

Dear Ms. Cummings:

Enclosed is an Incidental Harassment Authorization (IHA) issued to the Lamont-Doherty Earth Observatory, under the authority of Section 101(a)(5)(D) of the Marine Mammal Protection Act (16 U.S.C. 1361 *et seq.*), to harass small numbers of marine mammals, by Level B harassment, incidental to the R/V *Marcus G. Langseth's* marine seismic survey in the Atlantic Ocean during April through June, 2013.

You are required to comply with the conditions contained in the IHA. The taking of any marine mammal in a manner prohibited under this Authorization must be reported immediately to the Office of Protected Resources, National Marine Fisheries Service (NMFS), at 301-427-8401.

In addition, you must submit a report to the NMFS' Office of Protected Resources within 90 days of the completion of the cruise. The IHA requires monitoring of marine mammals by qualified individuals before, during, and after seismic activities and reporting of marine mammal observations, including species, numbers, and behavioral modifications potentially resulting from this activity.

If you have any questions concerning the IHA or its requirements, please contact Jeannine Cody, Office of Protected Resources, NMFS, at 301-427-8401.

Sincerely,

Helen M. Golde
Acting Director
Office of Protected Resources

Enclosures



DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL MARINE FISHERIES SERVICE

INCIDENTAL HARASSMENT AUTHORIZATION

We hereby authorize the Lamont-Doherty Earth Observatory (Observatory), Columbia University, P.O. Box 1000, 61 Route 9W, Palisades, New York 10964-8000, under section 101(a)(5)(D) of the Marine Mammal Protection Act (MMPA) (16 U.S.C. 1371(a)(5)(D)) and 50 CFR 216.107, to incidentally harass small numbers of marine mammals incidental to a marine geophysical survey conducted by the R/V *Marcus G. Langseth* (*Langseth*) marine geophysical survey on the Mid-Atlantic Ridge in the Atlantic Ocean, April through June, 2013.

1. This Authorization is valid from April 8 through June 24, 2013.
2. This Authorization is valid only for specified activities associated with the R/V *Marcus G. Langseth's* (*Langseth*) seismic operations as specified in the Observatory's Incidental Harassment Authorization (IHA) application and environmental analysis in the following specified geographic area:
 - (a) In the Atlantic Ocean on the Mid-Atlantic Ridge bounded by the following coordinates: approximately 35.5 to 36.5° North by 33.5 to 34.5° West as specified in the Observatory's application and the National Science Foundation's environmental analysis.

3. SPECIES AUTHORIZED AND LEVEL OF TAKES

- (a) This authorization limits the incidental taking of marine mammals, by Level B harassment only, to the following species in the area described in Condition 2(a):
 - (i) Mysticetes – see Table 1 (attached) for authorized species and take numbers.
 - (ii) Odontocetes – see Table 1 (attached) for authorized species and take numbers.
 - (iii) During the seismic activities, if the Holder of this Authorization encounters any marine mammal species that are not listed in Table 1 (attached) for authorized taking and are likely to be exposed to sound pressure levels greater than or equal to 160 decibels (dB) re: 1 μ Pa, then the Holder must alter speed or course or shut-down the airguns to avoid take.
- (b) This Authorization prohibits the taking by injury (Level A harassment), serious injury, or death of any of the species listed in Condition 3(a) or the taking of any kind of any other species of marine mammal. Thus, it may result in the modification, suspension or revocation of this Authorization.

(c) This Authorization limits the methods authorized for taking by Level B harassment to the following acoustic sources without an amendment to this Authorization:

- (i) a 36 Bolt airgun array with a total capacity of 6,600 in³ (or smaller);
 - (ii) an acoustic release transponder used to communicate with ocean bottom seismometers (OBS).
 - (iii) a multi-beam echosounder; and
 - (iv) a sub-bottom profiler.
4. The Holder of this Authorization must report the taking of any marine mammal in a manner prohibited under this Authorization immediately to the Office of Protected Resources, National Marine Fisheries Service, at 301-427-8401 and/or by email to Jolie.Harrison@noaa.gov and ITP.Cody@noaa.gov.
5. We require the Holder of this Authorization to cooperate with the Office of Protected Resources, National Marine Fisheries Service and any other Federal, state or local agency monitoring the impacts of the activity on marine mammals.

