



MARINE MAMMAL COMMISSION

29 October 2012

Mr. P. Michael Payne, 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. 17324
(Georgia Aquarium Inc.)

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. Georgia Aquarium Inc. (the Aquarium) is requesting authorization to import 18 beluga whales from Russia for the purpose of public display. The permit would be valid for a five-year period.

RECOMMENDATIONS

The Marine Mammal Commission recommends that the National Marine Fisheries Service confer with the Animal and Plant Health Inspection Service to ensure that Georgia Aquarium's plans and facilities for transporting and maintaining the whales meet the requirements established under the Animal Welfare Act and other applicable laws and are adequate to provide for the whales' health and well-being. If that is the case, then the Commission recommends that the Service issue the permit, but—

- condition it to require the Aquarium to develop, if it has not already done so, a contingency plan that will allow for removing the beluga whales from their transport containers and placing them into a less stressful environment and providing veterinary care if (a) the Brussels transfer or any flight is disrupted or delayed or (b) any whale shows signs of clinical illness during transport;
- strongly encourage the Aquarium to continue its support for research on the Sakhalin-Amur population of beluga whales to obtain a more accurate and precise assessment of its genetic status, its abundance and trend, and the significance of other risk factors that may affect its conservation status; and
- strongly encourage the Aquarium to advance a program of public education and outreach on the conservation of belugas worldwide, especially pertaining to the impacts of increasing human activities on the sub-arctic and Arctic populations.

RATIONALE

The 18 beluga whales that are the subject of this application include 8 males and 10 females ranging from approximately 2.5 to 11.5 years of age. Two were captured in 2006, 11 in 2010, and the remaining five in 2011. The Aquarium would import the whales, house some of them at its facility, and loan the others to Mystic Aquarium, Shedd Aquarium, and SeaWorld facilities in Orlando, San Antonio, and San Diego. The purpose of the proposed importation is to display the whales to the public, use them to promote beluga whale conservation through public viewing opportunities and education, and increase the probability that the collection of beluga whales maintained in captivity in North American facilities will become self-sustaining (i.e., does not require continued collection of additional whales from the wild). The proposed importation has sparked significant controversy on a number of grounds. In the following paragraphs, the Commission reviews the application, and associated controversy, with regard to three topics: the status of the source population and the effects of removing the whales; temporary holding facilities, transport, and final destinations; and the basis for holding these whales in captivity.

Status of the source population and the effects of removing the whales

Section 102(b)(3) of the Marine Mammal Protection Act prohibits the importation of marine mammals taken from a stock that has been designated by the Secretary of Commerce (in this case) as depleted. The only beluga whale population that has been designated as depleted is that in Cook Inlet, Alaska. Thus, the Act does not explicitly prohibit the importation of beluga whales from the populations in the Sea of Okhotsk.

Nevertheless, in the past both the Commission and the Service have taken the position that an applicant (and/or the Service as the decision-maker) has an obligation to demonstrate that the affected stock is not depleted before taking or importation can be allowed, even if no formal depletion designation has been made. Good policy reasons support this—we do not want to promote removals from unhealthy or potentially unhealthy populations simply because we do not have sufficient information to make a formal depletion designation.

The first task, then, is to identify the source population. All parties engaged in reviewing the application appear to agree that the population of beluga whales within the Sea of Okhotsk, where the animals were collected, is distinct from beluga whale populations elsewhere. The best available information indicates that during the winter months most of the belugas in the Sea of Okhotsk are found in the Sea's central, deep waters. The extent to which whales from different regions within the Sea of Okhotsk interbreed has not been determined, but such interbreeding is likely based on the whales' apparent association during the winter and the fact that the available (albeit limited) genetic information indicates similarity in nuclear DNA collected from whales in different parts of the Sea. Nuclear DNA is inherited from both parents and generally would be expected to vary among longstanding, distinct breeding populations. In contrast, the whales' mitochondrial DNA, which is inherited only from the mother, indicates that during the remainder of the year beluga whales in the Sea of Okhotsk separate into genetically differentiated summer aggregations centered in Shantar Bay, the Sakhalin Bay-Amur River region, and Shelikov Bay. The question, then, is whether to evaluate the potential effects of removing those whales based on the total Sea of Okhotsk beluga population or based more narrowly on the Sakhalin-Amur summer aggregation from which they

were removed. The latter option is more precautionary and, in the Commission's view, preferred, because it is more likely to reduce the risks to the ecosystem by ensuring that no summering aggregation (and whatever genetic differentiation it may represent) is lost. Melnikov (1999) noted that beluga whales were taken from Tauy Bay in the 1930s and that they have not been seen in that area in recent summer surveys. Although that information does not provide a clear indication of what happened and whether past exploitation had a role, it does reinforce the need for caution.

