

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

[I.D. 012303A]

Small Takes of Marine Mammals Incidental to Specified Activities; Port of Miami Construction Project (Phase II)

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

ACTION: Notice of receipt of application and proposed authorization for a small take exemption; request for comments.

SUMMARY: NMFS has received a request from the U.S. Army Corps of Engineers-Jacksonville District (Corps) for an Incidental Harassment Authorization (IHA) to take small numbers of marine mammals, by harassment, incidental to deepening the Dodge-Lummus Island Turning Basin in Miami, FL (Turning Basin) to a depth of 44 ft (13.41 m). Under the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue a 1-year small take authorization, to the Corps to incidentally take, by harassment, small numbers of bottlenose dolphins (*Tursiops truncatus*) as a result of conducting this activity.

DATES: Comments and information must be received no later than March 21, 2003.

ADDRESSES: Comments on the application should be addressed to Donna Wieting, Chief, Marine Mammal Conservation Division, Office of Protected Resources, NMFS, 1315 East-West Highway, Silver Spring, MD 20910-3225. Comments cannot be accepted if submitted via e-mail or the Internet. A copy of the application may be obtained by writing to this address or by telephoning the contact listed here. Publications referenced in this document are available for viewing, by appointment during regular business hours, at this address.

FOR FURTHER INFORMATION CONTACT: Kenneth R. Hollingshead, NMFS, (301) 713-2322, ext 128.

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 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.

Permission may be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s) and will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses and that the permissible methods of taking and requirements pertaining to the 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."

Subsection 101(a)(5)(D) of the MMPA established an expedited process by which citizens of the United States can apply for an authorization to incidentally take small numbers of marine mammals by harassment. 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; 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.

Subsection 101(a)(5)(D) establishes a 45-day time limit for NMFS review of an application followed by a 30-day public notice and comment period on any proposed authorizations for the incidental harassment of small numbers of marine mammals. Within 45 days of the close of the comment period, NMFS must either issue or deny issuance of the authorization.

Summary of Request

On June 24, 2002, NMFS received a request from the Corps for an IHA to take bottlenose dolphins incidental to deepening the Turning Basin in the Port of Miami, south of Dodge-Lummus Island. The Port of Miami is one of the major terminal complexes in Florida. The majority of this tonnage is high-value general cargo transported in trailers and containers. The Port also accommodates a large cruise ship industry. Development has primarily centered on the Lummus Island terminal and container complex facilities. Expanding and deepening the Turning Basin would eliminate the need

for vessels docked at Lummus Island to back to or from the Fisher Island Turning Basin.

Completion of the dredging project may employ a hopper dredge, clamshell dredge, cutterhead dredge and/or confined blasting. The dredging will remove 1.4 million cubic yards of material from an area 1,500 ft (457.2 m) in diameter. The Corps proposes to dredge the Turning Basin, starting in December 2002, to a maximum depth of 42 ft (12.8 m) plus a 2 ft (0.61 m) overdepth. Material removed from the dredging will be placed in the Miami Ocean Dredged Material Disposal Site.

The Corps expects the contractor will employ underwater dredging and confined blasting to construct the project. Blasting has the potential to have adverse impacts on bottlenose dolphins inhabiting the area near the project. While the Corps does not presently have a blasting plan from the contractor which will specifically identify the number of holes that will be drilled, the amount of explosives that will be used for each hole, the number of blasts per day (usually no more than 3/day) or the number of days the construction is anticipated to take to complete, the Corps has forwarded to NMFS a description of a completed project in San Juan Harbor, Puerto Rico to use as an example. For that project, the maximum weight of the explosives used for each event was 375 lbs (170 kg) and the contractors detonated explosives once or twice daily from July 16 to September 9, for a total of 38 individual detonations. Normal practice is for each charge to be placed approximately 5-10 ft (1.5-3 m) deep depending on how much rock needs to be broken and how deep a depth is sought. The charges are placed in the holes and tamped with rock. Therefore, if the total explosive weight needed is 375 lbs (170 kg) and they have 10 holes, they would average 37.5 lbs (17.0 kgs)/hole. However, a more likely weight for this project may be only 90 lbs (41 kgs) and, therefore, 9 lbs(4.1 kg)/hole. Charge weight and other determinations are expected to be made by the Corps and the contractor approximately 30-60 days prior to commencement of the construction project. Moreover, because the charge weight and other information is not presently available, NMFS will require the Corps provide this information to NMFS, including calculations for impact/mitigation ranges (for the protection of marine mammals and sea turtles from injury), prior to commencing work.

