

MARINE MAMMAL COMMISSION
4340 East-West Highway, Room 700
Bethesda, MD 20814-4447

18 July 2008

Mr. P. Michael Payne
Chief, Permits Division
National Marine Fisheries Service
Office of Protected Resources
1315 East-West Highway, Room 13635
Silver Spring, MD 20910

Dear Mr. Payne:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the application from the U.S. Fish and Wildlife Service seeking an incidental harassment authorization under section 101(a)(5)(D) of the Marine Mammal Protection Act. The applicant is requesting a one-year authorization to harass small numbers of Steller sea lions and Pacific harbor seals incidental to a rat eradication program at Rat Island, Alaska. The Commission also has reviewed the National Marine Fisheries Service's 18 June 2008 *Federal Register* notice soliciting comments on the application and on its intent to promulgate regulations under section 101(a)(5)(A) of the Act, which would authorize the take of marine mammals incidental to the specified activities for a five-year period. The Commission supports the eradication effort for the purposes of restoring the Rat Island ecosystem to a more natural state.

The National Marine Fisheries Service has preliminarily determined that extermination efforts would result, at most, in temporary behavioral modifications of small numbers of Steller sea lions and Pacific harbor seals in the form of head alerts; movement away from personnel, watercraft, and aircraft; and/or flushing from the beach. The Service does not expect marine mammals to be injured or killed as a result of the proposed activities and believes that take by harassment will be at the lowest level practicable due to the incorporation of specified mitigation measures. In addition, the Service has preliminarily determined that the anticipated takes would have a negligible impact on the affected marine mammal species and no unmitigable adverse impact on subsistence uses of marine mammals. The Commission offers the following recommendations and comments.

RECOMMENDATIONS

Based on the information in the application and the *Federal Register* notice, the Marine Mammal Commission recommends that the National Marine Fisheries Service issue the requested incidental harassment authorization provided that—

- prior to issuing the authorization, the Service require the applicant to expand its monitoring plan to detect the effects of disturbance and short- and long-term exposure to the rodenticide;
- should a sea lion or harbor seal injury or death occur, activities be suspended until the National Marine Fisheries Service has reviewed the situation and determined that further deaths or serious injuries are unlikely to occur or has issued regulations authorizing such takes under section 101(a)(5)(A) of the Act; and

- all mitigation, monitoring, and reporting measures identified in the *Federal Register* notice are included in the authorization and the approach be supplemented by the measures described below to avoid disturbance and detect problems that may arise after the rodenticide has been dispersed over the island.

RATIONALE

The primary method for eradicating rats from Rat Island would be delivery of compressed-grain bait pellets containing a rodenticide (25 ppm brodifacoum) through aerial broadcast by two helicopters flying at an average altitude of 50 m (164 ft). Bait would be applied from a specialized bait hopper slung 15–20 m (49–66 ft) beneath each helicopter. A deflector attached to the hopper would be used to reduce the potential for contamination of the marine and freshwater environments. Pinniped haul-out sites and rookeries would be avoided. Aerial broadcast would be supplemented by hand broadcast to ensure that all areas of the island receive full coverage. The Ayugadak Point rookery, which is designated as critical habitat for Steller sea lions, would be treated by installing enclosed bait stations and hand-broadcasting bait pellets to minimize disturbance of the animals by helicopters. All bait application activities would be conducted by or under the supervision of a pesticide applicator certified by the State of Alaska.

According to the environmental assessment prepared by the Fish and Wildlife Service on the proposed activity, rat eradication has been conducted successfully on more than 300 islands worldwide (Howald et al. 2007). The assessment resulted in a finding of no significant impact and concluded that rat eradication activities are not likely to adversely affect Steller sea lions or harbor seals at the individual or population level. These species may encounter bait pellets at low densities if they are hauled out on Rat Island or surrounding islets during bait application. Many of the pellets will be consumed by rats within a few days of the final bait application. The Service anticipates that pellets in and just above the intertidal zone, where sea lions and harbor seals are most likely to occur, will be consumed by rats or washed away by high tides. The Service also assumes that a few scattered pellets may remain in areas above the high-water line for up to a few months after the application. Pellets in the water should disintegrate and disperse within hours.

