



# MARINE MAMMAL COMMISSION

17 July 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. 20466  
(Alaska Department of Fish and Game)

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 amendment request with regard to the goals, policies, and requirements of the Marine Mammal Protection Act (the MMPA). Alaska Department of Fish and Game (ADFG) proposes to conduct research on ice seals in Alaska during a five-year period—permit 15324 authorized similar activities.

ADFG proposes to conduct research on spotted, ringed, bearded, and ribbon seals in the Bering, Chukchi and Beaufort Seas. The purpose of the research is to investigate ice seal (1) abundance and distribution, (2) demographic parameters, (3) habitat use and movement patterns, and (4) disease and health. Researchers would harass, capture<sup>1</sup>, handle, restrain, measure/weigh, sedate<sup>2</sup>, mark<sup>3</sup>, sample<sup>4</sup>, conduct ultrasound on, and/or attach instruments<sup>5</sup> to up to 200 individuals of each species per year (see the Take Table). Researchers could conduct aerial and vessel surveys of the various haul-out sites<sup>6</sup>. In addition, samples<sup>7</sup> would be collected from seals hunted for subsistence.

ADFG requests up to 5 mortalities<sup>8</sup> per year for each ice seal species. In previous years, beluga whales have been caught in the capture nets and two have drowned accidentally. To minimize

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<sup>1</sup> Lactating females with pups, the dependent pups, and obviously pregnant females would not be captured. Seals could be captured using various types of nets and a floating trap.

<sup>2</sup> Including remotely-delivered sedation (i.e., darting) and drug reversals for adult bearded seals only.

<sup>3</sup> With flipper tags.

<sup>4</sup> Including blood, vibrissae, hair, swabs, feces, skin, blubber, and/or muscle. All samples could be imported/exported for analysis.

<sup>5</sup> Up to four instruments per animal with a combined instrumentation mass of less than 3 percent of the body mass. Those instruments include a flipper-mounted tag and a temporary recording instrument that would be retained for approximately 24 hours. Generally, two instruments would be attached to each seal.

<sup>6</sup> Including photographing the seals.

<sup>7</sup> Including teeth, stomachs, blubber, liver, kidney, muscle, female reproductive tracts, claws, whiskers, hair, urine, feces, and other tissues. All samples could be imported/exported for analysis.

<sup>8</sup> Either unintentional or intentional mortality (i.e., euthanasia for humaneness purposes).

risk of capturing beluga whales, researchers would continuously monitor nets set near lagoon entrances. If belugas are observed near the nets, boats would be launched to discourage the whales from approaching the nets or the nets would be pulled. If a beluga is caught in a net, it would be immediately cut from the net. To prepare for situations in which belugas are seriously injured or drown before being freed from the net, ADFG requests up to one beluga mortality<sup>8</sup> per year during the proposed ice seal capture activities.

To minimize impacts during aerial surveys, the plane would circle within visual range of the seals but not directly over them for a maximum of 15 minutes. Researchers also would conduct vessel surveys slowly to minimize wakes and they would approach hauled-out seals only at a distance close enough to observe and record them. Further, ADFG would coordinate its activities with numerous Native Communities and other researchers working in Alaska including from the Marine Mammal Laboratory. ADFG's Institutional Animal Care and Use Committee has reviewed and approved the proposed research protocols.

### **Floating traps**

ADFG proposed to use a floating trap, which has been used to capture ice seals successfully in Russia but not in the United States (see application for details). The trap is made with hinged slatted doors and a net-framed box that floats in the water column. When a seal attempts to haul out on the slatted platform, it would drop through the doors into the net box<sup>9</sup>. ADFG indicated that seals would be able to surface and breathe through the approximate 4 in of space between the water surface and the slatted trap door—the seal also can breathe through the door itself, because it is slatted. The Commission has a few concerns regarding this novel capture method.

First, when new methods are used, researchers with experience using the methods or procedures generally demonstrate how the methods or procedures should be conducted safely. In this case, these would be Russian researchers. Second, an excerpt from a Russian paper<sup>10</sup> describing the floating trap indicated that a seal may be able to free swim in the net box for an extended period of time without any harmful consequences. However, the excerpt also indicated that a seal could become entangled in the net and die due to the seal's strong behavioral response to being trapped in the net box, thin net material being used, an anchor failing, or a break in the bottom of the net box. Although ADFG is unaware of any seal mortality attributed to use of the floating trap in Russia, the excerpt clearly indicates the potential exists. Third, ADFG stated that the presence of a vessel near the trap would decrease the chances that a seal would haul out on the platform. Thus, it planned to leave the floating traps unattended from a few hours up to 8 hours at a time. Given that ADFG has yet to use and gain experience with such traps, it is premature to propose leaving them unattended for any significant time period. The Commission therefore recommends that NMFS condition the permit to require ADFG to monitor the floating traps from a distance using binoculars or a spotting scope and extract any seals from the trap immediately. The Commission further recommends that NMFS condition the permit to require ADFG to (1) consult with NMFS and the Commission if one seal of any species dies either in the floating trap or after being caught in the floating trap<sup>11</sup> to determine the appropriate mitigation measures that should be employed to minimize further

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<sup>9</sup> The doors have stops so that they cannot open outward once the seal is inside the net box.

<sup>10</sup> Translated from Russian.

<sup>11</sup> Including if it is seriously injured or is stressed and then dies.

mortalities and (2) if two seals of any species die, cease use of the floating trap until its faults are assessed and remedied—NMFS and the Commission should be consulted at this stage as well.

### **Remotely-delivered sedation**

The Commission has some ongoing concerns regarding darting marine mammals, including bearded seals. ADFG indicated that a veterinarian would be present when remotely-delivered sedation is used until the drug combination and technique have been shown to be safe and the veterinarian is no longer needed<sup>12</sup>. Although ADFG was authorized to conduct darting of bearded seals under permit 15324, it has yet to remotely sedate a seal due to the animals being wary of boats and flushing into the water before the researchers are in range to deploy the dart. If a bearded seal can be darted successfully, the anesthetic agents would allow the seal to swim/float and reach the surface to breathe so that researchers could approach and capture it. Researchers also could administer reversals, if necessary. Since darting has inherent risks, the Commission continues to believe that NMFS should take a precautionary approach, as it has with authorizing darting activities under ADFG's previous permit and other bearded seal permits. Therefore, the Commission recommends that NMFS condition the permit to require ADFG to monitor bearded seals that have been darted and report on (1) their behavioral response and any activities that place them at heightened risk of injury or death and (2) whether they entered the water and their fate could not be determined. The Commission further recommends that NMFS condition the permit to require ADFG to halt the use of the darting technique and consult with NMFS and the Commission if three or more bearded seals are darted and suffer unanticipated adverse effects, including entering the water and either drowning or disappearing so that their fate cannot be determined.

Please contact me if you have any questions regarding the Commission's recommendations.

Sincerely,



Rebecca J. Lent, Ph.D.,  
Executive Director

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<sup>12</sup> The veterinarian also would supervise the co-investigators until they have sufficient experience to administer remotely-delivered sedation unsupervised.