



# MARINE MAMMAL COMMISSION

20 March 2012

Mr. P. Michael Payne, Chief  
Permits, Conservation, and Education Division  
Office of Protected Resources  
National Marine Fisheries Service  
1315 East-West Highway  
Silver Spring, MD 20910-3225

Dear Mr. Payne:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the Navy's application seeking authorization under section 101(a)(5)(D) of the Marine Mammal Protection Act to take marine mammals by harassment. The taking would be incidental to testing the AN/AQS-20A Mine Reconnaissance Sonar System (Q-20) in the Gulf of Mexico during a one-year period. The Commission also has reviewed the National Marine Fisheries Service's 28 February 2012 *Federal Register* notice (77 Fed. Reg. 12010) announcing receipt of the application and proposing to issue the incidental harassment authorization, subject to certain conditions.

## RECOMMENDATION

The Marine Mammal Commission recommends that the National Marine Fisheries Service issue the incidental harassment authorization, but condition it to require the Navy to conduct its monitoring for at least 15 minutes prior to the initiation of and for at least 15 minutes after the cessation of Q-20 testing activities.

## RATIONALE

The Navy proposes to test the Q-20 in waters of and adjacent to the Naval Surface Warfare Center, Panama City Division testing range in the Gulf of Mexico. The testing activities would occur beyond the territorial waters of the United States (i.e., more than 22 km from shore) in depths up to 250 m. The purpose of the testing is to verify the performance of the Q-20 in a realistic environment and support its integration with the remote multi-mission vehicle and the littoral combat ship. The Q-20 could be towed by the vehicle, other small surface vessels, or a helicopter. It operates at frequencies from 35 to greater than 200 kHz. The Navy would test the Q-20 at a maximum source level of 212 dB re 1  $\mu$ Pa at 1 m for up to 10 hours per day and 42 days during the one-year period. Other surface activities (i.e., deploying, towing, and recovering the system and other support activities) would use additional vessels and would occur when the system is not active. Active sonar and surface activities could occur during either daylight or nighttime hours.

The Service preliminarily has determined that, at most, the proposed activities temporarily would modify the behavior of bottlenose, pantropical spotted, Atlantic spotted, spinner, Clymene, and striped dolphins. It also anticipates that any impact on the affected species and stocks would be negligible. The Service does not anticipate any take of marine mammals by death or serious injury

and believes that the potential for disturbance will be at the least practicable level because of the proposed mitigation and monitoring measures. Those measures include—

- operating the Q-20 at the lowest practicable source level, except as required to meet testing objectives;
- using marine observers (i.e., Navy look-outs) to monitor before, during, and after testing activities;
- using delay and shut-down procedures, but not implementing those procedures if dolphins or porpoises exhibit bow-riding behavior;
- ensuring that the marine observers (1) review the Service-approved Marine Species Awareness Training, (2) are trained in marine mammal recognition, and (3) are trained in the most effective means to ensure quick and effective communication when implementing mitigation measures;
- using binoculars, night-vision goggles, and other sensors to aid in the detection of marine mammals;
- using aircraft to monitor for marine mammals when operationally feasible and safe;
- reporting injured and dead marine mammals immediately to the Service's local stranding network and regional office; and
- submitting a final report.

### **Monitoring measures**

The Navy proposes to test the Q-20, a high-frequency sonar system, in the relatively shallow waters of the Gulf of Mexico. The Commission believes that the potential effects to marine mammals would be limited relative to the potential effects of mid- and low-frequency sonar because the Q-20 sonar system uses high-frequency sound, which does not propagate over long distances in the marine environment. Nonetheless, the Navy proposes to use larger exclusion zones based on mid-frequency sonar (i.e., 183 m). The Commission considers the Navy's decision to use such zones to be reasonable and precautionary.

In addition, the Navy would use marine observers to monitor for approximately 15 minutes before, during, and for approximately 15 minutes after all Q-20 testing activities. The observers would monitor for marine mammals before a Q-20 testing activity to ensure the activities can be initiated without apparent risk. They would continue monitoring during the activity to determine if delay or shut-down procedures might be needed based on the proximity of any marine mammals to the sonar source. They also would monitor after the activity to detect any potentially significant effects (e.g., changes in marine mammal behavior, evidence of injury) that might become apparent after the cessation of each testing period.

The two key factors that determine the effectiveness of pre- and post-activity monitoring are (1) the behavior of the potentially affected marine mammals and (2) the effectiveness of the observers at detecting marine mammals if they are present. The marine mammals expected to be in the area are not deep divers and generally do not dive for periods exceeding 15 minutes. That means

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that the effectiveness of monitoring for 15-minute periods will depend largely on the ability of the observers to detect marine mammals when they are at the surface.

The ability of observers to detect marine mammals at the surface is something that could be evaluated with relatively common and straight-forward assessment techniques. The Commission understands that the Navy is in the process of assessing the effectiveness of visual observers, which is consistent with the Integrated Comprehensive Monitoring Plan that the Navy has developed and is implementing. However, results from that study are not available at this time. The Commission supports such studies and encourages the Navy to assess observer effectiveness under various conditions (e.g., poor weather, rough sea surface, nighttime) that may occur during the proposed activities.

Until results of the visual observer effectiveness study are available, the Commission believes that the Navy should make observations and collect data for at least 15 minutes before initiation of Q-20 transmissions and 15 minutes after cessation of those transmissions. As such, the Marine Mammal Commission recommends that the National Marine Fisheries Service issue the incidental harassment authorization, but condition it to require the Navy to conduct its monitoring for at least 15 minutes prior to the initiation of and for at least 15 minutes after the cessation of Q-20 testing activities.

Please contact me if you have questions regarding the Commission's recommendation and comments.

Sincerely,

A handwritten signature in blue ink that reads "Timothy J. Ragen". The signature is written in a cursive style with a long horizontal stroke at the beginning.

Timothy J. Ragen, Ph.D.  
Executive Director