The *Federal Register* notice states that aircraft and personnel activities will be coordinated to reduce potential take. Monitoring will be conducted by the applicant and the field crew associated with the action. If injury or death of any marine mammal occurs that may be the result of the eradication program, the applicant will suspend all activities and contact the National Marine Fisheries Service immediately to determine how best to proceed to ensure that no other injury or death occurs and to ensure that the applicant remains in compliance with the Marine Mammal Protection Act. The applicant has committed to providing a draft final report of activities to the National Marine Fisheries Service within 90 days after the conclusion of the field season. The *Federal Register* notice states that a section 7 consultation will be concluded prior to issuance of an incidental harassment authorization.

The Commission supports the rat eradication effort but has several concerns regarding the proposed approach. The first pertains to the potential for injury and death due to disturbance. Although the applicant intends to carry out the proposed activities in a cautious manner to minimize adverse impacts on marine mammals, a helicopter flight approaching a rookery could cause disturbance from a considerable distance, perhaps a kilometer or more. If the area where sea lions are hauled out includes cliffs, then pups, juveniles, or adults could be seriously injured or killed if they jumped off the cliffs in a stampede, as is not uncommon under such circumstances. Animals also could become lodged in crevices, which are typical features of many rookeries and haul-out areas. Thus, the structure and topography of the islet and rookery may have a significant influence on the occurrence of disturbance-related injuries or deaths. To avoid such events, it may be useful to have a biologist stationed on the ground to monitor the reaction of animals to helicopter noise and give feedback to the helicopter pilot.

Second, the methods for determining exactly how much rodenticide to use are not clear. Ideally, enough is used to kill all the rats with little poison remaining in the treated areas. Without an accurate estimate of the number of rats on the island and the number of pellets to be consumed by each rat, the amount of poison left on the island could be substantial. Although we do not anticipate that sea lions and harbor seals will be exposed to high levels of rodenticide over time, it is not clear that the existing monitoring program is sufficient to detect whether such exposure might occur through unexpected pathways.

Third, absent a well-planned monitoring program during and after the proposed activities, animals that are injured or killed by disturbance or are poisoned likely will not be detected. For that reason, a monitoring plan is necessary to adequately assess unintended consequences. The Marine Mammal Commission therefore recommends that, prior to issuing the authorization, the Service require the applicant to expand its monitoring to detect the effects of disturbance and short- and long-term exposure to the rodenticide.

The Commission concurs with the Service's proposal to require that operations be suspended immediately if a dead or seriously injured marine mammal is found in the vicinity of the operations and the death or injury could have occurred incidental to the rat extermination program. The Marine Mammal Commission recommends that any such suspension should remain in place until the National Marine Fisheries Service has reviewed the situation and determined that further deaths or serious injuries are unlikely to occur or has issued regulations authorizing such takes under section 101(a)(5)(A) of the Act.

Finally, the Marine Mammal Commission recommends that the National Marine Fisheries Service issue the requested incidental harassment authorization provided that all mitigation, monitoring, and reporting measures identified in the *Federal Register* notice are included in the authorization and that the approach be supplemented by the above-described measures to avoid disturbance and to detect problems that may arise after the rodenticide has been dispersed over the island.

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Please contact me if you have questions concerning our comments or recommendations.

Sincerely,



Timothy J. Ragen, Ph.D.
Executive Director

Literature Cited

Howald, G., C.J. Donlan, J.-P. Galvan, J.C. Russell, J. Parkes, A. Samaniego, Y. Wang, D. Veitch, P. Genovesi, M. Pascal, A. Saunders, and B. Tershy. 2007. Invasive rodent eradications on islands. *Conservation Biology* (online early edition accessed on 18 August 2007).