



MARINE MAMMAL COMMISSION

29 November 2016

Ms. Jolie Harrison, Chief
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910-3225

Dear Ms. Harrison:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the U.S. Air Force's (USAF) application seeking authorization under section 101(a)(5)(D) of the Marine Mammal Protection Act to take marine mammals by harassment incidental to conducting maritime weapon systems evaluation program (WSEP) activities at Eglin Air Force Base off Florida. The Commission also has reviewed the National Marine Fisheries Service's (NMFS) 21 November 2016 notice (81 Fed. Reg. 83209) announcing receipt of the application and proposing to issue the authorization, subject to certain conditions. The Commission has commented on similar authorizations in the last few years and understands that USAF currently is working with NMFS to incorporate all of its activities¹ into a single rulemaking and National Environmental Policy Act document, which the Commission fully supports.

Background

USAF plans to conduct its WSEP activities during a two-week timeframe² in February and March 2017. The purpose of those activities is to evaluate maritime deployment data, tactics, techniques, and procedures and determine the impact of those techniques and procedures on combat training. Those activities involve the use of gunnery rounds, rockets, missiles, and bombs (ranging from a 45 g gunnery round to a 429 kg bomb). USAF would use stationary, towed, and remotely-controlled boat targets. USAF would conduct all WSEP activities during daylight hours in waters approximately 35 m in depth and at a distance of approximately 27 km from the coast.

NMFS preliminarily has determined that the proposed activities could cause both Level A and B harassment of bottlenose³ and Atlantic spotted dolphins but anticipates that any impact on the affected species and stocks would be negligible. NMFS does not anticipate any take of marine

¹ e.g., naval explosive ordnance disposal school, precision strike weapon, air-to-surface gunnery, maritime strike operation, and WSEP activities.

² The Commission understands that the activities would occur on 8 days.

³ NMFS inadvertently omitted from the *Federal Register* notice one take of bottlenose dolphins by Level A harassment (slight lung injury). Thus, three rather than two takes of bottlenose dolphins by Level A harassment (permanent threshold shift (PTS) and slight lung injury) would be authorized in the final authorization.

mammals by serious injury or death and believes the proposed mitigation measures provide the means of effecting the least practicable impact on marine mammal species or stocks and their habitat. The proposed mitigation, monitoring, and reporting measures include—

- restricting WSEP activities from occurring when Beaufort sea states are greater than 4;
- using trained marine species observers to conduct vessel-based monitoring from five vessels for up to 2 hours before, during⁴, and for 30 minutes after the proposed activities;
- using delay and shut-down procedures;
- using live-video feed from three high-definition cameras to supplement vessel-based monitoring to detect marine mammals and implement mitigation measures;
- reporting injured and dead marine mammals immediately to NMFS's local stranding network, regional office, and Office of Protected Resources; and
- submitting a final report.

Estimation of takes

The method NMFS used to estimate the numbers of takes during the proposed activities, which summed fractions of takes for each species across mission days⁵, does not account for and negates the intent of NMFS's 24-hour reset policy—a policy decision that NMFS made many years ago and continues to implement⁶. Instead of summing fractions of takes across days and then rounding to estimate total takes, NMFS should have calculated a daily take estimate (determined by multiplying the estimated density of marine mammals in the area by the daily ensonified area) and then rounded that to a whole number *before* multiplying it by the number of days that activities would occur—a tack taken for all previous WSEP activities (80 Fed. Reg. 17398, 81 Fed. Reg. 7310). For species in which estimated daily takes would round down to zero, NMFS should use the average group size as a proxy for the estimated number of takes, as has been done for other incidental harassment authorizations (80 Fed. Reg. 75380, 81 Fed. Reg. 23144). If NMFS believes any of those species could be taken on multiple days, NMFS should multiply the average group size by the number of days of activities. NMFS proposed to authorize the taking by Level A harassment of up to two bottlenose dolphins⁷ and one Atlantic spotted dolphin. Those proposed numbers of takes do not make biological sense given that those species occur in groups larger than 1–3 dolphins. Thus, if NMFS believes that either species has the potential to be taken by Level A harassment, then those takes should be increased to average group size.