6. MITIGATION AND MONITORING REQUIREMENTS

We require the Holder of this Authorization to implement the following mitigation and monitoring requirements when conducting the specified activities to achieve the least practicable adverse impact on affected marine mammal species or stocks:

6. VISUAL OBSERVERS

- (a) Utilize two, National Marine Fisheries Service-qualified, vessel-based Protected Species Visual Observers (visual observers) to watch for and monitor marine mammals near the seismic source vessel during daytime airgun operations (from civil twilight-dawn to civil twilight-dusk) and before and during start-ups of airguns day or night.
- (i) At least one visual observer will be on watch during meal times and restroom breaks.
 - (ii) Observer shifts will last no longer than four hours at a time.
 - (iii) Visual observers will also conduct monitoring while the Langseth crew deploy and recover the airgun array and streamers from the water.
 - (iv) When feasible, visual observers will conduct observations during daytime periods when the seismic system is not operating for comparison of sighting rates and behavioral reactions during, between, and after airgun operations.
 - (v) The *Langseth's* vessel crew will also assist in detecting marine mammals, when practicable. Visual observers will have access to reticle binoculars (7x50 Fujinon), and big-eye binoculars (25x150).

6. EXCLUSION ZONES

(b) Establish a 180-decibel (dB) exclusion zone (zone) for cetaceans before starting the 4-string airgun array (6,600 in³); and a 180-dB exclusion zone for the single airgun (40 in³). See Table 2 (attached) for distances of the exclusion zones. Observers will use the predicted radius distance for the 180-dB exclusion zone for cetaceans.

6. VISUAL MONITORING AT THE START OF AIRGUN OPERATIONS

(c) Monitor the entire extent of the zones listed in Table 2 (attached) for at least 30 minutes (day or night) prior to the ramp-up of airgun operations after a shutdown.

(d) Delay airgun operations if the visual observer sees a cetacean within the 180-dB zone for cetaceans until the marine mammal(s) has left the area.

- (i) If the visual observer sees a marine mammal that surfaces, then dives below the surface, the observer shall wait 30 minutes. If the observer sees no marine mammals during that time, he/she should assume that the animal has moved beyond the 180-dB zone for cetaceans.
- (ii) If for any reason the visual observer cannot see the full 180-dB zone for cetaceans for the entire 30 minutes (*i.e.*, rough seas, fog, darkness), or if marine mammals are near, approaching, or within zone, the *Langseth* may not resume airgun operations.
- (iii) If one airgun is already running at a source level of at least 180 dB re: 1 μ Pa, the *Langseth* may start the second gun—and subsequent airguns—without observing relevant exclusion zones for 30 minutes, provided that the observers have not seen any marine mammals near the relevant exclusion zones (in accordance with Condition 6(b)).

6. PASSIVE ACOUSTIC MONITORING

(e) Utilize the passive acoustic monitoring (PAM) system, to the maximum extent practicable, to detect and allow some localization of marine mammals around the *Langseth* during all airgun operations and during most periods when airguns are not operating. One visual observer and/or bioacoustician will monitor the PAM at all times in shifts no longer than 6 hours. A bioacoustician shall design and set up the PAM system and be present to operate or oversee PAM, and available when technical issues occur during the survey.

(f) Do and record the following when an animal is detected by the PAM:

- (i) notify the visual observer immediately of a vocalizing marine mammal so a power-down or shut-down can be initiated, if required;
- (ii) enter the information regarding the vocalization into a database. The data to be entered include an acoustic encounter identification number, whether it was linked with a visual sighting, date, time when first and last heard and whenever any additional information was recorded, position, and water depth when first detected, bearing if determinable, species or species group (e.g., unidentified dolphin, sperm whale), types and nature of sounds heard (e.g., clicks, continuous, sporadic, whistles, creaks, burst pulses, strength of signal, etc.), and any other notable information.