The second task is to judge whether the Sakhalin-Amur aggregation can withstand such removals and maintain itself in a healthy state if it currently is healthy, or can recover to a healthy state if it is not. In the United States, the level that is used for distinguishing healthy from depleted marine mammal populations is 60 percent of the carrying capacity (Fed. Reg. 41:55536). In this case, the population's size is not known relative to its historic carrying capacity. Past hunting records indicate that the population may have been much larger at one time and those records, combined with the current abundance information indicate that the population may well be below 60 percent of its historic carrying capacity, or even below 50 percent as used by the International Union for Conservation of Nature (IUCN) panel that reviewed the effects of removal on this population (Reeves et al. 2011). The existing data also are not sufficient to determine with confidence whether the population is growing, stable, or declining or is affected substantially by other human-related sources of mortality or removal.

The IUCN panel addressed the question of whether the population can withstand the current level of removals using the "potential biological removal" (PBR) concept in the Marine Mammal Protection Act. PBR is defined as "the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population." For any given population, PBR is estimated as a product of three factors: the minimum population estimate, half the maximum growth rate, and a recovery factor that is varied from 0 to 1 depending on the status of the population. The IUCN panel estimated a PBR for this population of 29, which was later adjusted to 30 based on additional information. That estimate indicates that the population is likely to be able to tolerate removals on the order of those from the past decade.

However, the use of PBR in this case also presents certain problems. As noted above, we do not have a good understanding of the population's abundance and trend. In the absence of such information, the PBR approach uses a default maximum growth rate and applies an intermediate recovery factor (e.g., 0.5). However, if the population is declining, using an assumed maximum growth rate would be inappropriate. Furthermore, lowering the recovery factor would reduce the estimate of how many whales might be removed, but such removals would still be contributing to the population decline. Another complication is that the PBR approach is intended to account for all human-related removals from a population. In this case, the information needed to evaluate other sources of human-related mortality is largely anecdotal or consistent with an "absence-of-evidence" argument, which does not provide a basis for a compelling argument. Thus, although using a PBR analysis might provide a useful means for evaluating the potential effects of these removals on the Sakhalin-Amur population, the uncertainties associated with this approach again emphasize the need for caution.

Finally, it must be noted that Georgia Aquarium, in association with four other aquaria, have provided substantial support for studies needed to assess this population. Those studies were initiated in 2007 and have continued annually since then. Among other things, they have involved biopsy sampling for genetics, satellite tagging to assess movements and distribution, health assessments of individual animals, and aerial surveys to assess population abundance. These types of studies are essential for providing the needed clarity regarding population status and, importantly, the Aquarium has indicated that it will continue its support for research on this population.

Temporary holding facilities, transport, and final destinations

The Commission did not observe the captures and has not visited the temporary holding facilities in Russia and therefore cannot make informed comments on their adequacy and humaneness. The application indicated that the belugas were captured in the Sakhalin-Amur region of Russia by personnel from the Utrish Marine Dolphinarium and a team that has been capturing belugas for public display for more than 30 years. All the whales were captured under permits issued by the Russian Federation. The capture team focused on groups of whales that did not include female-calf pairs, calves, juveniles less than one year of age, or large adults. After a temporary holding period near the capture site, the whales were transferred to the Utrish Marine Mammal Research Station on the Russian coast of the Black Sea, where they currently are being held. The Aquarium has indicated that those holding facilities meet U.S. Animal and Plant Health Inspection Service's standards for animal care. In addition, mature males and females are being housed separately to ensure that the females do not become pregnant.