Description of the Marine Mammals Affected by the Activity

General information on marine mammal species found off the East Coast of the United States can be found in Waring et al. (2001, 2002). This report is available at the following location:

http://www.nmfs.noaa.gov/prot_res/PR2/Stock_Assessment_Program/sars.html.

The only marine mammal species likely to be found in the Turning Basin is the bottlenose dolphin. There is not currently a stock assessment available concerning the status of bottlenose dolphins in the inshore and nearshore waters off south Florida. Additionally, while neither a status review nor peer-reviewed reports of status of the Biscayne Bay bottlenose dolphins have been published, the Southeast Fisheries Science Center, NMFS, is currently working on this report. Preliminary information indicates a documented population of 159 bottlenose dolphins residing within the boundaries of the Biscayne Bay area. A total of 146 bottlenose dolphins have been resighted in the Port of Miami area at least one additional time. These animals were often sighted within or transiting through the Port of Miami. It is not known whether bottlenose dolphins inhabit the Turning Basin or whether they simply use the area as a transit to North Biscayne Bay or offshore via the main port channel. The defined stocks of bottlenose dolphins that reside closest to the project area, therefore, are the western North Atlantic coastal and offshore stocks of bottlenose dolphins with minimum populations estimated to be 2,482 for the coastal stock and 24,897 for the offshore stock. Additional assessment information for these two stocks is available at the previously mentioned URL.

Potential Effects on Marine Mammals

In general, potential impacts to marine mammals from explosive detonations could include both lethal and non-lethal injury, as well as Level B harassment. Marine mammals may be killed or injured as a result of an explosive detonation due to the response of air cavities in the body, such as the lungs and bubbles in the intestines. Effects are more likely to be most severe in near surface waters where the reflected shock wave creates a region of negative pressure called "cavitation."

A second criterion for mortality is the onset of extensive lung hemorrhage. Extensive lung hemorrhage is considered debilitating and potentially fatal. Suffocation caused by lung

hemorrhage is likely to be the major cause of marine mammal death from underwater shock waves. The estimated range for the onset of extensive lung hemorrhage to marine mammals varies depending upon the animal's weight, with the smallest mammals having the greatest potential hazard range.

NMFS has established dual criteria for determining non-lethal injury for explosives as the peak pressure that will result in: (1) the onset of slight lung hemorrhage, or (2) a 50-percent probability level for a rupture of the tympanic membrane. These are injuries from which animals would be expected to recover on their own. Finally, NMFS has established dual criteria for Level B acoustic harassment: (1) an energy-based TTS criterion of 182 dB re 1 $\mu\text{Pa}^2\text{-sec}$ cumulative energy flux in any 1/3 octave band above 100 Hz for odontocetes (and sea turtles) derived from experiments with bottlenose dolphins (Ridgway *et al.*, 1997; Schlundt *et al.*, 2000); and (2) 12 psi peak pressure cited by Ketten (1995) as associated with a safe outer limit for minimal, recoverable auditory trauma (i.e., TTS). The Level B Harassment zone therefore is the minimum distance at which neither criterion is exceeded.

To protect endangered, threatened and protected species (manatees, dolphins, sea turtles), the following equations have been proposed by the Corps for this project to determine zones for injury or mortality from an open water explosion and to assist the Corps in establishing mitigation to reduce impacts to the lowest level practicable. These equations are believed to be conservative since they are based on unconfined charges and the proposed blasts in the Turning Basin will be confined (stemmed) charges. The equations are:

Caution Zone radius = $260 (\text{lbs}/\text{delay})^{1/3}$

Safety Zone radius = $520 (\text{lbs}/\text{delay})^{1/3}$

The caution zone is the radius from the detonation where mortality (but not necessarily injury), would not occur in an open-water blast while the safety zone is the approximate distance where non-serious injury (Level A harassment) is unlikely from an open-water explosion. However, even though single event detonations do not result in behavioral response by marine mammals (*see* 66 FR 22450, May 3, 2001), there is a possibility that other Level B harassment (e.g., a temporary shift in hearing threshold) could occur at greater distances than provided by these safety zones. For that reason, an IHA is warranted.