6. RAMP-UP PROCEDURES

(g) Implement a “ramp-up” procedure when starting the airguns at the beginning of seismic operations or anytime after the entire array has been shutdown, which means start the smallest gun first and add airguns in a sequence such that the source level of the array will increase in steps not exceeding approximately 6 dB per 5-minute period. During ramp-up, the observers will monitor the exclusion zone, and if marine mammals are sighted, a course/speed alteration, power-down, or shutdown will be implemented as though the full array were operational.

6. RECORDING VISUAL DETECTIONS

(h) Visual observers must record the following information when they have sighted a marine mammal:

- (i) Species, group size, age/size/sex categories (if determinable), behavior when first sighted and after initial sighting, heading (if consistent), bearing and distance from seismic vessel, sighting cue, apparent reaction to the airguns or vessel (*e.g.*, none, avoidance, approach, paralleling, etc., and including responses to ramp-up), and behavioral pace; and
- (ii) Time, location, heading, speed, activity of the vessel (including number of airguns operating and whether in state of ramp-up or shut-down), Beaufort sea state and wind force, visibility, and sun glare; and
- (iii) The data listed under 6(f)(ii) at the start and end of each observation watch and during a watch whenever there is a change in one or more of the variables.

6. SPEED OR COURSE ALTERATION

(i) Alter speed or course during seismic operations if a marine mammal, based on its position and relative motion, appears likely to enter the relevant exclusion zone. If speed or course alteration is not safe or practicable, or if after alteration the marine mammal still appears likely to enter the exclusion zone, the Holder of this Authorization will implement further mitigation measures, such as a shutdown.

6. POWER-DOWN PROCEDURES

(j) Power down the airguns if a visual observer detects a marine mammal within, approaching, or entering the relevant exclusion zones (as defined in Table 2, attached). A power-down means reducing the number of operating airguns to a single operating 40 in³ airgun. This would reduce the exclusion zone to the degree that the animal(s) is outside of it.

6. RESUMING AIRGUN OPERATIONS AFTER A POWER-DOWN

(k) Following a power-down, if the marine mammal approaches the smaller designated exclusion zone, the airguns must then be completely shut-down. Airgun activity will not resume until the observer has visually observed the marine mammal(s) exiting the exclusion zone and is not likely to return, or has not been seen within the exclusion zone for 15 minutes for species with shorter dive durations (small odontocetes) or 30 minutes for species with longer dive durations (mysticetes and large odontocetes, including sperm, pygmy sperm, dwarf sperm, killer, and beaked whales).

(l) Following a power-down and subsequent animal departure, the *Langseth* may resume airgun operations at full power. Initiation requires that the observers can effectively monitor the full exclusion zones described in Condition 6(b). If the observer sees a marine mammal within or about to enter the relevant zones, then the *Langseth* will implement a course/speed alteration, power-down, or shutdown.

6. SHUTDOWN PROCEDURES

(m) Shutdown the airgun(s) if a visual observer detects a marine mammal within, approaching, or entering the relevant exclusion zone (as defined in Table 2, attached). A shutdown means that the *Langseth* turns off all operating airguns.

(n) If a North Atlantic right whale (*Eubalaena glacialis*) is visually sighted, the airgun array will be shut-down regardless of the distance of the animal(s) to the sound source. The array will not resume firing until 30 minutes after the last documented whale visual sighting.

6. RESUMING AIRGUN OPERATIONS AFTER A SHUTDOWN

(o) Following a shutdown, if the observer has visually confirmed that the animal has departed the 180-dB exclusion zone within a period of less than or equal to 8 minutes after the shutdown, then the *Langseth* may resume airgun operations at full power.

(p) Else, if the observer has not seen the animal depart the 180-dB exclusion zone, the *Langseth* shall not resume airgun activity until 15 minutes has passed for species with shorter dive times (*i.e.*, small odontocetes and pinnipeds) or 30 minutes has passed for species with longer dive durations (*i.e.*, mysticetes and large odontocetes, including sperm, pygmy sperm, dwarf sperm, killer, and beaked whales). The *Langseth* will follow the ramp-up procedures described in Conditions 6(g).