The Marine Mammal Protection Act prohibits the importation for the purpose of public display any marine mammal that was (1) pregnant at the time of taking, (2) nursing at the time of taking, or less than eight months old, whichever occurs later, or (3) taken in a manner deemed inhumane by the Secretary. In addition, it is unlawful to import any marine mammal that was taken in violation of the Marine Mammal Protection Act or in violation of the laws of the country of origin. In this case, it does not appear that any of the animals that would be imported was pregnant or nursing or under eight months of age at the time of taking. Although some may argue that capture techniques are, per se, inhumane, applying the statutory definition of "humane" (section 3(4) of the Act), the Commission is not aware of suggestions as to how the captures may have been accomplished with a lesser degree of pain and suffering to the animals involved. We note, however, that if public comments identify such alternatives, this is an issue that the Service will need to consider further. Finally, it does not appear that the beluga whales were taken in violation of Russian or U.S. law.

Transport of the animals from Russia to the United States is estimated by the Aquarium to take about 30 hours and would be complicated by Russian and U.S. restrictions on aircraft flown in their respective territories. To address those concerns, the transport team would take the whales from the Black Sea to Brussels using a Russian aircraft. In Brussels, the whales would be transferred to aircraft approved to fly in U.S. air space. Some of the whales would be flown from Brussels to Atlanta and others from Brussels to Chicago and then flown to airports near the facilities where they would be maintained.

During transport, the whales would be accompanied by qualified veterinary and husbandry personnel from the Georgia Aquarium. The Aquarium stated that all equipment and methods for the transport would be in accordance with professionally accepted standards and techniques and in compliance with all applicable regulations, standards, and conditions set forth under the Animal Welfare Act, Marine Mammal Protection Act, Convention on International Trade in Endangered Species and Wild Fauna and Flora, U.S. Fish and Wildlife Service regulations, Animal and Plant Health Inspection Service regulations, and the International Air Transport Association Live Animal Regulations. Export permits for the beluga whales have been obtained under the Convention on International Trade in Endangered Species and Wild Fauna and Flora.

All transports involve a degree of risk and impose some degree of stress to the animals. This transport is particularly long and complicated by political considerations (i.e., flight restrictions, aircraft and container changes, etc.), but it also appears to be well planned and equipped given those complications. The transfer in Brussels may be the most difficult phase of the transport and, aside from having the needed personnel, equipment, and supplies, the primary concern would be a flight delay or problem that requires prolonged holding of the whales in their transport containers. The attending veterinarians and husbandry personnel will be in the best position to make decisions regarding how to respond to unforeseen situations that may arise. To maximize the flexibility to respond to such situations, those personnel should have the option of moving the whales out of their containers in all places where the aircraft land. Thus, the Service should require contingency plans for housing the animals outside of the containers should a medical need arise.

Once the animals have arrived in the United States, they will be transported to one of five final destinations, as noted above. The determination as to which facilities would receive which whales was based, in part, on existing social groupings at those facilities, with particular attention given to the need to promote breeding opportunities. The Georgia Aquarium, as the permit holder, will be responsible for the welfare of the whales and for compliance with the Marine Mammal Protection Act and the terms and conditions of the permit, regardless of where the whales are maintained. To the Commission's knowledge, all facilities where the beluga whales would be housed satisfy the requirements established under the Animal Welfare Act and enforced by the Animal and Plant Health Inspection Service.

The Marine Mammal Protection Act requires that a facility maintaining marine mammals for purposes of public display be registered or hold a license under the Animal Welfare Act. The Commission interprets this requirement to mean that the facility must not only be licensed, but also must meet all of the applicable standards (e.g., the space requirements for the number of animals that would be obtained) for the species involved. The Commission believes that it is the responsibility of the applicant(s) to meet those requirements independent of any arrangements that may have been made to house some or all of the animals at a facility other than the permit holder's. This should not be an issue in this instance, even though several of the whales to be imported would go to other facilities at the outset. The Commission has been advised by the Animal and Plant Health Inspection Service that the Georgia Aquarium has sufficient space and otherwise meets the requirements to house all 18 whales at its facility should the need arise. In addition, the Act requires that the facilities be open to the public on a regular basis, a condition which all facilities meet.

The basis for holding these whales in captivity

Many people opposed to the proposed importation have raised the question of whether beluga whales should be held at any facility for public display. Ultimately, that question is addressed in the Marine Mammal Protection Act, which allows for maintaining marine mammals in captivity for purposes of public display. Still, the question merits careful consideration.