In the Turning Basin or any area where explosives are required to obtain

channel design depth, marine mammal/sea turtle protection measures will be employed by the Corps. For each explosive charge, the Corps proposes that detonation will not occur if a marine mammal is sighted by a dedicated marine mammal/sea turtle observer within the caution zone, a circular area around the detonation site with the following radius: $R = 260(W)^{1/3}$ (260 times the cube root of the weight of the explosive charge in pounds) where: R = radius of the danger zone in ft; W = weight of the explosive charge in lbs). Although the area described by the above equation is considered to be an area for potential mortality, the Corps believes that because all explosive charges will be stemmed (placed in a drilled hole and tamped with rock), the areas for potential mortality and injury will be significantly smaller than this area and therefore it is unlikely that even non-serious injury would occur if monitoring this zone is effective. (Since bottlenose dolphins are commonly found on the surface of the water, implementation of a mitigation/monitoring program is expected by NMFS to be close to 100 percent effective).

According to the Corps, bottlenose dolphins and other marine mammals have not been documented as being directly affected by dredging activities and therefore the Corps does not anticipate any incidental harassment of bottlenose dolphins by dredging.

Potential Effects on Habitat

The Corps expects the effects on marine mammal habitat to be minimal. The bottom of the basin is rock and sand, and the walls of the Turning Basin are vertical rock. The Corps also believes that the area of the Turning Basin may not be suitable habitat for dolphins in Biscayne Bay, but it is more likely that the animals use the area to traverse to North Biscayne Bay or offshore via the main port channel. In addition, as a large number of fish are not expected to perish during the detonations, there will not be a significant effect on dolphins' food supply (T. Jordan, pers. comm, 2002).

Mitigation and Monitoring

The Corps proposes to implement mitigation measures and a monitoring program that will establish both danger- and caution-zone radii to ensure that bottlenose dolphins will not be injured during blasting and that impacts will be at the lowest level practicable. Mitigation measures include: (1) confining the explosives in a hole with drill patterns restricted to a minimum of 8 ft (2.44 m) separation from any other

loaded hole; (2) restricting the hours of detonation from 2 hours after sunrise to 1 hr before sunset to ensure adequate observation of marine mammals and sea turtles in the safety zone; (3) staggering the detonation for each explosive hole in order to spread the explosive's total overpressure over time, which in turn will reduce the danger zone radius; (4) capping the hole containing explosives with rock in order to reduce the outward potential of the blast, thereby reducing the chance of injuring a dolphin or sea turtle; (5) matching, to the extent possible, the energy needed in the "work effort" of the borehole to the rock mass to minimize excess energy vented into the water column; and (6) conducting a marine mammal/sea turtle watch with no less than two qualified observers from a small water craft and/or an elevated platform on the explosives barge, at least 30 minutes before and continue for 30 minutes after each detonation to ensure that there are no dolphins or sea turtles in the area at the time of detonation. The observer monitoring program will take place in a circular area at least three times the radius of the above described caution/safety zone (called the watch zone). Any marine mammal(s) in the danger zone or the watch zone will not be forced to move out of those zones by human intervention. Detonation shall not occur until the animal(s) move(s) out of the danger zone on its own volition.

In the unlikely event a marine mammal or marine turtle is injured or killed during blasting, the Contractor shall immediately notify the NMFS Regional Office.

Reporting

The Corps would like to have contractors complete the proposed activities in no more than 24 months from start date. Therefore, NMFS is proposing to issue a 1-year IHA with the possibility for renewal upon application from the Corps. NMFS proposes to require the Corps to submit a report of activities 120 days before the expiration of the proposed IHA if the Corps plans to request a renewal of its IHA, or 120 days after the expiration of the IHA if a renewal is not being requested.