6. SURVEY OPERATIONS AT NIGHT

(q) The *Langseth* may continue marine geophysical surveys into night and low-light hours if the Holder of the Authorization initiates these segment(s) of the survey when the observers can view and effectively monitor the full relevant exclusion zones.

(r) This Authorization does not permit the Holder of this Authorization to initiate airgun array operations from a shut-down position at night or during low-light hours (such as in dense fog or heavy rain) when the visual observers cannot view and effectively monitor the full relevant exclusion zones.

(s) To the maximum extent practicable, the Holder of this Authorization should schedule seismic operations (*i.e.*, shooting the airguns) during daylight hours.

6. MITIGATION AIRGUN

(t) The *Langseth* may operate a small-volume airgun (*i.e.*, mitigation airgun) during turns and maintenance at approximately one shot per minute. The *Langseth* would not operate the small-volume airgun for longer than three hours in duration during turns. During turns or brief transits between seismic tracklines, one airgun will continue operating. The *Langseth*'s crew will still follow the ramp-up procedure (described in Condition 6(g) when increasing the source levels from one airgun to the full airgun array. Through use of this approach, seismic operations may resume without the 30-minute observation period of the full exclusion zone required for a "cold

start,” and without ramp-up if operating with the mitigation airgun for less than 8 minutes, or with ramp-up if operating with the mitigation airgun over 8 minutes. Observers will be on duty whenever the airguns are firing during daylight, and at night during the 30 minute period prior to ramp-ups as well as during ramp-ups or when the acoustician detects the present of marine mammals with the exclusion zone.

7. REPORTING REQUIREMENTS

This Authorization requires the Holder of this Authorization to:

(a) Submit a draft report on all activities and monitoring results to the Office of Protected Resources, National Marine Fisheries Service, within 90 days of the completion of the *Langseth*'s central Pacific Ocean cruise. This report must contain and summarize the following information:

- (i) Dates, times, locations, heading, speed, weather, sea conditions (including Beaufort sea state and wind force), and associated activities during all seismic operations and marine mammal sightings;
- (ii) Species, number, location, distance from the vessel, and behavior of any marine mammals, as well as associated seismic activity (number of shutdowns), observed throughout all monitoring activities.
- (iii) An estimate of the number (by species) of marine mammals with known exposures to the seismic activity (based on visual observation) at received levels greater than or equal to 160 dB re: 1 μ Pa and/or 180 dB re 1 μ Pa for cetaceans and a discussion of any specific behaviors those individuals exhibited.
- (iv) An estimate of the number (by species) of marine mammals with estimated exposures (based on modeling results) to the seismic activity at received levels greater than or equal to 160 dB re: 1 μ Pa and/or 180 dB re 1 μ Pa for cetaceans with a discussion of the nature of the probable consequences of that exposure on the individuals.
- (v) A description of the implementation and effectiveness of the: (A) terms and conditions of the Biological Opinion's Incidental Take Statement (attached); and (B) mitigation measures of the Incidental Harassment Authorization. For the Biological Opinion, the report will confirm the implementation of each Term and Condition, as well as any conservation recommendations, and describe their effectiveness, for minimizing the adverse effects of the action on Endangered Species Act listed marine mammals.

(b) Submit a final report to the Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, within 30 days after receiving comments from us on the draft report. If we decide that the draft report needs no comments, we will consider the draft report to be the final report.

8. REPORTING PROHIBITED TAKE

In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by this Authorization, such as an injury (Level A harassment), serious injury or mortality (*e.g.*, ship-strike, gear interaction, and/or entanglement), the Observatory shall immediately cease the specified activities and immediately report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, at 301-427-8401 and/or by email to Jolie.Harrison@noaa.gov and ITP.Cody@noaa.gov.

The report must include the following information:

- Time, date, and location (latitude/longitude) of the incident;
- Name and type of vessel involved;
- Vessel's speed during and leading up to the incident;
- Description of the incident;
- Status of all sound source use in the 24 hours preceding the incident;
- Water depth;
- Environmental conditions (*e.g.*, wind speed and direction, Beaufort sea state, cloud cover, and visibility);
- Description of all marine mammal observations in the 24 hours preceding the incident;
- Species identification or description of the animal(s) involved;
- Fate of the animal(s); and
- Photographs or video footage of the animal(s) (if equipment is available).

