



MARINE MAMMAL COMMISSION

29 July 2014

Ms. Jolie Harrison, Chief
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910-3226

Dear Ms. Harrison:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the application submitted by the U.S. Marine Corps seeking authorization under section 101(a)(5)(A) of the Marine Mammal Protection Act (the MMPA) to take Atlantic bottlenose dolphins by mortality, Level A harassment, and Level B harassment. The taking would be incidental to various training exercises at the Marine Corps Air Station, Cherry Point Range Complex in North Carolina during a five-year period. The Commission also has reviewed the National Marine Fisheries Service's (NMFS) 15 July 2014 notice (79 Fed. Reg. 41374) announcing receipt of the application and proposing to issue the authorization, subject to certain conditions. The Commission has commented on multiple incidental harassment authorization requests related to the training activities and the Marine Corps's advanced notice of proposed rulemaking in 2013.

The Navy's Final Environmental Impact Statement/Overseas Environmental Impact Statement (FEIS) assesses the impacts of its training and research, development, test, and evaluation activities within the Atlantic Fleet Training and Testing study area and NMFS's associated final rule authorizes the taking of marine mammals incidental to those activities during a five-year period. Although that FEIS and final rule include activities at the Cherry Point Range Complex, those documents do not cover the training exercises conducted by the Marine Corps. For completeness, the Commission recommends that the Marine Corps work with the Navy and NMFS to include its training activities in future EISs and rulemakings that authorize the taking of marine mammals for activities conducted at the Cherry Point Range Complex.

Background

The Marine Corps is planning year-round air-to-surface and surface-to-surface training exercises using bombing targets BT-9 and BT-11 at the Cherry Point Range Complex within southern Pamlico Sound, North Carolina. The training exercises consist of inert and live ordnance (up to 15 lbs net explosive weight) including bombing, rocket, gunnery, strafing, special weapons (i.e., laser systems), and mine-laying exercises. Live firing would occur at the BT-9 site only. Training exercises could occur at any time, day or night.

The Marine Corps proposes to include the following mitigation, monitoring, and reporting measures—

- conducting range sweeps and “cold passes” (i.e., no ordnance delivered) prior to the proposed activities;
- using delay procedures;
- using remotely operated, high-resolution cameras equipped with night-vision capabilities to monitor the target areas during day and night;
- abiding by NMFS’s Southeast Region Marine Mammal & Sea Turtle Viewing Guidelines;
- using Marine Corps personnel to serve as protected species observers and requiring those personnel to complete Marine Species Awareness Training;
- conducting pre- and post-exercise monitoring;
- funding Duke University to continue long-term monitoring of marine mammals in Pamlico Sound;
- conducting a detailed assessment of the effectiveness of sensor-based monitoring (i.e., passive acoustic monitoring (PAM)) in detecting marine mammals in the area of the training exercises;
- reporting injured, stranded, and dead marine mammals immediately (or as soon as operationally feasible and clearance procedures allow) to NMFS, including any marine mammals struck by a vessel;
- participating in an adaptive management process; and
- submitting annual reports and a comprehensive final report.

The Commission commends the Marine Corps for including the use of a PAM system to supplement its other proposed mitigation and monitoring measures and for proposing to determine the effectiveness of that system. Because the effectiveness of the camera systems also has yet to be determined, the Commission recommends that NMFS require the Marine Corps to determine the effectiveness of all sensor-based monitoring, including the camera systems and infrared capabilities of those systems. Additionally, the Commission supports the Marine Corps’s request, and NMFS’s proposal, to include in the proposed rule taking by Level A harassment and mortality based on the model-estimated takes. For other similar proposed rules, the model-estimated takes have been reduced by some presumed mitigation effectiveness scores. In time, the Marine Corps may be able to incorporate such findings, but at this time, the Commission agrees that no such assumptions should be made.

Probability of direct strike

The Marine Corps estimated the probability of ordnance striking a marine mammal based on simple calculations using the surface area and density of dolphins and the amount of ordnance expected to be expended within a year. By combining dolphin densities and those activities over space and time into a single calculation, the Marine Corps provided only a very crude estimate of strike probabilities. To obtain a more reliable estimate of takes from ordnance, the Marine Corps should have used direct strike or dynamic Monte Carlo models that account for the locations and trajectories of the expended ordnance and the movement patterns of the bottlenose dolphins in the area, much like the various acoustic models that incorporate animal dosimeters. Such dosimeters could be used in this situation to collect close-approach distance data rather than received sound levels, which would result in more realistic strike probabilities. The models can be adjusted to account for variable ordnance types, quantities, speeds, and tracks, as well as the density and

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movements of dolphins—many of which are not incorporated in the simple calculations used by the Marine Corps. The probability of ordnance strike based on such models may be similar to that which is proposed to be authorized (i.e., one mortality per year, five during the five-year period), but that assumption should be confirmed using the best possible (i.e., most realistic) models of the proposed exercises and animals involved. Therefore, the Commission reiterates its recommendation that NMFS require the Marine Corps to use either direct strike or dynamic Monte Carlo models to determine the probability of ordnance strike rather than using its simplistic, unrealistic calculations of strike probability.

Thank you for carefully considering the enclosed comments and recommendations. The Commission looks forward to receiving your responses. Please contact me if you have questions about our recommendations or rationale.

Sincerely,

A handwritten signature in blue ink that reads "Rebecca J. Lent". The signature is written in a cursive style with a large initial "R".

Rebecca J. Lent, Ph.D.
Executive Director

Cc: Carmen Lombardo, U.S. Marine Corps
Jessica Guilianelli, U.S. Marine Corps