



MARINE MAMMAL COMMISSION

25 May 2017

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

Re: Permit Application No. 19703
(Fred Sharpe, Ph.D.,
Alaska Whale Foundation)

Dear Ms. Harrison:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the above-referenced permit application with regard to the goals, policies, and requirements of the Marine Mammal Protection Act (the MMPA). Dr. Sharpe proposes to conduct research on humpback and killer whales in Alaska during a five-year period—permit 14599 authorized similar activities.

Dr. Sharpe proposed to conduct research on humpback and killer whales in Alaska from April through November of each year. The purpose of the research is to investigate whale social structure, vocalizations, foraging ecology¹, and efficacy of pingers to minimize entanglement of whales. Dr. Sharpe would harass², observe, photograph/videotape³, sample⁴, acoustically record and conduct playbacks on⁵, and attach suction-cup tags to whales of either sex and various age classes each year (see the take table). He would not tag humpback calves less than 6 months of age but could tag females with calves as young as 5 months of age. Dr. Sharpe could harass non-target humpback and killer whales and four additional species during the proposed activities.

¹ Including prey intake and energetics.

² Including during prey mapping.

³ Using manned helicopters, unmanned aerial systems (UASs), pole cameras, and divers. UASs could land on the water to collect underwater photography/videography or to deploy a hydrophone to collect passive acoustic data.

⁴ Including feces and exhaled breath.

⁵ Playbacks of vocalizations and biological sounds would not exceed a source level of 170 dB re 1 μ Pa at 1 m emitted at frequencies generally from 31 Hz to 3 kHz. Playbacks of pingers would not exceed a source level of 135 dB re 1 μ Pa at 1 m emitted at frequencies generally from 3 to 4 kHz. Each playback session would occur for no longer than 20 minutes each with up to three sessions conducted per day. In addition, the actual 3- and 4-kHz pingers could be deployed for no more than 2 hours per day for floating platforms and 12 hours per day for moored platforms, and pingers would not be deployed at night.

To minimize impacts⁶ during tagging attempts, Dr. Sharpe would not separate female-calf pairs and would cease activities if any whale exhibits a strong adverse reaction (e.g., breaching, tail lobbing, repeated underwater exhalations, or disassociation from the pod) to the presence of the vessel or tag. Animals would be approached at a slow continuous speed from behind. When a UAS lands on the water, researchers would avoid landing it on the surface directly in the path of swimming whales, directly above individuals that are rising to the surface, or in the portion of the bubble net where whales surface to lunge feed. Playback studies would not be initiated when animals are within 50 m of the vessel. In addition, playback studies would cease if any animal (1) swims toward the beach, shallows, or kelp beds or lifts its head above the water, (2) exhibits prolonged/repeated emphatic breaching, (3) swims away from or toward the vessel at a high rate of speed, or (4) exhibits overly aggressive behavior toward the playback vessel. Playback activities also would cease if increased spatial separation and dive cycle de-synchronization of females with calves is observed.

Based on the source level of the pingers, NMFS indicated that it does not plan to authorize Level B harassment takes for the playback of pinger sounds or for the pingers themselves. NMFS took a similar tack with the recent Marine Mammal Laboratory (MML) permit #20465. However, for the MML permit, the source level of the playbacks of Biggs killer whales is the same as the vocalization⁷ playback source level proposed to be authorized under Sharpe's permit, 170 dB re 1 μ Pa at 1 m. In both instances, the Level B harassment zone was estimated to be less than 5 m and the exclusion zones would be much larger than the Level B harassment zone. The Commission is unsure why NMFS is taking different approaches for the MML and Sharpe permits. Therefore, the Commission recommends that NMFS develop a consistent approach for authorizing acoustic research activities, including both playback studies and use of actual sound sources, under its scientific research permits. That approach also should account for the possibility that Level A harassment zones may be larger than Level B harassment zones based on NMFS's recently updated Level A harassment thresholds for permanent threshold shift (PTS) based on cumulative sound exposure levels. The Commission understands that NMFS has yet to authorize directed Level A (PTS) harassment takes under scientific research permits.

The Commission believes that the proposed activities are consistent with the purposes and policies of the MMPA. Kindly contact me if you have any questions concerning the Commission's recommendation.

Sincerely,



Rebecca J. Lent, Ph.D.
Executive Director

⁶ NMFS's standard permit conditions (i.e., females should not be separated from their calves, coordination with other researchers working in the same area or on the same species, etc.) also would be included in the permit, if issued.

⁷ Also including killer whale vocalizations.