Endangered Species Act

Under section 7 of the ESA, NMFS has begun consultation on the proposed issuance of an IHA under section 101(a)(5)(D) of the MMPA for this activity. Consultation will be concluded upon completion of the comment period and consideration of those comments prior to a determination on issuance of an IHA.

National Environmental Policy Act

In accordance with section 6.01 of the National Oceanic and Atmospheric Administration (NOAA) Administrative Order 216-6 (Environmental Review Procedures for Implementing the National Environmental Policy Act, May 20, 1999), NMFS has analyzed both the context and intensity of this action and determined, based on a programmatic NEPA assessment conducted on the impact of NMFS' rulemaking for the issuance of IHAs (61 FR 15884; April 10, 1996); the Corps' 1989 Environmental Impact Statement and Feasibility Report for the Navigation Study for the Miami Harbor Channel; and the contents, results, and analyses of the Corps' blasting project, will not individually or cumulatively result in a significant impact on the quality of the human environment as defined in 40 CFR 1508.27. Therefore, based on this analysis, the action of issuing an IHA governing the incidental taking of marine mammals, by harassment for this activity meets the definition of a "Categorical Exclusion" as defined under NOAA Administrative Order 216-6 and is exempted from further environmental review.

Preliminary Conclusions

NMFS has preliminarily determined that the short-term impact as described in this document, should result, at worst, in the temporary modification in behavior by bottlenose dolphins. While behavioral modifications, including temporarily vacating the area, may be made by these species to avoid the resultant visual and acoustic disturbance from dredging and detonations, this action is expected to have a negligible impact on the animals. In addition, no take by injury and/or death is anticipated, and harassment takes will be at the lowest level practicable due to incorporation of the mitigation measures mentioned previously in this document.

Proposed Authorization

NMFS proposes to issue an IHA to the Corps for the potential harassment of small numbers of bottlenose dolphins incidental to deepening the Dodge-Lummas Island Turning Basin in Miami, FL (Turning Basin), provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. NMFS has preliminarily determined that the proposed activity would result in the harassment of only small numbers of bottlenose dolphins and will have no more than a negligible impact on this marine mammal stock.

Information Solicited

NMFS requests interested persons to submit comments, information, and suggestions concerning this request (*see ADDRESSES*).

Dated: February 12, 2003.

Laurie K. Allen,

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

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[I.D. 011003C]

Marine Mammals; File No. 782-1438

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

ACTION: Issuance of permit amendment.

SUMMARY: Notice is hereby given that the National Marine Mammal Laboratory, NMFS, NOAA, 7600 Sand Point Way, NE, BIN C15700, Bldg. 1, Seattle, WA 98115-0070, (Dr. Sue Moore, Principal Investigator (PI)) has been issued an amendment to scientific research Permit No. 782-1438.

ADDRESSES: The amendment and related documents are available for review upon written request or by appointment in the following office(s):

Permits, Conservation and Education Division, Office of Protected Resources, NMFS, 1315 East-West Highway, Room 13705, Silver Spring, MD 20910; phone (301) 713-2289; fax (301) 713-0376;

Alaska Region, NMFS, P.O. Box 21668, Juneau, AK 99802-1668; phone (907) 586-7221; fax (907) 586-7249.

FOR FURTHER INFORMATION CONTACT: Ruth Johnson, (301) 713-2289.

SUPPLEMENTARY INFORMATION: The requested amendment has been granted under the authority of the Marine Mammal Protection Act of 1972, as amended (16 U.S.C. 1361 *et seq.*), the Regulations Governing the Taking and Importing of Marine Mammals (50 CFR part 216), the Endangered Species Act of 1973, as amended (ESA; 16 U.S.C. 1531 *et seq.*), the regulations governing the taking, importing, and exporting of endangered and threatened species (50 CFR 222-226), and the Fur Seal Act of 1966, as amended (16 U.S.C. 1151 *et seq.*).

Permit No. 782-1438, issued on issued on May 8, 1998 (63 FR 27265) authorizes the National Marine Mammal Laboratory to take various large and