The Observatory will not resume their activities until we are able to review the circumstances of the prohibited take. We will work with the Observatory to determine what is necessary to minimize the likelihood of further prohibited take and ensure Marine Mammal Protection Act compliance. The Observatory may not resume their activities until we notify them by letter, email, or telephone.

9. REPORTING AN INJURED OR DEAD MARINE MAMMAL WITH AN UNKNOWN CAUSE OF DEATH

In the event that the Observatory discovers an injured or dead marine mammal, and the lead visual observer determines that the cause of the injury or death is unknown and the death is relatively recent (*i.e.*, in less than a moderate state of decomposition as described in the next paragraph), the Observatory will immediately report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, at 301-427-8401 and/or by email to Jolie.Harrison@noaa.gov and ITP.Cody@noaa.gov.

The report must include the same information identified in the Condition 8. Activities may continue while we review the circumstances of the incident. We will work with the Observatory to determine whether modifications in the activities are appropriate.

10. REPORTING AN INJURED OR DEAD MARINE MAMMAL NOT RELATED TO THE ACTIVITIES

In the event that the Observatory discovers an injured or dead marine mammal, and the lead visual observer determines that the injury or death is not associated with or related to the activities authorized in the Authorization (*e.g.*, previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), the Observatory will report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, at 301-427-8401 and/or by email to Jolie.Harrison@noaa.gov and ITP.Cody@noaa.gov within 24 hours of the discovery. The Observatory will provide photographs or video footage (if available) or other documentation of the stranded animal sighting to us.

11. ENDANGERED SPECIES ACT BIOLOGICAL OPINION AND INCIDENTAL TAKE STATEMENT

The Observatory is required to comply with the Terms and Conditions of the Incidental Take Statement corresponding to the Endangered Species Act Biological Opinion issued to both the National Science Foundation and the National Marine Fisheries Service's Office of Protected Resources, Permits and Conservation Division (attached).

A copy of this Authorization and the Incidental Take Statement must be in the possession of all contractors and protected species observers operating under the authority of this Incidental Harassment Authorization.

APR 08 2013



Helen M. Golde
Acting Director,
Office of Protected Resources
National Marine Fisheries Service

Date

Attachments

Attachment

Table 1. Authorized Level B take for the Observatory’s seismic survey on the Mid-Atlantic Ridge in the Atlantic Ocean, April through June, 2013.

Species	Requested Take Authorization
Humpback whale	50
Bryde's whale	1
Sei whale	9
Fin whale	198
Blue whale	66
Minke whale	3
Sperm whale	164
Northern bottlenose whale	4
Cuvier's beaked whale	7
Mesoplodon spp. ¹	39
Bottlenose dolphin	47
Atlantic spotted dolphin	112
Striped dolphin	1,034
Short-beaked common dolphin	2,115
Risso’s dolphin	21
False killer whale	7
Killer whale	5
Short-finned pilot whale	674

Table 2. Modeled distances to which sound levels greater than or equal to 160 and 180 dB re: 1 μPa could be received during the proposed survey over the Mid-Atlantic Ridge in the north Atlantic Ocean, during April through June, 2013.

Source and Volume (in³)	Tow Depth (m)	Water Depth (m)	Predicted RMS Distances¹ (m)	
			160 dB	180 dB
Single Bolt airgun (40 in ³)	12	> 1,000	388	100
		100 to 1,000	582	100
36-Airgun Array (6,600 in ³)	12	> 1,000	6,908	1,116
		100 to 1,000	10,362	1,674

