



MARINE MAMMAL COMMISSION

15 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

Re: Permit Application No. 16991
(James Harvey, Ph.D.,
Moss Landing Marine Laboratory)

Dear Mr. Payne:

The Marine Mammal 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. Dr. Harvey is seeking to renew permit 555-1870 for research on harbor seals along the U.S. west coast during a five-year period.

RECOMMENDATION

The Marine Mammal Commission recommends that the National Marine Fisheries Service issue the requested permit, but condition it to ensure that activities to be conducted under this permit and those of other permit holders who might be conducting research on the same species in the same areas are coordinated and, as possible, data and samples are shared to avoid duplicative research and unnecessary disturbance of animals.

RATIONALE

Dr. Harvey proposes to conduct research on harbor seals in California, Oregon, Washington, and Alaska year-round. The objectives are to continue research of more than 30 years investigating (1) abundance and distribution, (2) survival and reproductive success, (3) movement patterns and habitat use, (4) foraging ecology and fisheries interactions, (5) disease and health, and (6) effects of human disturbance on harbor seals.

Dr. Harvey would harass, capture, handle, restrain, administer drugs to, measure, weigh, mark/tag, sample, and conduct ultrasound measurements of blubber thickness on 1,770 harbor seals each year of any age class or either sex. In general, he would use salmon, tangle, seine, or hoop nets to capture the seals. In addition, Dr. Harvey may capture up to an additional 1,065 harbor seals per year and release them without sampling because the capture methods and skittish nature of the animals do not make it possible to capture specific individuals. He also may capture female-pup pairs for purposes of assessing condition and health. Once captured, those pairs would be identified and the mother and pup kept in close proximity to each other. In addition, they would be handled before other animals and released together. Lone nursing pups and lactating females then would be handled before males, subadult females, or weaned female pups. Nursing pups with fresh umbilical

scars would not be handled. Dr. Harvey has used this protocol when handling females and pups in the past with no observed cases of stranding, abandonment, or human-caused mortality. Individuals could be captured and handled up to three times during the course of the five-year permit. Dr. Harvey would mark each harbor seal with plastic flipper and passive integrated transponder tags. If a seal is recaptured, the tags would be reattached or implanted only if the original tags have been lost or damaged, or were not implanted during previous captures. Dr. Harvey also would collect blood, hair, blubber, skin, swabs, urine, and feces. He is seeking authorization to sample up to 690 harbor seals that are one month of age or older using lavage or an enema.

In addition, Dr. Harvey may attach instruments to the pelage of the head or between the shoulders with epoxy or attach the instruments using flipper tags to 690 harbor seals per year (see the take tables). The instruments would weigh less than 2 percent of the seal's body mass and could include VHF transmitters, satellite transmitters, GPS transmitters, time-depth recorders, video or still cameras, and acoustic tags. Instruments either would be removed when the animals are recaptured several weeks later or would be allowed to fall off during the next molt. Several of the instruments could be implanted surgically either within the subcutaneous layer or under the blubber layer. Scientists have implanted such instruments in harbor seals for more than 10 years with no obvious negative consequences. In general, Dr. Harvey would attach only one instrument on each seal. However, a subset of the seals may be instrumented with a combination of tags to collect different types of data (see Table 2 in the application). Dr. Harvey would not instrument pups less than six weeks of age but could instrument females with those pups.

To assess impacts from anthropogenic sound, Dr. Harvey would use a hydrophone, digital audio tape recorder, and focal follows. He also would perform playback experiments using recorded harbor seal vocalizations transmitted from an underwater speaker hung from a vessel. Those vocalizations would be intended to mimic the calls of males in underwater territories and would be transmitted for up to 15 minutes. Dr. Harvey would use an underwater video system and surface observations to determine seals' responses to the vocalizations.

Dr. Harvey is requesting authorization to harass incidentally up to 9,190 harbor seals during the capture and playback activities and an additional 6,000 during scat collections. Those collections could occur on a weekly basis but would last no more than 30 minutes. Dr. Harvey also is seeking authorization to harass up to 55 California sea lions and 35 northern elephant seals per year incidental to the proposed research activities.

Dr. Harvey is requesting authorization to kill, unintentionally, up to 10 harbor seals per year, not to exceed 25 seals during the five-year period. Dr. Harvey is requesting authorization of more unintentional mortalities than in previous applications due to the prevalence of domoic acid in the harbor seal population in California, which may increase the chances of mortalities during capture events. If a lactating female dies as a result of the research activities and her dependent pup can be identified, researchers would transport the pup to a rehabilitation facility. If, however, a lactating female dies and the researchers cannot locate the dependent pup, the pup also would be counted as a mortality. In addition, Dr. Harvey proposes that, if any female dies during her third trimester of pregnancy, both the female and the unborn pup would be counted as unintentional mortalities. Dr.

Mr. P. Michael Payne
21 February 2012
Page 3

Harvey would carry a crash kit during all capture activities and would have a veterinarian or veterinary technician along on most of the captures to administer drugs to euthanize an animal, if necessary. If a veterinarian or veterinarian technician is not present, other qualified personnel trained by the veterinarian or veterinarian technician would euthanize the animal.

Dr. Harvey has indicated that his Institutional Animal Care and Use Committee (IACUC) has reviewed and approved the proposed procedures until April 2012. At that time, his IACUC will review the procedures again. He also stated that the proposed research activities could occur in wildlife refuges, national parks, and national marine sanctuaries. He has obtained the relevant authorizations to conduct research activities in those areas in the past and would secure all necessary authorizations in the future.

Various scientists conduct research on harbor seals at some of the same locations identified in Dr. Harvey's application. As such, his research activities may overlap with those of other researchers and could cause unnecessary disturbance or duplicative collection of samples if his activities are not coordinated with those activities of other researchers. Therefore, the Marine Mammal Commission recommends that the National Marine Fisheries Service issue the requested permit, but condition it to ensure that activities to be conducted under this permit and those of other permit holders who might be conducting research on the same species in the same areas are coordinated and, as possible, data and samples are shared to avoid duplicative research and unnecessary disturbance of animals.

The Commission believes that the activities for which it has recommended approval are consistent with the purposes and policies of the Marine Mammal Protection Act.

Please contact me if you have any questions concerning the Commission's recommendation.

Sincerely,

A handwritten signature in black ink, appearing to read "Timothy J. Ragen" followed by a flourish and the word "for".

Timothy J. Ragen, Ph.D.
Executive Director