Further, as the Commission has indicated in previous letters regarding this matter⁸, the issue at hand involves policy rather than mathematical accuracy. In this instance, the numbers of takes for

⁴ The observers would be required to leave the mission area at least 30 minutes prior to the activities and move to the periphery of the safety zone (approximately 15 km away), which is based on human safety.

⁵ In this instance, NMFS summed the fractions of takes for each species across the number of each of the three mission day scenarios, rounded those takes, and then added those numbers of takes for the three mission scenarios. Thus, NMFS rounded the numbers of takes based on the three mission scenarios, rather than on either a daily basis or on the whole activity basis. The Commission has yet to see this variant of NMFS's approach.

⁶ See the *Federal Register* notice regarding NMFS's technical guidance for assessing the effects of anthropogenic sound on marine mammal hearing—underwater acoustic thresholds for onset of PTS and temporary threshold shift (TTS; 81 Fed. Reg. 51694).

⁷ Which NMFS plans to increase to three.

⁸ See the Commission's 7 September 2016 letter detailing this issue.

Level A (PTS) and Level B harassment (both TTS and behavior) were based on the respective cumulative sound exposure level (SEL_{cum}) thresholds summed across days, which NMFS clearly reaffirmed a few months ago should be based on a 24-hour reset (81 Fed. Reg. 51694). If those SEL_{cum} thresholds were intended to be accumulated over the timeframe of the various mission scenarios, 2 and 4 days in this case⁹, NMFS would have indicated such in its recently issued acoustic guidance. Thus, the Commission recommends that NMFS (1) follow its policy of a 24-hour reset for enumerating the number of each species that could be taken during the proposed activities, (2) apply standard rounding rules before summing the numbers of estimated takes across days, and (3) for species that have the potential to be taken but model-estimated or calculated takes round to zero, use group size to inform the take estimates—these methods should be used consistently for all future incidental take authorizations. The Commission discussed this matter with NMFS in mid-summer and would like to engage in further discussions to resolve this matter in the near future.

Mitigation and monitoring measures

Although USAF has used and would continue to use live-feed video cameras to supplement its ability to detect marine mammals when implementing mitigation measures, the Commission remains concerned that those measures remain insufficient. The Commission has recommended for many years that NMFS require USAF to (1) supplement its mitigation measures with real-time passive acoustic monitoring devices, which could be installed on or near USAF's instrumentation barge¹⁰ that also houses the cameras and weapon tracking equipment and (2) determine the effectiveness of its mitigation measures. For the proposed authorization, the mission area would be cleared of marine mammals for up to 30 minutes, and likely longer, before the munitions are detonated. The observers then would move to the periphery of the safety zone, more than 15 km from the target. The Commission does not believe that USAF would be able to monitor effectively for marine mammals entering either the 706.5 km² area or the mortality and Level A harassment zones that are more than 14 km away prior to detonation. Additionally, USAF stated that the live-feed video cameras have blind spots on the sides and behind the cameras and that in some instances the target may be positioned more than 4 km from the cameras—neither of which provides confidence that all marine marine mammals entering the respective zones will be detected.

In its application, USAF indicated that the overall effectiveness of the mitigation measures in reducing the numbers of takes has not been quantified. However, it believed the high numbers of documented sightings (179–189 animals¹¹) during the pre-mission surveys for past activities indicate a significant level of success in executing the survey plans and identifying protected species in the area. What those numbers of animals indicate to the Commission is the high probability that animals can occur in the respective zones and that a more concerted effort should be made to ensure the mortality and Level A harassment zones are clear immediately before conducting the proposed activities. For these reasons, the Commission again recommends that NMFS and USAF assess practicable ways to supplement USAF's mitigation measures with real-time passive acoustic monitoring devices and determine the effectiveness of its suite of mitigation measures. This issue should be addressed prior to NMFS publishing the proposed rule. The Commission has been and continues to be willing to discuss these issues with NMFS and USAF.

⁹ Scenarios A and C could occur on 2 days each, while Scenario B could occur on 4 days.

¹⁰ The Gulf Range Armament Test Vessel (GRATV).

¹¹ Including sea turtles.

Ms. Jolie Harrison
29 November 2016
Page 4

The Commission trusts you will find its letter helpful. Please contact me if you have questions regarding the Commission's comments and recommendations.

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" and a distinct "Lent" at the end.

Rebecca J. Lent, Ph.D.
Executive Director