The Aquarium's application indicated that it expects to fulfill multiple purposes in bringing the whales to the facilities listed in the application. Certainly, the animals will be an attraction that will benefit the Aquarium and the other facilities. Thus, there is a business-related motivation involved in this importation. But the Aquarium and other facilities also propose to fulfill other purposes as well, some of those being required under the Marine Mammal Protection Act and some not.

First, the whales will serve an educational and conservation purpose. By crafting the Marine Mammal Protection Act to allow public display of marine mammals, Congress recognized that such displays provide an opportunity to educate the public about wild marine mammal populations and thereby promote their conservation. Under the Act the Secretary of Commerce may issue a display permit only to a person who "offers a program for education or conservation purposes that is based on professionally recognized standards of the public display community." Although there is room for debate about the overall effectiveness of such programs, Congress clearly intended for them to promote education and conservation. In this case, the whales will serve as compelling ambassadors at a time when the public needs to be better informed about the risks that human activities pose to the natural marine environment, particularly in the Arctic.

Second, marine mammals in captivity have provided otherwise unavailable opportunities for research. Although some of that research is geared towards successfully maintaining and propagating the animals in a captive environment, other research is aimed at understanding the animals, their biology, their needs, and their vulnerability to risk factors such as human-generated sound in the marine environment or climate disruption. The scientific literature on marine mammals includes many valuable studies of captive animals. Information derived from such studies could prove to be valuable if, for example, it could be applied to populations like the Cook Inlet beluga whale population that is highly endangered and seems to be continuing to decline, or if it helps managers mitigate the effects of increasing human activities in the arctic (e.g., oil and gas operations, seismic studies, shipping).

Third, the Aquarium believes that this importation of belugas will increase the probability that the captive population in North American facilities will become self-sustaining. Captive survival and reproduction of beluga whales was poor historically, but both have improved in recent decades and captive belugas are producing calves that are surviving. Certain other captive marine mammal populations are self-sustaining and the same may be possible for beluga whales, although the record clearly is better for relatively smaller cetaceans such as bottlenose dolphins and not as good with relatively larger animals such as beluga whales. If achieved, the establishment of such a population should reduce the removal of animals from the wild to meet the demand in North America. However, as indicated by this import application, the demand is global in nature and the removal of beluga whales from the wild almost certainly will continue through the foreseeable future. That fact

emphasizes the need to improve monitoring and assessment of the wild source populations, especially the Sakhalin-Amur population in the Sea of Okhotsk.

Conclusion

With all of the above in mind, the Marine Mammal Commission recommends that the National Marine Fisheries Service confer with the Animal and Plant Health Inspection Service to ensure that Georgia Aquarium's plans and facilities for transporting and maintaining the whales meet the requirements established under the Animal Welfare Act and other applicable laws and are adequate to provide for the whales' health and well-being. If that is the case, then the Commission recommends that the Service issue the permit, but (1) condition it to require the Aquarium to develop, if it has not already done so, a contingency plan that will allow for removing the beluga whales from their transport containers and placing them into a less stressful environment and providing veterinary care if (a) the Brussels transfer or any flight is disrupted or delayed or (b) any whale shows signs of clinical illness during transport; (2) strongly encourage the Aquarium to continue its support for research on the Sakhalin-Amur population of beluga whales to obtain a more accurate and precise assessment of its genetic status, its abundance and trend, and the significance of other risk factors that may affect its conservation status; and (3) strongly encourage the Aquarium to advance a program of public education and outreach on the conservation of belugas worldwide, especially pertaining to the impacts of increasing human activities on the sub-arctic and Arctic populations.

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 and the Endangered Species Act. Please contact me if you have any questions concerning the Commission's recommendations.

Sincerely,



Timothy J. Ragen, Ph.D.
Executive Director

Reference

- Melnikov, V.V. 1999. The Beluga Whale (*Delphinapterus leucas*) of the Sea of Okhotsk. Report of the International Whaling Commission, 1999, SC/51/SM27.
- Reeves, R.R., R.L. Brownell, Jr., V. Burkanov, M.C.S. Kingsley, L.F. Lowry, and B.L. Taylor. 2011. Sustainability assessment of beluga (*Delphinapterus leucas*) live-capture removals in the Sakhalin-Amur region, Okhotsk Sea, Russia: Report of an independent scientific review panel. Occasional Paper of the IUCN Species Survival Commission, No. 44, Gland, Switzerland, 34 pages.