Incidental Take Statement

Section 9 of the ESA and federal regulation pursuant to Section 4(d) of the ESA prohibit the “take” of endangered and threatened species, respectively, without special exemption. “Take” is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the NMFS as an act which actually kills or injures wildlife, which may include significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of Sections 7(b)(4) and 7(o)(2), taking that is incidental and not intended as part of the agency action is not considered to be prohibited taking under the ESA provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are nondiscretionary, and must be undertaken by the NSF and the Permits Division so that they become binding conditions for L-DEO for the exemption in Section 7(o)(2) to apply. Section 7(b)(4) of the ESA requires that when a proposed agency action is found to be consistent with Section 7(a)(2) of the ESA and the proposed action may incidentally take individuals of listed species, the NMFS will issue a statement that specifies the impact of any incidental taking of endangered or threatened species. To minimize such impacts, reasonable and prudent measures and term and conditions to implement the measures, must be provided. Only incidental take resulting from the agency actions and any specified reasonable and prudent measures and terms and conditions identified in the incidental take statement are exempt from the taking prohibition of Section 9(a), pursuant to Section 7(o) of the ESA.

Section 7(b)(4)(C) of the ESA specifies that in order to provide an incidental take statement for an endangered or threatened species of marine mammal, the taking must be authorized under Section 101(a)(5) of the MMPA. One of the federal actions considered in this Opinion is the Permits and Conservation Division’s proposed authorization of the incidental taking of fin, blue, sei, humpback, and sperm whales pursuant to Section 101(a)(5)(D) of the MMPA. The final authorization will be issued and its mitigation and monitoring measures incorporated in this Incidental take Statement as Terms and Conditions. With this authorization, the incidental take of listed whales is exempt from the taking prohibition of Section 9(a), pursuant to Section 7(o) of the ESA as long as such take occurs consistent with this statement.

Amount or Extent of Take

The NMFS anticipates the proposed seismic survey over the mid-Atlantic Ridge is likely to result in the incidental take of listed species by harassment. The proposed action is expected to take by harassment 66 blue, 198 fin, 9 sei, 50 humpback, and 164 sperm whales by exposing individuals to received seismic sound levels greater than 160 dB re 1 μ Pa by harassment. These estimates are based on the best available information of whale densities in the area to be ensounded above 160 dB re 1 μ Pa during the proposed activities. This incidental take would result primarily from exposure to acoustic energy during seismic operations and would be in the form of harassment, and is not expected to result in the death or injury of any individuals that are exposed.

We expect the proposed action will also take individual sea turtles as a result of exposure to acoustic energy during seismic studies, and we expect this take would also be in the form of

harassment, with no death or injury expected for individuals exposed. NMFS anticipates that the take of listed sea turtles will be difficult to detect. Therefore, NMFS cannot specify the numbers of individuals anticipated to be taken. Take, however, is limited to harassment only.

Harassment of sea turtles is expected to occur at received levels above 166 dB re 1 μ Pa. As we cannot determine the number of individuals to which harassment will occur, we expect the extent of exposure will occur within the 166 dB isopleth of the *Langseth's* airgun array.

Harassment of blue, fin, humpback, sei, and sperm whales exposed to seismic studies at levels less than 160 dB re 1 μ Pa, or of leatherback, loggerhead, green, and Kemp's ridley sea turtles at levels less than 166 dB re 1 μ Pa, is not expected. If overt adverse reactions (for example, startle responses, dive reactions, or rapid departures from the area) by listed whales or sea turtles are observed outside of the 160 dB or 166 dB re 1 μ Pa isopleths, respectively, while airguns are operating, incidental take may be exceeded. If such reactions by listed species are observed while airguns are in operation, this may constitute take that is not covered in this Incidental Take Statement. The NSF and NMFS' Permits and Conservation Division must contact the Endangered Species Act Interagency Cooperation Division to determine whether reinitiation of consultation is required because of such operations.

Any incidental take of blue, fin, humpback, sei, and sperm whales or leatherback, loggerhead, green, and Kemp's ridley sea turtles is restricted to the permitted action as proposed. If the actual incidental take meets or exceeds the predicted level or type, the NSF and NMFS' Permits and Conservation Division must reinitiate consultation. All anticipated takes would be "takes by harassment", as described previously, involving temporary changes in behavior.

Effect of the Take

In the accompanying Opinion, NMFS has determined that the level of incidental take is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat.