



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

AUG 05 2013

Billy Hurley
Georgia Aquarium
225 Baker Street
Atlanta, GA 30313

Dear Mr. Hurley:

Upon review of your application and supplemental materials (File No. 17324) for a permit to import 18 beluga whales (*Delphinapterus leucas*) from Russia to the United States for the purpose of public display, we are denying your permit application under the Marine Mammal Protection Act (MMPA) and our implementing regulations at 50 CFR part 216.

Our review of the application and other relevant information, including the Marine Mammal Commission, Animal and Plant Health Inspection Service, and public comments, indicates that you did not demonstrate that the proposed importation would be consistent with the purposes of the MMPA or the relevant statutory and regulatory requirements, all of which need to be satisfied, in order for us to issue a permit.

In reviewing this application through the lens of the purposes of the MMPA, we must consider the environmental impacts of the importation of these 18 beluga whales - not only the effects on the individual marine mammals, but also the current and future effects to the ecosystem from which they were collected. Thorough consideration of the ongoing beluga capture operation and the information available regarding the population status in the Sea of Okhotsk suggests that the level of total removal, including past and present live capture operations, have likely contributed to an adverse impact on this population. Therefore, the requested action is not consistent with the purposes of the MMPA and NMFS' implementing regulations.

Specifically, we determined that you did not demonstrate that:

- the proposed activity by itself or in combination with other activities, will not likely have a significant adverse impact on the species or stock (216.34(a)(4)). We cannot discount the likelihood that total removals from this stock have exceeded the total net production on an annual basis resulting in a small, but steady and significant decline over the past two decades. Further, the ongoing live-capture trade since 1989 may have contributed to a cumulative decline over the past two decades, and we considered this in combination with other past, present, and foreseeable future actions. Therefore, we are unable to make the determination that the proposed activity, by itself or in combination with other activities, would not likely have a significant adverse impact on the species or stock.
- any requested import or export will not likely result in the taking of marine mammals or marine mammal parts beyond those authorized by the permit (216.34(a)(7)). We have determined that the requested import will likely result in the taking of marine mammals



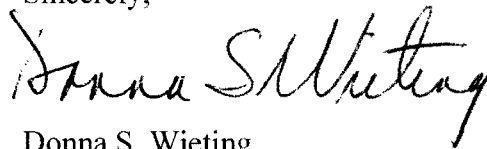
beyond those authorized by the permit. There are ongoing, legal marine mammal capture operations in Russia that are expected to continue, and we believe that issuance of this permit would contribute to the demand to capture belugas from this stock for the purpose of public display worldwide, resulting in the future taking of additional belugas from this stock.

- the marine mammals proposed for importation were not nursing at the time of taking, or less than eight months old, whichever occurs later (Section 102(b)(2)). We have determined that five of the beluga whales proposed for import, estimated to be approximately 1.5 years old at the time of capture, were potentially still nursing and not yet independent. This would only result in the inability to import these five specific animals, if not for the other criteria that you did not meet.

NMFS' detailed rationale in denying your permit application is described in the attached decision memo. You may seek judicial review of this decision by filing a petition for review with the appropriate U.S. District Court within 60 days of this letter.

This denial of your application does not prejudice consideration by NMFS of future permits you may request or be associated with. If you have questions about this decision, please contact the Permits and Conservation Division at 301-427-8401.

Sincerely,



Donna S. Wieting
Director
Office of Protected Resources

Enclosure

cc: Rebecca Lent, Ph.D., MMC
Barbara Kohn, D.V.M., APHIS



AUG 05 2013

Memorandum For: F/PR – Donna S. Wieting
Director, Office of Protected Resources

From: F/PR1 – P. Michael Payne
Chief, Permits and Conservation Division

Subject: Report on the Application for a Public Display Permit (File No. 17324): Recommendation for Denial

I recommend that the National Marine Fisheries Service (NMFS) deny issuance of a permit to import beluga whales for public display, pursuant to the Marine Mammal Protection Act of 1972 as amended (MMPA; 16 U.S.C. 1361 *et seq.*) and the regulations governing the taking and importing of marine mammals (50 CFR Part 216). The application for a permit was submitted by Georgia Aquarium Inc. (the Aquarium), 225 Baker Street, Atlanta, GA 30313.

The Aquarium did not demonstrate that the proposed importation would be consistent with the purposes and requirements of the MMPA or regulatory requirements for permit issuance. PR1 recommends denial of the permit primarily because the Aquarium has not demonstrated that the proposed activity, by itself or in combination with other activities, would not likely have a significant adverse impact on the species or stock.¹ The Aquarium has also failed to demonstrate that the requested import will not likely result in the taking of marine mammals beyond those authorized by the permit.² Finally, the Aquarium has not demonstrated that all of the animals were not nursing at the time of taking, or less than eight months old, whichever occurs later.³

I. Legal Authorities Applicable to the Decision on the Application

A. Purposes and Policies of the MMPA

Congress enacted the MMPA in 1972 at a time when a substantial number of marine mammals were being killed incidental to human activities, e.g., commercial fishing practices. Extensive legislative history exists to support Congress' view that marine mammals are of great importance to society, and the MMPA's main focus is to provide marine mammals with protection against human activities. Congress stated further that "[t]he primary objective of marine mammal management is to maintain the health and stability of the marine ecosystem; this in turn indicates that the animals must be managed for their benefit and not for the benefit of commercial exploitation." H.R. Rep. No. 92-707, at 22. Although Congress' declaration of policy in Section 2 of the MMPA makes clear that marine mammal protection is of paramount concern, several exceptions to the MMPA's take and import prohibition exist. See, e.g., MMPA Sections 101 and

¹ Issuance criterion at 50 CFR 216.34(a)(4).

² Issuance criterion at 50 CFR 216.34(a)(7).

³ Issuance criterion at 50 CFR 216.12(ii).



104. However, any applicant requesting a take⁴ or import permit under Section 104 maintains the burden of proof to demonstrate that the request will be consistent with the MMPA and applicable regulations. It is under these principles – notably the Congressional findings and declaration of policy in Section 2, the MMPA’s other relevant provisions, and our implementing regulations – that we reviewed the applicant’s request for a permit to import beluga whales for public display. *See* MMPA Section 2 (1), (2), (3), & (6); 102(b) & (c); 104; and 50 CFR Part 216.

B. MMPA Section 102. Prohibitions (16 U.S.C. 1372)

The MMPA contains several absolute prohibitions on imports, and commits others to the Secretary’s discretion. Section 102(b) explicitly prohibits (except for scientific research and/or enhancement permits) the import of 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;
- (3) taken from a species or population stock which the Secretary has, by regulation, designated as depleted; or
- (4) taken in a manner deemed inhumane by the Secretary.

Section 102(b) allows the Secretary to issue a permit for the importation of a marine mammal that falls into category (1) or (2) above, if the Secretary determines that such importation is necessary for the protection or welfare of the animal.

Section 102(c) prohibits import of any marine mammal that was taken in violation of the MMPA or any applicable foreign law.

C. MMPA Section 104. Permits (16 U.S.C. 1374)

Section 104(a) of the MMPA provides an exception to the moratorium on take or import of marine mammals and provides the Secretary the discretion to issue permits if certain findings are made. Furthermore, Section 104(b) stipulates that a permit must specify: 1) number and kind of animals; 2) location and manner of import; 3) time period of the permit; and 4) any other terms and conditions which the Secretary deems appropriate. Section 104(b)(2)(D) provides discretion to the Secretary to impose terms and conditions on a permit which are necessary to support the purposes of the MMPA.

Section 104(c) states that applicants for public display permits must demonstrate that they meet these criteria to hold marine mammals for this purpose: 1) offering a program of education or conservation based on professionally recognized standards; 2) being licensed as an exhibitor

⁴ The MMPA defines take as to “harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal.”

under the Animal Welfare Act (7 U.S.C. 2131 *et seq.*); and 3) maintaining facilities that are open to the public on a regularly scheduled basis.

Section 104(d)(3) requires that an applicant for any permit under this section must demonstrate to the Secretary that the taking or importation of any marine mammal under such permit will be consistent with the purposes of the MMPA, which includes a demonstration of how the proposed activity satisfies the issuance criteria in NMFS regulations.

D. MMPA Implementing Regulations and Issuance Criteria (50 CFR Part 216)

NMFS regulations implementing the permit provisions of the MMPA are in 50 CFR Sections 216.33 through 216.35, and 216.12. Section 216.33 contains requirements for application submission, the process for application review, and issuance or denial procedures. Section 216.34 specifies issuance criteria, specifically indicating that the applicant must demonstrate how their proposed activity meets the criteria. Section 216.35 specifies permit restrictions, including limitations on importation. Section 216.12 specifies conditions under which importation of marine mammals is prohibited, including by permit.

E. Other Applicable Federal Laws and Treaties

Animal Welfare Act (AWA)

Marine mammals held for public display purposes must be maintained in facilities licensed by the USDA Animal and Plant Health Inspection Service (APHIS), and held and transported in compliance with the provisions of the Animal Welfare Act (AWA: 7 U.S.C. 2131 – 2156). APHIS has jurisdiction under the AWA for enforcing the standards and certification requirements for the humane handling, care, treatment, and transportation of mammals. The application was forwarded to APHIS for review and comment specific to compliance of the facilities with AWA and APHIS implementing regulations. APHIS provided comments on the application and was consulted regarding the revised transport plan. These comments can be found in the *USDA Animal and Plant Health Inspection Service (APHIS)* subsection of Part III(iv)B: *Summary of external comments and response*.

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

Beluga whales are listed on Appendix II of CITES. The country of export must make findings prior to issuing the CITES export permit regarding: 1) the impact of the export on the survival of that species; 2) whether the collection of an animal was consistent with domestic laws; and 3) whether the shipment of an animal is done in a way that minimizes the risk of injury, damage to health, or cruel treatment.

National Environmental Policy Act (NEPA) documentation

NMFS prepared an environmental assessment (EA) to evaluate the potential impacts of permit issuance on the human environment. NOAA's Administrative Order 216-6 (May 20, 1999) identifies issuance of permits under section 104 of the MMPA as generally qualifying for a categorical exclusion from the requirement of NEPA to prepare an Environmental Impact Statement or an EA. (see Section 6.03f.2(a) of NAO 216-6)

We prepared a draft EA to assist the agency in decision-making. 40 CFR § 1501.3(b). The EA considered one action alternative – issuance of the permit as requested by the applicant, with terms and conditions deemed standard for this kind of permit. The No Action alternative was to deny issuance of the permit. The draft EA was made available for public review and comment concurrent with the application. The EA was revised based on the recommendation to deny the permit and resulted in a Finding of No Significant Impact.

II. Summary of Application

The Aquarium requested a five-year permit under the MMPA for the importation of eighteen (18) wild caught beluga whales (*Delphinapterus leucas*) from the Utrish Marine Mammal Research Station (UMMRS) in Russia to the United States for the purpose of public display. All 18 animals would be imported by and be the responsibility of the Aquarium. The animals would be distributed between the Georgia Aquarium facility in Atlanta, GA, and four other U.S. partner facilities pursuant to breeding loans: Sea World of Florida, Sea World of Texas, Sea World of California, and Shedd Aquarium.

The application submitted on June 15, 2012, addressed applicable sections of *NMFS Application Instructions and Supplemental Information for Public Display Permits under the Marine Mammal Protection Act* (OMB No. 0648-0084; Expires July 31, 2013). The information most pertinent to our findings regarding compliance with issuance criteria is contained within Sections IV. E. "If Marine Mammals are to be Imported into the U.S.," and IV.F. "Effects of the Proposed Activity."

Regarding Section IV.E., the application contains:

1. the names and a description of qualifications of the personnel who will accompany the animals during import.
2. a description of the pen, tank, container, cage, cradle or other device to be used during import and thereafter during transportation to the initial holding facility.
3. a description of the mode of transportation, special care during transport, and the length of time required for the transfer from the foreign facility to the initial holding facility in the United States.
4. a written certification from the attending veterinarian responsible for the animals during import that the methods of import and post-import care will be adequate to ensure the well-being of the animals.

5. the name of the country of exportation (i.e., the country from which the marine mammal is to be imported into the United States) and the country of origin (country from which the animal was originally taken from the wild or where born in captivity) if different from the country of exportation.
6. a description of how the marine mammals were taken in the country of origin.
7. a statement and, to the extent practicable, documentation concerning whether the marine mammal to be imported was captured and is presently being held in compliance with the laws of the country of exportation.
8. a statement of whether taking of marine mammals will occur in order to replace the marine mammals to be imported, or whether the proposed import will result in an increased demand for marine mammals.
9. a discussion of the circumstances involved and any alternatives considered if the import is necessary for the protection or welfare of the marine mammals. Note that while the Georgia Aquarium indicated here that the import under this permit would not be for the purpose of the whales' protection or welfare, they provided a discussion of alternatives to the importation of wild-caught belugas from the Sea of Okhotsk in Appendix E of their application.

Regarding Section IV.F, the application contains a description of the effects of the proposed taking or import, by itself or in combination with other known or suspected takings or imports, on:

- (a) the individual animals concerned (e.g., describe how the proposed activity will affect the individual's behavior, physiology, etc.);
- (b) the relevant species or stock (for takes from the wild, describe what impacts there will be from removal of individuals from the population and from incidental disturbance);
- (c) the human environment (e.g., describe how your actions will affect the general public); and
- (d) the marine ecosystem (for takes from the wild, indicate if you will be incidentally taking non-target species, etc.).

Chronology of Processing

May 7, 2012	Preliminary draft application provided to NMFS for comments
May 17, 2012	NMFS provided comments on preliminary draft application
June 15, 2012	Application submitted
July 7, 2012	NMFS provided comments on application
July 18, 2012	The Aquarium provided response to initial review
July 18, 2012	Application determined complete
August 30, 2012	Application and draft EA published in the <i>Federal Register</i>
August 30, 2012	Application and draft EA distributed to reviewers
September 12, 2012	NMFS forwarded Marine Mammal Commission questions to the Aquarium
September 28, 2012	The Aquarium provided response to Marine Mammal Commission questions

October 12, 2012	Public Meeting on application/draft EA in Silver Spring, MD
October 29, 2012	Close of public comment period (60 days)
October 29, 2012	Marine Mammal Commission comments received
October 29, 2012	The Aquarium provided 1 st set of responses to public comments (Includes transport alternatives analysis)
October 31, 2012	Animal and Plant Health Inspection Service comments received
December 13, 2012	The Aquarium provided additional analysis of transport options
December 18, 2012	Transport options forwarded to APHIS and FWS (Live Animal Transport) for consultation
December 19, 2012	APHIS commented on transport alternatives
January 8, 2013	The Aquarium provided 2 nd set of responses to public comments
January 16, 2013	FWS (Live Animal Transport) provided comments on transport alternatives
January 31, 2013	The Aquarium agreed to Option B of the revised transport options
February 11, 2013	The Aquarium provided 3 rd set of responses to public comments
February – July 2013	Internal discussions and drafting decision documents

The Aquarium supplemented their application in response to comments submitted by NMFS, other federal agencies, and the public as indicated above. The supplemental information included an analysis of alternatives to the transport protocols in Section IV.E. NMFS consulted with APHIS and FWS on these revised transport protocols.

III. Findings and Considerations to Support Denial of Permit

In reviewing this application through the lens of the purposes of the MMPA, we must consider the environmental impacts of the importation of these 18 beluga whales - not only the effects on the individual marine mammals, but also the current and future effects to the ecosystem from which they were collected. According to statutory and regulatory language, it is the applicant's responsibility, not that of NMFS, to demonstrate that the MMPA criteria have been met. This is outlined specifically in the statute at Section 104(d)(3), which states a permit applicant "must demonstrate to the Secretary that the taking or importation of any marine mammal under such permit will be consistent with the purposes of this Act," and in the regulations at 216.34, which states that "the applicant must demonstrate that" the proposed activities satisfy the statutory and regulatory criteria. NMFS' review and consideration of the ongoing beluga capture operation and the information available regarding the population status in the Sea of Okhotsk indicates that the requested action is not consistent with the purposes of the MMPA and NMFS' implementing regulations.

Because the issuance criteria in the MMPA are codified nearly verbatim in NMFS regulations, we need not consider the statutory criteria separately from the regulatory issuance criteria.

(i) Issuance Criteria (216.34)

CRITERION 1: The proposed activity is humane and does not present any unnecessary risks to the health and welfare of marine mammals (216.34(a)(1)).

NMFS determination: The proposed activity is the importation of the beluga whales from Russia to the United States. Humane, as used here, is defined by the MMPA as “that method of taking which involves the least possible degree of pain and suffering practicable to the mammal involved.” *See* MMPA Section 3(4).

The Aquarium’s analysis of alternatives to the transport protocols in Section IV.E of the application was reviewed by NMFS, in consultation with the USDA Animal and Plant Health Inspection Service (APHIS) and FWS CITES policy specialist for live animal transport.

APHIS and FWS recommended Option B because it would be shorter, involve the least number of stops, and by having fewer animals on board for each of three separate transports, the attention each animal would receive during transport would be maximized. Also, because this option would require no transport container changes at Liege Airport, it would further minimize stress to the whales. The Aquarium agreed to use Option B if the permit were issued. We determined that the revised transport plan using Option B is humane, as defined by the MMPA.

CRITERION 2: The proposed activity is consistent with restrictions set forth in 50 CFR 216.35 and any purpose-specific restrictions as appropriate set forth at 50 CFR 216.41 – 43 (216.34(a)(2)).

NMFS determination: The applicable restrictions outlined here (216.35(c), (d), and (g)) overlap with the requirements of other sections of the regulations and our findings are discussed in the applicable sections of this document. Other parts of this criterion are related to the roles and responsibilities of personnel listed in the permit, and possession or transfer of the permit, if one were issued.

CRITERION 3: The proposed activity, if it involves endangered or threatened marine mammals, will be conducted consistent with the purposes and policies set forth in section 2 of the Endangered Species Act (ESA) (216.34(a)(3)).

NMFS determination: This criterion is not applicable because the Sea of Okhotsk stock of beluga whales is not listed under the ESA.

CRITERION 4: The proposed activity by itself or in combination with other activities, will not likely have a significant adverse impact on the species or stock (216.34(a)(4)).

NMFS determination: The Aquarium has not demonstrated that their activity will meet this requirement. The information they provided, including their analysis of impacts in Section IV.F, does not adequately consider the impacts of the proposed importation in

combination with other past, present, and foreseeable future actions affecting the stock, including the ongoing live-captures from this stock.

As discussed in Attachment 1, the Aquarium calculated a Potential Biological Removal (PBR)⁵ level for the Sakhalin-Amur stock and compared this to the current rate of removal for the live-capture trade. They used this calculated PBR as their justification that the proposed importation meets the MMPA criterion that the proposed activity, by itself or in combination with other activities, will not likely have a significant adverse impact on the species or stock.

Generally, looking only at the PBR and comparing that to the number of animals removed by a single activity is not an appropriate way to assess whether the proposed activity by itself or in combination with other activities, would likely have a significant adverse impact on the species or stock. In addition, if the Sakhalin-Amur stock has declined, as the available data seem to suggest, PBR is not an appropriate proxy to determine the sustainability of the live-capture activity.

Based on the data available, we cannot discount the possibility that the Sakhalin-Amur stock has experienced a small, yet significant and unsustainable decline over the past several decades that has gone undetected given the minimal amount of monitoring that has occurred over the years. The live capture of beluga whales cannot be discounted as a possible contributing factor to this decline. See Attachment 1 for more detail.

CRITERION 5: Whether the applicant's expertise, facilities, and resources are adequate to accomplish successfully the objectives and activities stated in the application (216.34(a)(5)).

NMFS determination: The information provided by the Aquarium demonstrates that they meet the criteria to hold animals for public display purposes under the MMPA Section 104(c)(2)(A). APHIS was consulted and confirmed that the facility was in compliance with the requirements of the Animal Welfare Act (AWA).

CRITERION 6: If a live animal will be held captive or transported, the applicant's qualifications, facilities, and resources are adequate for the proper care and maintenance of the marine mammal (216.34(a)(6)).

NMFS determination: The Aquarium demonstrated that this criterion has been met. The application included the Curriculum Vitae for the supervisory staff and veterinarians that would be involved in the proposed transport. We also consulted with APHIS and received confirmation that the receiving facilities (Georgia Aquarium, John G. Shedd Aquarium, and the three Sea World marine mammal parks) are all licensed under the

⁵ PBR is an MMPA calculation which defines the number of animals, excluding natural mortality, which may be removed from a population while still allowing that population to grow or recover. See MMPA Section 3(20).

AWA and have sufficient space and experienced personnel to house and maintain these animals.

CRITERION 7: Any requested import or export will not likely result in the taking of marine mammals or marine mammal parts beyond those authorized by the permit (216.34(a)(7)).

NMFS determination: The Aquarium has not demonstrated that the import will not result in taking of marine mammals beyond those authorized by the permit. In fact, additional beluga whales are likely to be captured as part of the ongoing, legal marine mammal capture operation in Russia.

The Aquarium indicated that it is unlikely that other U.S. facilities would submit applications to NMFS to import additional beluga whales for public display in the near future. However, the point of this criterion is that the foreign shipping facility will not replace these animals with additional animals of the same species.

In the 1993 Proposed Rule to amend NMFS regulations for permits to take or import marine mammals for the purposes of scientific research, public display, or enhancing the survival of a marine mammal species or stock, this criterion included an explanation that “the import or export is not likely to result in replacement takes or otherwise increase demand for protected species or protected species parts resulting in takes to meet such anticipated demand.” That explanation was not included in the Final Rule; however, we believe it describes the intent of this criterion and we have applied it as such in past decisions.

In the past, we have required confirmation from exporting parties (i.e., the foreign facility that is shipping marine mammals to the U.S.) that they have no intention of replacing the animals they are exporting with animals of the same species. For previous imports of beluga whales (from Mexico, Germany, and Canada), the shipping facilities in those countries have provided assurances that additional animals would not be acquired as a result of the import.

This case is somewhat different, in that the ongoing, legal marine mammal capture operation in Russia is expected to continue. Thus, we cannot obtain the assurance that an additional 18 whales would not be captured in the future in place of the 18 whales requested for import. If these 18 beluga whales are not imported to the U.S. they could be made available to public display facilities in other countries and it is possible that 18 fewer beluga whales would be captured in Russia to supply other facilities.

CRITERION 8: The Office Director will also consider the opinions or views of scientists or other persons or organizations knowledgeable of the marine mammals that are the subject of the application or of other matters germane to the application (216.34(b)).

The application and the draft EA were made available to the public for review, and were distributed to the Marine Mammal Commission, APHIS, and the USFWS for comment. Approximately 9,000 comments were received from the above mentioned agencies, NGO's, scientists, and the general public. These comments are summarized and responses are given below in Part III(iv)D (*Summary of external comments and response*).

(ii) Prohibited Importation

In addition to meeting the permit issuance criteria listed above, the applicant must also demonstrate that the marine mammals proposed for importation were not (50 CFR 216.12):

- pregnant at the time of taking;
- nursing at the time of taking, or less than eight months old, whichever occurs later;
- taken from a species or stock designated as depleted; or
- taken in a manner deemed inhumane by the Secretary of Commerce.

We discuss each of these four factors separately.

CRITERION 9: The animals must not have been pregnant at the time of taking.

NMFS determination: The Aquarium has demonstrated that this criterion has been met. The Aquarium included a statement in the application indicating that none of the animals proposed for importation were pregnant at the time of capture. No allegations or documentation indicating any animal may have been pregnant at the time of capture were provided during the public comment period that would suggest otherwise and we have no reason to believe that any of the animals may have been pregnant.

CRITERION 10: The animals must not have been nursing at the time of taking, or less than eight months old, whichever occurs later.

NMFS determination: The Aquarium has not demonstrated that this criterion has been met for each of the 18 whales. The application indicates that five of the beluga whales proposed for import were estimated to be approximately 1.5 years old at the time of capture. This determination would only result in the inability to import these five specific animals, if not for all of the other factors discussed in this document.

Section 102 of the MMPA and 216.12 of NMFS implementing regulations both specifically state that the animals must not have been nursing, or less than eight months old, whichever occurs later, at the time of the original take (i.e., capture). We must then consider whether or not nursing in this context means a calf is fully dependent on its mother for survival, or if it is a broader concept in that while the calf is in the process of becoming independent, it is still occasionally nursing from its mother. It is difficult to

visually determine when an animal is fully independent if it is still nursing to some extent. Therefore, we believe that it is the intent of the MMPA to restrict importation of marine mammals to those individuals that were taken after such time that they were considered to be independent of their mothers.

The scientific literature supports a conclusion that beluga calves are nursed for two years and may continue to associate with their mothers for a considerable time thereafter (Reeves et al. 2002). They appear to be dependent on their mothers for nursing for the first year, when their teeth appear (Katona et al. 1993), at which point they supplement their diets with shrimp and small fishes (Haley 1986). At 1.5 years of age, beluga whale calves are likely not independent from their mothers.

The Aquarium contends in their response to comments on this subject that the animals proposed for import have age ranges, and that 1.5 years is the bottom of that range. A table was provided in the application which included the estimated age of each animal at time of collection and as of January 1, 2012. These ages were not provided as a range.

The Aquarium also contends that “only animals in human care can be observed for a definite termination of when mother-calf dependency ends” and that juvenile beluga whales can be independent by 1.5 years of age. While some beluga whales may be independent at this age, it doesn’t logically follow that every individual will be and we cannot assume that all 1.5 year olds are independent from their mothers.

We asked the Aquarium why some of the estimated ages of animals proposed for importation had changed (increased) from the preliminary draft application to the submitted application and requested that they clarify the process for estimating the ages. The Aquarium responded that the preliminary draft had a few typographical errors and a very limited amount of information that had not yet been fully updated or was in the process of being reviewed. They indicated that ages were estimated using standard methodologies, which included morphometrics (length, girth, fluke sizes), skin color, tooth emergence, and behavior; however, they did not provide specific details regarding those methodologies.

Of the 18 animals listed in the application, eight of them had differences in estimated ages from the preliminary draft application to the submitted application, all increasing in estimated age by a year. In the submitted application, five animals were estimated to be 1.5 years old at the time of capture, all of which were captured in 2010. For two of these animals, the Aquarium estimated their age to be 2.5 years in January 2012 in the preliminary draft application, which would mean that in 2010 (at time of capture) they were approximately one year old. The estimated age for these two animals was increased to 3.5 years in the submitted application. This provides for ambiguity regarding whether these two animals were potentially younger than the estimated 1.5 years old at the time of collection listed in the submitted application, based on the information provided in the preliminary draft application. In general, this raises questions about the accuracy of the

estimated age at collection of the animals proposed to be imported.

CRITERION 11: The animals must not have been taken from a species or stock designated as depleted.

NMFS determination: The Aquarium has demonstrated that the animals are not from a stock designated as depleted. “Depleted” under the MMPA means any case in which the Secretary determines that the species or stock is below its optimal sustainable population or a species or stock is listed as endangered or threatened under the ESA. NMFS does not manage the beluga stocks in the Sea of Okhotsk; therefore a designation of “depleted” would not be made by NMFS. However, if we were to make a determination for this stock, the information we have suggests it would be considered depleted.

CRITERION 12: The animals must not have been taken in a manner deemed inhumane by the Secretary of Commerce.

NMFS determination: The Aquarium demonstrated that this criterion has been met in their description of the captures provided in the application.

A number of commenters argued that the captures were inhumane based on a 1999 video by the International Fund for Animal Welfare documenting captures conducted in the same location, and by the same organization. The video portrays only portions of captures. The term “humane” is defined by Section 3(4) of the MMPA as “that method of taking which involves the least possible degree of pain and suffering practicable to the mammal involved.”

The Aquarium stated in their response to comments that observers were sent to witness the collection and handling techniques in the Sea of Okhotsk to ensure that the methods were humane and similar to methods permitted in the U.S. Despite the presence of observers and our request to provide documentation regarding the beluga captures (email from J. Skidmore to B. Hurley and G. Mannina on May 23, 2011), no video was made available. Therefore, we must rely on the description provided in the application, information provided by commenters, and other reasonable information to determine if the captures would be considered inhumane.

The description of the capture methods provided in the application is similar to that of research captures of beluga whales in Alaska that have been previously permitted by NMFS. The capture methods used in Alaska were determined to be humane during processing of the scientific research permit that authorizes them. Although some may argue that capture techniques are, per se, inhumane, the captures were accomplished in a manner with as minimal a degree of pain and suffering to the animals involved as possible, consistent with the statutory definition of humane.

(iii) Purpose-Specific Issuance Criteria

Section 216.43 references permit specific issuance criteria; this section is currently reserved and contains no issuance criteria specific to public display permits.

(iv) Summary of External Comments and Responses

We published a notice in the *Federal Register* announcing receipt of the application, making it available for public review. The application was also provided to the Marine Mammal Commission (Commission), the APHIS, and a FWS CITES policy specialist for live animal transport. In addition, a public meeting was held regarding the application and draft EA and approximately 9,000 individual comments were received during the public comment period.

A. The Marine Mammal Commission (Commission)

The MMPA stipulates that NMFS may not issue a permit without first seeking review of the application by the Commission and its Committee of Scientific Advisors.

In their letter dated October 29, 2012, the Commission reviewed the application with regard to 1) the status of the source population and the effects of removing the whales; 2) temporary holding facilities, transport, and final destinations; and 3) the basis for holding these whales in captivity.

The Commission noted that the existing data is not sufficient to determine with confidence whether this population is growing, stable, or declining or is affected substantially by other human-related mortality or removal. Regarding PBR, the Commission commented that this analysis might be useful for evaluating potential effects of these removals on the Sakhalin-Amur population; however, considering the uncertainties associated with this approach, they emphasized the need for caution.

The Commission stated that it cannot make informed comments on the humaneness of the captures or the adequacy of the temporary holding facilities in Russia because they were not present at the capture and have not visited the facilities. The Commission acknowledged that some may argue that any capture techniques are, per se, inhumane; but applying the statutory definition of “humane,” 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. The Commission commented that all transports involve a degree of risk and stress to the animals; however, they noted that the transport plan appeared to be well thought out and equipped given the potential complications.

The Commission believes that these belugas, if imported, would promote conservation and education as intended by Congress in crafting the MMPA. This import would increase the probability of establishing a self-sustaining captive population and, if successful, should

reduce the need for further captures for U.S. facilities. However, the global demand for belugas is likely to continue through the foreseeable future.

After considering these points in their rationale, the Commission recommended issuance of the permit provided that NMFS:

1. confer with APHIS to ensure that the Aquarium's plans and facilities for transporting and maintaining the whales meet the requirements established under the AWA and other applicable laws.

NMFS Response: As described in the next section, we consulted with APHIS.

2. condition the permit to require the Aquarium, if it has not already done so, to develop a contingency plan that will allow for the animals to be removed from their transport containers and placed in a less stressful environment and providing for veterinary care if (a) any part of the transport is delayed or disrupted or (b) any whale shows signs of clinical illness.

NMFS Response: As described in the above subsection of the *Issuance Criteria* section considering whether *the proposed activity is humane and does not present any unnecessary risks to the health and welfare of marine mammals*, the proposed methods for importing the animals (transport plan) were adapted based on comments received during the comment period. The revised options provided by the Aquarium are made part of the application on file. The Aquarium described contingency options in their revised transport plan and in their responses to comments. If a permit were issued, it would contain the conditions suggested by the Commission.

3. strongly encouraged the Aquarium to continue its support of research on the Sakhalin-Amur population to assess its genetic status, abundance, and risk factors that may affect its conservation status.

NMFS Response: We forwarded this recommendation to the Aquarium, who responded by pointing out that there is no statutory or regulatory requirement related to whether they plan to continue research on beluga whales in the Sea of Okhotsk. However, they indicated that they are committed to a beluga whale research program and have agreed to fund continuing research in Alaska and in Russia.

4. strongly encouraged 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.

NMFS Response: Section 104(c)(2)(A)(i) of the MMPA specifies that facilities must offer "a program for education or conservation purposes that is based on professionally recognized standards of the public display community." We

recognize that the public display industry is largely self-regulated under the 1994 Amendments to the MMPA, including that the “professionally recognized standards” for education and conservation programs for public display have been established by the public display industry.

The Aquarium submitted information regarding their conservation/education programs, and those of their partners, and identified themselves as members of both the Association of Zoos and Aquariums (AZA) and the Alliance of Marine Mammal Parks and Aquariums (Alliance). Notice to accept professional standards of the AZA and Alliance was published in the *Federal Register* on October 6, 1994 (59 FR 50900). As such, we are satisfied that the Aquarium and its partner facilities meet the public display criteria as specified in the MMPA.

B. The USDA Animal and Plant Health Inspection Service (APHIS)

In a letter dated October 31, 2012, the APHIS confirmed that the receiving facilities (Georgia Aquarium, John G. Shedd Aquarium, and the three Sea World marine mammal parks) are all licensed under AWA and have sufficient space and experienced personnel to house and maintain these animals. The transport plans are complex, but appear to be compliant with AWA standards. APHIS acknowledged that the length of travel for this importation is long, and all AWA requirements must be complied with throughout the trip (once the transfer of custody occurs in Europe). APHIS requested that it be notified of the exact entry and final flight information at least two weeks prior to arrival to allow for APHIS to make arrangements to inspect the animals and containers, if deemed necessary.

APHIS also provided comments regarding the revised transport plan via email on December 19, 2012. APHIS again reiterated that the transport is a long one, based on geography, but as long as the transport meets AWA standards, APHIS has no opposition. Upon review of the proposed transport options, Option B was recommended as the most viable, as it would negate the need to switch crates in Liege, saving time and minimizing stress to the animals.

NMFS Response: As discussed in the subsection of the *Issuance Criteria* section considering whether *the proposed activity is humane and does not present any unnecessary risks to the health and welfare of marine mammals*, we agree that Option B of the revised transport plan options was the best, and the Aquarium agreed to follow this option if a permit was issued.

C. FWS (Live Animal Transport)

FWS has regulations pertaining to the standards for humane and healthful transport of wild mammals and birds to the U.S. (50 CFR 14, Subpart J). In addition, CITES prescribes guidelines for transport of live wild animals and plants. CITES refers to the International Air Transport Association (IATA) Live Animal Regulations (LAR) as the standard for

transporting animals by air in a safe and humane manner. The LAR also includes the most updated airline and government specific requirements for transporting live animals.

NMFS consulted with FWS regarding the revised transport alternatives. FWS recommended Option B as the preferred option for import. FWS commented that the transport would be shorter, involves the least amount of stops, and is more direct. Splitting the shipment into 3 transports of 6 animals would maximize the attention each animal would receive and the elimination of the container change would further minimize stress to the animals.

NMFS Response: As discussed in the subsection of the *Issuance Criteria* section considering whether *the proposed activity is humane and does not present any unnecessary risks to the health and welfare of marine mammals*, we agree that Option B of the revised transport plan options was the best, and the Aquarium agreed to follow this option if a permit was issued.

D. Public Comments

Public comments were received in the form of individual comments, form letters, and petitions. Comments were received from members of the general public as well as non-government organizations (NGOs). Comments were received both in opposition and in support of issuance of a permit; however, the majority of commenters opposed the import of these beluga whales. Many commenters raised similar concerns regarding issuance of the permit and the comments are organized and responded to by topic areas rather than individually.

The comments were organized into these 11 categories:

1. Concerns regarding captivity
2. Concerns regarding capture
3. Status of the species
4. Concerns regarding transport
5. Concerns regarding education and/or research component
6. Support for education and research programs
7. References to the MMPA issuance criteria
8. Concerns regarding the commerce
9. CITES determination
10. Alternatives for acquisition
11. NEPA analysis

1. **Concerns regarding captivity** included general opposition to beluga whales in captivity, concerns regarding previous mortalities and the unsuccessful breeding of beluga whales, as well as concerns regarding the APHIS standards.

Commenters asserted that captivity is cruel and inhumane for this species, particularly that their size, large home ranges, and complex social structure makes this species unsuitable for captivity. In addition, commenters alleged that captivity decreases life expectancy and commenters referenced previous mortalities of this species at U.S. facilities to support this comment. Commenters argued that the captive breeding program for beluga whales has not been successful and maintenance of a sustainable captive population is not a compelling justification to import these whales. Some commenters also referenced the APHIS standards as being inadequate for this species.

NMFS response: The MMPA provides for exceptions to the moratorium on take for the purpose of public display including the issuance of import permits. Comments regarding captive maintenance and care (including captive breeding) are beyond the scope of issues for NMFS to consider under the MMPA and are under the purview of APHIS under the AWA. As described above, we consulted with APHIS and received confirmation that the Georgia Aquarium facility is licensed under the AWA and has adequate space for the requested number of animals without the inclusion of partnering facilities. Concerns regarding the standards for holding marine mammals in captivity should be addressed to APHIS as this falls under the purview of the AWA and not the MMPA.

2. **Concerns regarding capture** included general opposition to captures, concerns that (1) the captures were inhumane, (2) the captures occurred before the applicant applied for a permit, (3) unweaned animals may have been captured, (4) this import would encourage future trade, and requests for the captured belugas to be released.

Commenters expressed general opposition to the capture of beluga whales for permanent captivity and implied that such captures would be illegal under U.S. law. Specifically, commenters argued that these particular captures were inhumane and make note that the five animals estimated to be 1.5 years old at the time of capture would be considered unweaned animals.

Commenters noted the collection of the belugas for the purpose of this import had occurred prior to the submission and consideration of the application. Two of the animals had been held at the Russian facilities since 2006 (6 years prior), the other animals were collected in 2010 and 2011. Commenters claim that this prejudiced NMFS' decision in the Aquarium's favor. The Aquarium claims that there is no effect to wild belugas from the proposed import because the captures have already occurred. However, the commenters reiterate that the captures are integrally related to the import activity as they fall under the cumulative impacts of the action.

They also argue that issuance of a permit would encourage future trade in marine mammals

and several commenters requested that the captured belugas be released.

NMFS response: The MMPA provides for exceptions to the moratorium on take, including for capture from U.S. waters for public display purposes. Although the last permit for collection of marine mammals from U.S. waters was requested and issued more than 20 years ago, the MMPA allows for the submission of permit applications for take from the wild.

See the discussion regarding the humaneness of the captures and whether unweaned animals were collected in the subsection of the *Prohibited Importation* section.

The fact that the collections took place prior to an application being submitted does not negate the need to look at the effects of the current capture operation on the individual beluga whales and the overall population. The cumulative impacts from the collection and potential import of these beluga whales were considered in the decision-making process and the impacts to the wild population of belugas were not discounted merely because the animals had already been captured.

The potential future trade implications are discussed in the subsection of the *Issuance Criteria* section considering whether *any requested import or export will not likely result in the taking of marine mammals or marine mammal parts beyond those authorized by the permit.*

The comment requesting the release of the beluga whales under the consideration of this permit is not under the purview of the MMPA or the U.S. Government. These animals were collected and are currently being maintained in Russia and the disposition of these animals is under the jurisdiction of the Russian government.

- 3. Status of the species** comments included concerns that the belugas of the Sakhalin-Amur region are a recovering population, the threats have not been adequately addressed, and the PBR calculation does not support the current take of animals in this area.

Commenters noted that the belugas in the Sea of Okhotsk were extensively hunted until the 1960s and are still recovering. They reference other sources of mortality from human activities such as subsistence hunting, bycatch, vessel strikes, and accidental drownings during live-capture operations that must also be considered in any sustainability evaluation. This does not factor in other potential contributors to mortality that are even harder to quantify, such as climate change and pollution. The commenters further reference the objectives of the research project funded by the Aquarium as “to estimate the sustainable annual take quota” for the live-capture operations which they allege is not conservation *per se*. The commenters contend that the Aquarium submitted a possible PBR versus a precautionary PBR and the Aquarium’s analysis should not form the basis of a sustainability determination in the evaluation of this application.

NMFS response: The comments under this subsection are directly relevant to the MMPA issuance criteria (216.34(a)(4)) which states that the proposed activity by itself or in combination with other activities, will not likely have a significant adverse impact on the species or stock. In this case, the specific stock under consideration is the Sakhalin-Amur region in the Sea of Okhotsk. The sustainability of the live-capture operation is discussed in Attachment 1, and the subsection of the *Issuance Criteria* section considering whether *the proposed activity by itself or in combination with other activities, will not likely have a significant adverse impact on the species or stock.*

4. Concerns regarding transport comments included both general transport concerns and specific transport concerns.

Commenters noted that transport in general is stressful to the animals and suggest that transport in and of itself is inhumane. Specifically, concerns were raised regarding the proposed transport plan submitted by the Aquarium. Commenters noted the extensive travel time, the possibility of delays, and inadequate contingency planning to deal with any potential delays. Furthermore, concern was expressed regarding the need for the animals to switch transport containers at the Liege Airport.

NMFS Response: The issue of the humaneness of transport is directly relevant to the issuance criteria discussed in the above subsection of the *Issuance Criteria* section considering whether *the proposed activity is humane and does not present any unnecessary risks to the health and welfare of marine mammals.*

5. Concerns regarding education and/or research components focused on the inadequacy of the education program and/or the lack of conservation to be associated with holding these animals in captivity.

Commenters described the education programs at marine mammal public display facilities as inadequate, inaccurate, and incomplete. Some commenters questioned the necessity of captive marine mammals given the expanding use of alternative modes of education including viewing in the wild, video, film and print materials. Others debated whether the entertainment value of these animals translated into educational value. Still other commenters contended that the educational standards requirement for public display cannot be evaluated, monitored, or enforced, as the “professionally recognized standards” are those that have been provided by the industry being regulated.

Commenters further questioned the value of the conservation programs mentioned in the application and how conservation is linked to the import of these additional beluga whales. Commenters argue that research on beluga whales is generally unidirectional, with captive marine mammals benefitting more from wild research than vice versa.

NMFS response: Section 104(c) of the MMPA provides the Secretary with discretion to authorize the use of marine mammals for public display purposes including permits for

import and capture from the wild. Section 104(c)(2)(A)(i) of the MMPA specifies that facilities must offer “a program for education or conservation purposes that is based on professionally recognized standards of the public display community.” We recognize that the public display industry is largely self-regulated under the 1994 Amendments to the MMPA, including that the “professionally recognized standards” for education and conservation programs for public display have been established by the public display industry.

The application submitted is for import for public display purposes and not for scientific research purposes. In this respect, comments regarding any potential research associated with these animals are beyond the scope to be considered under MMPA for public display. NMFS’ implementing regulations allow for public display animals to participate in “non-intrusive” research without any additional authorization. In order for public display animals to participate in “intrusive” research, a scientific research permit would be necessary and that application would be considered on its own merits and in accordance with the issuance criteria associated with a permit of that nature.

The Aquarium (and its partners) submitted information regarding their conservation/education programs and identified themselves as members of both the Association of Zoos and Aquariums (AZA) and the Alliance of Marine Mammal Parks and Aquariums (Alliance). Notice to accept professional standards of the AZA and Alliance was published in the *Federal Register* on October 6, 1994 (59 FR 50900). As such, we are satisfied that the Aquarium and its partner facilities meet the public display criteria as specified in the MMPA.

6. **Support for education and/or research programs** identified ways in which public display of marine mammals (specifically belugas) provided for the education of the public and ways in which the research of marine mammals in captivity supported the global recovery efforts for this species.

Several comments were received in support of the Aquarium’s education and research programs.

NMFS response: The Aquarium and its partners have demonstrated that they meet the criteria as outlined in Section 104 (c)(2)(A) to hold marine mammals for public display purposes.

7. **References to the MMPA issuance criteria** mentioned in the comments include (1) the humaneness of the activity and whether or not it might present an unnecessary risk to the health or welfare of the animals, (2) likelihood of significant adverse impacts on the species or stocks, (3) the requested import will not likely result in taking of marine mammals beyond those authorized by the permit, (4) the original take and import must be conducted in a humane manner and in compliance with the MMPA, applicable foreign laws and CITES, and (5) at the time of take or import, the marine mammals may not be

pregnant, lactating, unweaned or less than 8 months old.

Commenters believed that the transport was complex and potentially risky, especially given the transport container switch necessary at the Liege Airport. Commenters also referenced Marineland of Canada as a potential source of belugas that were closer and may be in need of rescue (addressed in *Alternatives for Acquisition* below). Commenters referenced the decline of the Sakhalin-Amur population that resulted from previous hunting activities and questioned the Aquarium's analysis of sustainable take using PBR. Specifically, commenters disagreed with the Aquarium's assumption that any other human-caused mortality could be discounted and, therefore, did not contribute to PBR.

Given that these animals were collected as part of a continuing capture operation, commenters stated that additional animals will be taken beyond those authorized if a permit to import these belugas is issued, therefore, failing to meet the MMPA issuance criteria. In addition, commenters expressed concern that the original captures were not conducted in a humane manner and questioned why video documentation could not be provided of these captures. Commenters noted the 1.5 year age estimate at the date of capture for several of the belugas and indicated that these animals should be considered animals that were still nursing and dependent on their mothers. This also raised the question in the commenters mind regarding the capture operation if mother and calves were not being targeted for collection.

NMFS response: These comments are directly relevant to the issuance criteria and are discussed in the sections on the *Issuance Criteria* and *Prohibited Importation*.

8. Concerns regarding the commerce – Many commenters identified commerce as the primary objective of the permit application. In addition, there were requests for the United States to lead by example by prohibiting the importation of these wild caught beluga whales.

Many commenters noted the Aquarium charges an admission fee and advertises a “swim-with” or “meet-and-greet” program with the belugas for an additional cost. They argue that this indicates that sole purpose for importing these beluga whales is commerce. In addition, they contend that the U.S. should be leading by example and not participating in the global trade of wild-caught beluga whales. Commenters asserted that issuance of this permit would create an incentive to the operators to continue captures using inhumane methods and without science-based quotas. The United States is seen as a country with strong environmental laws which are enforced and issuance of this permit would legitimize the capture operations in Russia.

NMFS response: Section 104(c)(2)(A)(iii) of the MMPA specifies that facilities be “open to the public on regularly scheduled basis and that access ... is not limited or restricted other than by charging of an admission fee.” The MMPA does not prohibit public display facilities from charging an admission for entry and for special programs.

In addition, the MMPA allows for the sale and purchase of marine mammals for the purpose of public display (Section 104 (c)(2)(B)).

Regarding participation in the global trade, the MMPA provides the Secretary with discretion to issue permits for importation for public display. Applicants are required to demonstrate that they have met all permit issuance criteria. Every application is subject to public review and is evaluated on its own merits. NMFS does not have the jurisdiction to regulate the capture activities within Russia; however, the MMPA does require NMFS to evaluate the collection methods as they relate to the issuance criteria for any permit requested for importation.

- 9. The CITES determination** was an issue for commenters who questioned the validity of the non-detriment determination for the beluga population given the current capture quotas and the unknowns of other types of take.

Some commenters asserted that the proposed import fails to meet the requirements of CITES for international commercial trade in an Appendix II species because of potential impacts on the wild population, and that “the Russian Federation cannot make a credible non-detriment finding. Accordingly, the exports permits cannot be valid and must be rejected by the U.S.’s Management Authority.” They also indicated that NMFS should seek a copy of the non-detriment finding to confirm that it has been made and that it is credible prior to engaging in any further review of this application or that the Aquarium should have provided the non-detriment finding issued by the Government of Russia associated with the CITES export permits.

NMFS Response: Beluga whales are listed on Appendix II of CITES; therefore, any transport of beluga whales must be accompanied by an export permit from the originating country. The Aquarium provided two sets of CITES permits issued by the Russian government (valid through 8/13/12 and 10/19/12) for the export of these animals to the U.S. In issuing these permits, the Management Authority for the country of origin must make a determination that the export “...will not be detrimental to the survival of that species” (Article IV. 2. a.). In addition, CITES requires that a country’s Management Authority is satisfied that “...any living specimen will be so prepared and shipped as to minimize the risk of injury, damage to health or cruel treatment” (Article IV. 2. c.).

While the CITES permits have since expired and we do not have access to the information provided in the non-detriment finding, we consider the copies of the CITES export permits sufficient documentation of compliance with CITES as it pertains to the evaluation of the application.

- 10. Alternatives for acquisition** were proposed by commenters. One alternative involved obtaining animals from already captive sources, specifically Marineland of Canada. Commenters indicated that the Aquarium should rescue the animals at Marineland as opposed to importing wild-caught belugas.

Many commenters referenced an exposé by the Toronto Star newspaper in August 2012 alleging water quality, animal neglect, and staffing issues at Marineland of Canada. This article prompted an investigation by the Ontario Society for the Prevention of Cruelty for Animals, in conjunction with the Niagara Falls Humane Society and the Canadian Association of Zoos and Aquariums. Commenters felt that U.S. facilities should work with Marineland to relocate animals or hold space available should animals from this facility need to be rescued. We also received comments encouraging the use of alternatives for acquisition including breeding loans among the U.S. partners, importation of already captive belugas (not recently wild caught), and use of artificial insemination techniques.

NMFS Response: While all these options are alternatives for acquisition, we cannot require the Aquarium to import animals already at public display facilities (as opposed to those recently captured), or pursue breeding loans or artificial insemination, in lieu of the activities requested in the permit application. The application is for the importation of 18 wild-caught beluga whales for the purposes of public display. The application must be evaluated in accordance with the purposes and policies of the MMPA and to ensure compliance with NMFS' implementing regulations.

If the Aquarium chooses to pursue any of these alternatives, each has requirements (i.e., permits or notifications to NMFS) that must be met. Breeding loans among U.S facilities would require a 15 day notification to NMFS prior to the transport of animals (Section 104(c)(2)(E) and Section 104(c)(8)(B)). Importation of other beluga whales currently maintained in captivity would require a Section 104 permit for public display (the same type of permit under consideration at this time). Artificial insemination would be considered non-intrusive research that the holders of marine mammals can conduct without additional permitting requirements; however, a research permit would be necessary should the Aquarium wish to import samples from outside the U.S.

As to the Marineland animals, NMFS does not have jurisdiction over animals outside of the United States and has no involvement in the investigation occurring in Canada. We have not been contacted by any of the entities investigating Marineland for assistance. To our knowledge, no U.S. facilities, including the Aquarium, have been asked to accept any of the animals located at Marineland. Based on news reports from the Toronto Star, the Ontario Society for the Prevention of Cruelty for Animals concluded their investigation into Marineland in April 2013. At this time, the animals at Marineland do not appear to be available for importation and there is no reasonable expectation that they might be available in the near future.

11. Comments were received regarding the **NEPA analysis**, most specifically that this action required an Environmental Impact Statement (EIS) as opposed to an Environmental Assessment (EA). In addition, many commenters viewed the range of alternatives as inadequate.

Commenters argued that the draft EA was an inadequate level of NEPA analysis for this federal action and identified several Council on Environmental Quality (CEQ) “significance” criteria that they believe apply to this action, thereby triggering the need to prepare an EIS. They state that the proposed action (1) threatens a violation of the MMPA and NMFS implementing regulations, (2) may establish a precedent for future actions with significant effects, (3) may have cumulatively significant impacts, (4) is highly controversial. Commenters also point out that the draft EA only considers two alternatives (to issue or not to issue a permit), which they believe is inadequate. The application considers five alternatives for acquisition and commenters question why these alternatives were not considered in the draft EA.

NMFS response: An EA may be prepared “at any time” as a tool to inform agency decision-making. 40 CFR § 1501.3(b). At the time the application was deemed complete, we made an initial determination that an EA would be the appropriate level of NEPA analysis for this action. This initial determination was announced in the Notice of Receipt of the application published in the *Federal Register* concurrent with the Notice of Availability of the draft EA. Our initial determination was based on the consideration of other permits issued for import, which are generally categorically excluded from the requirement to prepare an EA or EIS, and the level of interest the application was receiving in the press and online prior to the notice. The draft EA was prepared before we completed our analysis of the application under the MMPA and NMFS’ implementing regulations; it was intended to facilitate but not pre-determine the results of our MMPA analysis. The EA was revised based on the recommendation to deny the permit and resulted in a Finding of No Significant Impact.

With regard to the above-mentioned CEQ criteria, we could not issue a permit that would be in violation of the MMPA or NMFS’ implementing regulations.

The scope of our decision-making is limited to either the issuance or denial of the permit requested by the applicant; therefore our alternatives under NEPA were the Action (issuance of the permit) and No Action (denial of the permit) Alternatives. Denial of the permit under the No Action alternative will have no significant impact on the human environment. The animals will not be imported, and any future capture of additional animals that might have been connected to the import will not occur.

V. Conclusion and Recommendation

The MMPA and NMFS regulations require that the information provided by the Aquarium demonstrate that the importation will be consistent with the purposes of the MMPA and applicable regulations.

Our review of the application and other relevant information, including comments provided by the Commission, APHIS, and the public, indicates that the Aquarium did not demonstrate that

the proposed importation would be consistent with the purposes of the MMPA and the relevant statutory and regulatory requirements, all of which need to be satisfied in order for us to issue a permit. Specifically, we determined that the Aquarium did not demonstrate that they met the following requirements:

- the proposed activity by itself or in combination with other activities, will not likely have a significant adverse impact on the species or stock (216.34(a)(4)). We cannot discount the likelihood that total removals from this stock have exceeded the total net production on an annual basis resulting in a small, but steady and significant decline over the past two decades. Further, the ongoing live-capture trade since 1989 may have contributed to a cumulative decline over the past two decades, and we considered this in combination with other past, present, and foreseeable future actions. Therefore, we are unable to make the determination that the proposed activity, by itself or in combination with other activities, would not likely have a significant adverse impact on the species or stock.
- any requested import or export will not likely result in the taking of marine mammals or marine mammal parts beyond those authorized by the permit (216.34(a)(7)). We have determined that the requested import will likely result in the taking of marine mammals beyond those authorized by the permit. There are ongoing, legal marine mammal capture operations in Russia that are expected to continue, and we believe that issuance of this permit would contribute to the demand to capture belugas from this stock for the purpose of public display worldwide, resulting in the future taking of additional belugas from this stock.
- the marine mammals proposed for importation were not nursing at the time of taking, or less than eight months old, whichever occurs later (Section 102(b)(2)). We have determined that five of the beluga whales proposed for import, estimated to be approximately 1.5 years old at the time of capture, were potentially still nursing and not yet independent. This would only result in the inability to import these five specific animals, if not for all of the other factors discussed in this document.

For these reasons, I recommend you deny the Aquarium's request for a public display permit to import beluga whales and sign the attached *Federal Register* Notice announcing the decision.

I concur. Donna S. Welling

8/5/2013
Date

I do not concur. _____

Date

Literature Cited

- ACIA. 2004. Impacts of a Warming Arctic: Arctic Climate Impact Assessment. Cambridge University Press, Cambridge, U.K.
- Berzin A.A. and Vladimirov V.L. 1989. Sovremennoye raspredeleniye i chislennost kitoobraznikh v Okhotskom more (Present-day distribution and numbers of cetaceans in the Sea of Okhotsk). *Biologiya moria*, N 2, pp. 15–23. Cited in Melnikov (1999).
- Berzin A.A., Vladimirov V.L. and Doroshenko N.V. 1990. Aerial surveys to determine the distribution and number of polar grey whales and beluga whales in the Sea of Okhotsk in 1985-1989. *News of the Pacific Research Institute for Fisheries and Oceanography*, V. 112. (Translated from Russian)
- Chelintsev, N.G. and O.V. Shpak. Unpublished. PBR Estimation for Different Combinations of Survey Regions based on 2009 and 2010 Survey Data. REPORT FOR Georgia Aquarium, Inc., 2011
- Haley, D. 1986. *Marine Mammals of Eastern North Pacific and Arctic Waters* (2 ed.). Seattle, Pacific Search Press.
- Hammill, M.O. and G.B. Stenson: 2007. Application of the precautionary approach and conservation reference points to management of Atlantic seals. *ICES Journal of Marine Science*, 64: 702-706.
- Heide-Jørgensen, M., Laidre, K., Borchers, D., Marques, T., Stern, H. and Simon, M. 2010. The effect of sea-ice loss on beluga whales (*Delphinapterus leucas*) in West Greenland. *Polar Res.*, 29: 198–208. doi: 10.1111/j.1751-8369.2009.00142.x
- ICES: 2005. Report of the Joint ICES/NAFO Working Group on harp and hooded seals. Advisory Committee on Fisheries Management, ICES CM 2006/ACFM, 44pp. St. John's Newfoundland, Canada, August 30-September 3, 2005.
- Johannessen, O. M., L. Bengtson, M. W. Miles, S. I. Kuzmina, V. A. Semenov, G. V. Alexseev, A. P. Nagurnyi, V.F. Zakharov, L. P. Bobilev, L. H. Pettersson, K. Hasselmann, and H. P. Cattle. 2004. Arctic climate change: observed and modeled temperature and sea-ice variability. *Tellus*. 56A:328-341.
- Katona, S.K. V. Rough and D.T. Richardson. 1993. *Field Guide to Whales, Porpoises, and Seals from Cape Cod to Newfoundland* (4 ed.), Smithsonian Institutional Press. p. 336.
- Laidre, K. L., I. Stirling, L. Lowry, Ø. Wiig, M. P. Heide-Jørgensen, and S. Ferguson. 2008. Quantifying the sensitivity of arctic marine mammals to climate-induced habitat change. *Ecol. Appl.* 18(2):S97-S125.

- Lowry, L., O’Corry-Crowe, G., and Goodman, D. 2006. *Delphinapterus leucas* (Cook Inlet population). In: IUCN 2006. 2006 IUCN Red List of Threatened Species.
- Moore, S.E., K.W. Sheldon, D.J. Rugh, B.A. Mahoney, and L.K. Litzky. 2000. Beluga, *Delphinapterus leucas*, habitat associations in Cook Inlet, Alaska. *Mar. Fish. Rev.* 62(3):60-80.
- Rapoport, V.L. and L.M. Kondrat’eva. 2008. Pollution of the Amur River with anthropogenic and natural organic substances. *Contemporary Problems of Ecology*. Volume 1, Issue 3, pp 377-386.
- 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 Species Survival Commission, No. 44, IUCN, Gland, Switzerland, 34 pp.
- Reeves, R.R., B.S. Stewart, P.J. Clapham, and J.A. Powell. 2002. *National Audubon Society: Guide to Marine Mammals of the World*. Alfred A. Knopf, New York.
- Shpak, O., I. Meschersky, R. Hobbs, R. Andrews, D. Glazov, N. Chelintsev, D. Kuznetsova, B. Solovyev, E. Nazarenko, R. Michaud, and L. Mukhametov. 2011. Current status of the Sakhalin–Amur beluga aggregation (The Okhotsk Sea, Russia): sustainability assessment. Report for 2007-2010 stages: Results of 4 years of study and preliminary conclusions. Report to IUCN Independent Scientific Review Panel for a meeting in Chicago, USA, 6-7 March 2011. Available from: Olga Shpak at ovshpak@gmail.com.

Attachment 1. NMFS analysis of the sustainability of the beluga whale trade in the Sea of Okhotsk.

The MMPA establishes a strict moratorium on the taking and importation of all marine mammals, subject to a few narrow exemptions (Section 101(a)). One such limited exception is the import of marine mammals for purposes of public display (Section 101(a)(1)). However, NMFS regulations require that a proposed activity (in this case, the proposed import) by itself or in combination with other activities will not likely have a significant adverse impact on the species or stock (50 CFR 216.34(a)(4)). Therefore the relevant question under the MMPA becomes “Is the beluga whale trade in the Sea of Okhotsk sustainable?”

The information available for us to determine whether the Aquarium meets this criterion is considered data-poor and has considerable uncertainty. There is very little documented information about past abundance levels that can be compared to the present and there is limited information on past and current threats to this population. We considered all of the available scientific information concerning the status of the Sakhalin-Amur stock and the larger Sea of Okhotsk beluga whale population, past and current abundance estimates, past and current threats, available reports, and other factors including site fidelity and, to a lesser extent, matriline to inform our analysis of this criterion. In particular, we relied heavily on the International Union for the Conservation of Nature (IUCN) Committee’s recent report (Reeves et al. 2011) and information from NMFS status reviews of beluga whale stocks in reaching our conclusion. We also considered information on population demographics from other, better studied stocks of beluga whales, and applied this to the Sea of Okhotsk stocks of whales when appropriate. Each of these subjects is discussed in more detail.

Potential Biological Removal (PBR) and live-capture of the Sakhalin-Amur beluga whales

The Aquarium relied on a Potential Biological Removal (PBR) analysis as their justification that the proposed importation meets the MMPA criterion that the proposed activity, by itself or in combination with other activities, will not likely have a significant adverse impact on the species or stock (i.e., that the Russian capture operation was sustainable at current levels). PBR is an MMPA calculation which defines the number of animals, excluding natural mortality, which may be removed from a population while still allowing that population to grow or recover. See MMPA Section 3(20). The PBR is based on the following factors: 1) the minimum population estimate; 2) an estimated net productivity rate; and 3) a recovery factor. We have concerns with the Aquarium’s PBR-based analysis for several reasons. First, the information available leads us to believe that removals likely exceed PBR. Second, even assuming that, as the Aquarium posits, removals are commensurate with PBR, that measure is only appropriate where the stock is increasing, and that does not appear to be the case for the stock in question. In addition, we examined the application under a framework established by an intergovernmental organization and concluded that the information necessary to determine population trends that would be necessary to rely solely on PBR under their model is not available.

NMFS does not manage the beluga whale stocks in the Sea of Okhotsk, and therefore, has not calculated PBR for these stocks. A sustainability analysis of live-capture from the Sakhalin-Amur stock by the IUCN in 2011 resulted in a calculated PBR of 29 to 30 individuals and the IUCN Panel accepted the number with reservations (under-estimation of human-caused mortality, over-estimation of R_{\max} ⁶, and over-estimation of the population by including multiple stocks). The Aquarium used a comparison of this calculated PBR to the current removal rate for the live capture trade as their justification that the proposed importation meets the MMPA criterion that the proposed activity will not likely have a significant adverse impact on the species or stock. However, as discussed below, the available information suggests that removals likely exceed the level assumed in the Aquarium's analysis.

Live captures of beluga whales began at Sakhalin Bay in 1986 and, since 1992, when Canada stopped providing belugas for captive facilities, Russia has been the sole regular supplier of belugas to the public display industry (Fisher and Reeves, 2005). Historical numbers of collected belugas between 1986 and 1999 are unknown. Between 1990 and 2010, a 20-year period, the World Conservation Monitoring Centre (CITES database) recorded the export of at least 237 live belugas from the Russian Federation. Between 2000-2011, the average number of known animals removed from the wild has been 21.3 per year ranging from 0 taken in 2007 to a maximum of 33 in 2011.

The Aquarium calculated a 5-year running average for this capture operation as 22 animals (since 2000). This 5-year average is consistent with how NMFS calculates PBR for U.S. stocks. The 5-year running average resulted in a minimum average of 18.6 animals to a maximum of 22.8 animals. The Aquarium indicated that for the belugas collected in 2006, 2010, and 2011 (years in which animals proposed for importation were captured), the average number of animals collected was 27.7 belugas, which suggests that the number of animals being collected is increasing over time. Because this is below the calculated PBR of 30, the Aquarium believes that the effects of combined takes of beluga whales from this area, including those that would be imported under the permit activity, are not expected to result in adverse impacts on the Sakhalin-Amur stock.

The Aquarium also calculated a different PBR for the combined Sakhalin-Amur and Shantar beluga aggregations (a PBR of 86 animals), which was based on limited genetic data suggesting that these aggregations may be mixing and could potentially be considered a single stock, which would further support their application if true. However, we have reviewed the available data including the assessment by the IUCN Panel on the population estimates and genetic data and agree with the IUCN's working hypothesis that the appropriate population unit for the evaluation of this action includes only those animals encompassing the Sakhalin Bay and the Amur River estuary and river.

⁶ R_{\max} is the maximum net productivity rate is defined as the level where there is the greatest net annual increment in population numbers resulting from addition to the population due to reproduction less losses caused by natural mortality.

The Aquarium's reliance on a comparison between PBR and the number of live removals is misplaced. Looking solely at PBR, or the average number of animals taken during years in which animals proposed for importation were captured, is not an appropriate way to assess whether the proposed activity by itself, or in combination with other activities, would likely have a significant adverse impact on the species or stock. The Aquarium claims that the captures are sustainable; however, this is dependent on the assumption that the number of animals being removed from the population during live-captures will remain under the calculated PBR and that no other human-caused factors are contributing to loss of animals from the population. However, in three separate years 30 or more animals were taken (including 2010 and 2011, years in which animals proposed for importation were captured). In these years, the entire calculated PBR allowance was taken in live captures, allowing for no buffer to account for other sources of human-caused mortality, which is of particular concern to us. In addition, as noted below, these numbers appear to be trending upward over time. Moreover, the number of animals that Russia authorizes to be removed in live capture operations is not limited to the calculated PBR. Shpak et al. (2011) reported the annual quota authorized by the Russian government to be between 40-57 individuals. Finally, available data raise substantial questions about the assumption that there are no other human caused mortalities.

Human-caused mortality sources

Several human-related activities that may result in serious injury or mortality to Sea of Okhotsk beluga whales were identified by the IUCN panel. They include subsistence, death during live-capture, entanglement in fishing gear, vessel strike, climate change, and pollution. In general, information on these potential sources of serious injury and mortality are very limited for this group of whales. As noted in the application and the IUCN review, monitoring of other types of take in this region is low, if existent at all, and information concerning possible threats and mortality in this population of beluga whales are highlighted by a lack of substantiated data, and are largely anecdotal.

The IUCN panel emphasized the lack of data regarding other sources of mortality, and noted that "any animals taken by humans, including those killed or injured in fishing gear, struck by vessels, or accidentally drowned during live-capture operations, should be considered when evaluating the sustainability of any level of intentional removals". Information on potential sources of mortality that may be impacting the species or stock is relevant to our analysis of whether the proposed activity by itself or in combination with other activities would likely have a significant adverse impact on the species or stock.

Although the full extent of other sources of mortality cannot be determined, it cannot be fully discounted or assumed to be zero. Potential mortality from the following activities highlighted in the IUCN report should be considered, in addition to live removals, in the analysis of sustainability.

- **Subsistence:** Little information is available on subsistence or other forms of harvest, however, Shpak reported (cited in application) that annual take levels from subsistence,

bycatch or illegal harvest were probably 1 to 3 per village, but NMFS has no information on how many villages would be included in this estimate. The application indicated that Shpak later stated that there was no quantifiable basis for that estimate; however, it can be assumed that some level of subsistence hunting within the region is occurring.

- **Live Capture:** As discussed above, live captures of beluga whales for public display facilities was initiated in 1986 and is on-going. In addition to the live removals, there is the potential for mortality associated with the capture events and those mortalities may not be adequately reflected in the capture records. Data on possible accidental drowning associated with live captures are not available prior to 2007 (data gap of 20+ years). Between 2007 and 2010 (the only years for which we have data), there has been one reported death of a newborn calf entangled with its mother during live capture.
- **Beluga whale entanglement:** Incidental captures of belugas as bycatch were first reported in 1915 (somewhere between 16 – 48 animals). Since then, few cases have been reported; however, a few specific instances of beluga entanglements in coastal salmon traps, beach-set salmon gillnets, and illegal sturgeon nets have been recalled (as told to Shpak by local fishermen). It has further been noted that belugas seem to be unusual among cetaceans in their ability to avoid entanglement. This is based on entanglement reports from other beluga populations (Bristol Bay and Cook Inlet, Alaska, as well as the St. Lawrence River, Canada) regarding few reports or observed cases of entanglements and a lack of scarring on animals which would be suggestive of previous entanglements.
- **Vessel strikes:** Small fishing vessels make up the majority of vessel traffic in the Sakhalin-Amur region due to the shallowness of Tatar Strait and the Amur estuary. There have been no reports of vessel strikes or evidence of strikes (injuries or scarring indicative of collisions) reported for this population. Although the data on this potential source of serious injury and mortality is lacking, it is unlikely that this is a large source of mortality for beluga whales in this region. Even in other areas where considerable shipping and beluga whale distributions overlap and vessel strikes are reported (e.g. St. Lawrence estuary of Canada), there is very little indication that vessel strikes are a significant source of mortality for those populations.
- **Climate Change:** Evidence indicates that the Arctic climate is changing and one result of the change is a reduction in the extent of sea ice in at least some regions of the Arctic (ACIA 2004, Johannessen et al. 2004). Ice-associated animals, such as the beluga whale, may be sensitive to changes in Arctic weather, sea-surface temperatures, or ice extent, and the associated effect on prey availability. Currently, there are insufficient data to make reliable predictions of the effects of Arctic climate change on beluga whales, but Laidre et al. (2008) and Heide-Jørgensen et al. (2010) concluded that on a worldwide basis belugas were likely to be less sensitive to climate change than other arctic cetaceans because of their wide distribution and flexible behavior. Increased human activity in the Arctic, including increasing oil and gas exploration and development, and increased nearshore development,

have the potential to impact habitat for beluga whales (Moore et al. 2000, Lowry et al. 2006), but predicting the type and magnitude of the impacts if any, is difficult at this time.

- **Pollution:** The Amur River is the tenth longest in the world traveling through the Heilongjiang Province of China - an area of diverse industry - and draining into the Sakhalin Bay (area of beluga captures). Non-point sources of pollution include organic and inorganic pollutants from urban area surface flow, agricultural runoff, and forest fires (Rapoport and Kondrat'eva, 2008). The effects of pollution on beluga whales are difficult to determine and there is no basis for integrating pollution into an assessment of biological removal. There is a potential for belugas to be affected by the development that is occurring in the Sea of Okhotsk region. The IUCN Panel recommended further monitoring of this population to include analysis of blubber for contaminant loading and blood testing for reactions to toxins.

In sum, while we recognize the limitations on data about sources of human-caused mortality other than live capture removals, we cannot discount the likelihood that some unquantifiable level of additional human-caused mortality is occurring. The Aquarium's exclusive reliance on a comparison between PBR and live capture removals fails to account for any additional mortality. Therefore, the application does not demonstrate the sustainability of the proposed activity.

Population Trends and the Impact of Live Capture Removals

Even if we were to accept the Aquarium's PBR-based analysis of sustainability despite the flaws identified above, an underlying assumption in the application of the PBR equation is that the stock will naturally grow and that some surplus growth may be removed while still allowing recovery. However, with only one recent abundance estimate to rely on and no trend data to establish that the stock is increasing, the use of PBR as an index of sustainability in this case is not appropriate. The historical information required to support the Aquarium's assertion (using PBR) that this import will meet the MMPA criterion is lacking. In fact, we developed three scenarios that, taken together, suggest to the contrary – that is, that the stock is either declining or stable, but is not increasing. Moreover, the two more plausible scenarios suggest human-caused removals well in excess of those resulting from live captures, thereby raising additional doubts about the Aquarium's exclusive focus on those removals in their PBR-based analysis.

The current abundance estimate for Shantar Bay (6,661) is approximately twice as big as the Sakhalin-Amur stock (2,891 – 2,972). However, Berzin and Vladimirov suggested that, at least on a relative scale, the Sakhalin-Amur aggregation in 1989 was larger than that found in the Shantar Bay region. This suggests that some factor or factors have affected one, or both, of these stocks over the past two decades to the point where the Sakhalin-Amur stock is no longer the largest aggregation in the Sea of Okhotsk. This inconsistency between past and present further highlights the data-poor resource status of this stock and the uncertainty associated with the information available to review this application. To further investigate the inconsistency we developed three scenarios comparing historical and current population estimates by integrating the current estimate (as the most accurate reference) and the theoretical maximum net productivity rate (R_{max}) of 4% into several mathematical models (or scenarios) to back-calculate

what the abundance of whales was in the Shantar region and the Sakhalin-Amur region in 1989-1990 and examined the likely role of live capture removals in those trends. The maximum net productivity rate is defined as the level where there is the greatest net annual increment in population numbers resulting from addition to the population due to reproduction less losses caused by natural mortality.

The scenarios that follow rely primarily on the minimum population estimate for the Sakhalin-Amur population of 2,891 (Reeves et al. 2011) and further refined to 2,972 (Chelintsev and Shpak 2011), the estimate for Shantar Bay of approximately 6,661 animals, and an estimate of recruitment (the theoretical maximum net productivity rate (R_{max}) of 4% used in NMFS Stock Assessment Reports for beluga whales).

Scenario I: We can use the R_{max} value to back-calculate what the abundance of the Shantar stock had to be in order for the current estimate to be 6,661 in 2010 (i.e., subtract 4% from the abundance estimate each year from 2010 to 1990). The result of such an analysis is that the abundance of the Shantar stock in 1990 would have been approximately 2,944 beluga whales, which is extremely similar to the accepted 2010 minimum population estimate of 2,972 for the Sakhalin-Amur population used by the Aquarium in the application.

This first scenario suggests that if the abundance of the Shantar stock of beluga whales was approximately 2,944 whales in 1989, then the abundance of the Sakhalin-Amur stock was, at a minimum, greater than 3,000 whales, or greater than its current abundance. This analysis highlights the difficulties of reviewing this application in the absence of credible historical data. The lack of an accurate historical maximum, or a time-series of data to determine a trend, becomes extremely significant to this discussion. There is no scenario that can be developed where the Sakhalin-Amur stock of beluga whales was the largest aggregation two decades ago, the Shantar stock is now at 6,661 and twice the size of the Sakhalin-Amur stock, and PBR has not been exceeded on a regularly occurring basis in the Sakhalin-Amur stock. Rather, this scenario represents a likely decline in abundance of the Sakhalin-Amur stock during the past 20 years.

We cannot know the abundance of the Sakhalin-Amur stock in 1990 but if we assume that it was only 3,500 whales, or approximately 500 whales larger than that of the Shantar region at the time, then there would have been an average decline of the Sakhalin-Amur stock of 25 whales per year, or slightly less than 1% per year during the period from 1990 to 2010. In order to be declining, the stock would have to lose, on an annual basis, the amount that it should increase from the theoretical net productivity -- 120-140 whales per year (4% of 3,000 and 3,500 whales, respectively) -- plus those 25 animals. This equates to an annual loss of between 145-165 whales from 1990 to 2010 when the population had declined to its current level of approximately 3,000 animals.

The estimated rates of removal under this scenario are consistent with the 2012 quota allowed by Russia of 200 beluga whales for the whole of the Sea of Okhotsk region, which included both live capture and hunting. Of this 200 quota, 150 belugas were allowed to be taken from the

subregion (northern Okhotsk subzone) where the live captures have occurred. The quota of 150 belugas that could legally be taken from the northern Okhotsk subzone is considerably larger than any removals that have been reported from this region. However, the removal of beluga whales for subsistence purposes, and live capture, in the past decade or longer would adequately explain such a decline.

Scenario II: Alternatively we can use the R_{\max} value to back-calculate what the abundance of the Sakhalin-Amur stock had to be in order for the current minimum estimate to be 2,972 whales in 2010. Under this scenario there had to be approximately 1,314 whales in the Sakhalin-region in 1990 in order for the stock to increase to its present estimate of 2,972 whales. This second scenario considers a much-reduced Sakhalin-Amur stock of whales in 1989 which increased by 4% per year to its current level of abundance. By itself, this would appear to represent a sustainable scenario for this stock. However, this scenario results in an impossible contradiction between available historical data and current data.

Under this scenario there is no manner in which the Shantar stock (considered the smaller of the two aggregations in 1989) could increase during the same period of time to its current, accepted abundance level of greater than 6,000 whales. Therefore, this scenario is not possible. Even if the Shantar stock and the Sakhalin-Amur stock were the same size in 1989, the Shantar stock could not increase in size to its current, acceptable estimate. Again, the lack of rigor in previous surveys and an accurate historical maximum, or a time-series of data to determine a trend, has resulted in a situation where we cannot determine if total removals have been sustainable.

Scenario III: If we assume that both stocks contained 3,000 whales in 1990 (i.e., that the two stocks were identical in size contrary to the report by Berzin and Vladimirov), then the Sakhalin-Amur stock would still have had to lose its total production per year (that is, 120 whales) to remain at 3,000 whales in 2010. Again, this level of removal could easily be explained by a subsistence removal that has largely gone undocumented. Under this scenario the Shantar stock could also theoretically increase to its present estimate of 6,600 whales. Therefore this scenario is feasible but only if total removals from the Sakhalin-Amur stock exceed PBR by 4X on an annual basis.

All scenarios suggest that something in addition to the reported level of live-capture removals has limited the growth of the Sakhalin-Amur stock since 1989. The removals for live-capture of the beluga whales from the Sea of Okhotsk at the levels reported from 2000-2011 should not impede the stock's growth or recovery. If the removal of beluga whales for public display were the only source of mortality or removal from this stock, then it should be increasing at a slow rate. However, based on an integration of all the available data, we believe that total removals from the Sakhalin-Amur stock have exceeded PBR, and likely the total net production, on a regular basis resulting in a small, but steady and significant decline over the past two decades. As indicated above, there are several potential sources of human-caused mortality that may have produced this decline, and the live captures of beluga whales cannot be discounted as a possible contributing factor. Regardless of the source of the decline, the result is a net loss of whales per year throughout the 20 year period which has gone undetected because of the lack of monitoring

in this region during this period. Since the available information does not support a conclusion that the stock is stable or increasing, the record does not support a finding that the proposed activity is sustainable on the basis of the Aquarium's PBR-based analysis.

Management of Marine Mammal Removals in Data-poor Situations (ICES 2005)

We also considered the Aquarium's PBR-based analysis under a decision-making framework established by the International Council for the Exploration of the Sea (ICES, 2005) and Hammill and Stenson (2007). The ICES tool is not controlling for our consideration of this permit application, but we consider it as an additional tool to examine the sustainability of the proposed activity. Applying the ICES framework further cautions against a conclusion that the proposed activity will not have a significant adverse impact on the stock.

The ICES framework describes a set of tiered reference points to be used when scientists are required to provide advice to managers in situations where data available to scientists are either data-rich or data-poor. These reference points are described below.

For the marine mammal stocks that ICES provides quota advice on, a policy has been adopted (ICES 2005) that defines data-rich stocks as stocks whose abundance data have the following characteristics:

- a. Accuracy
 - (i) Precision—abundance estimates should have a Coefficient of Variation about the estimate of 30%; and
 - (ii) Abundance estimates should be unbiased.
- b. The most recent abundance estimates should be prepared from surveys and supporting data (e.g., birth and mortality estimates) that are no more than 5-8 years old. Surveys and associated data that are 8+ years old are too old to be considered as recent data (due to increasing imprecision as the data age). Therefore, a stock whose last abundance estimate is more than 8 years old, would not be considered to have a recent abundance estimate and would therefore, be considered data-poor.
- c. A time series of at least three abundance estimates should be available spanning a period of 10-15 years with surveys separated by 2-5 years.

Stocks whose abundance estimates do not meet all these criteria are considered data-poor. For the Sakhalin-Amur stock of beluga whales, there is a 2010 abundance estimate that meets the ICES standards. There are, however, no other, similar abundance estimates available from the last 10-15 years. Thus, it is considered a data-poor stock under these criteria.

ICES (2005) has also adopted the following criteria to determine which assessment approach to follow in a data-poor situation:

- a. If a stock has no recent, accurate abundance estimates, then no harvest should occur.

- b. If a stock has 1-2 recent, accurate abundance estimates, then the criteria focuses on whether the abundance is less than or greater than 30% of the historical maximum such that:
 - (i) If abundance is greater than 30% of historical maximum, then the PBR protocol is used to set the harvest reference point (or quota); or
 - (ii) If abundance is less than 30% of the historical maximum, then no harvest should occur.

As discussed below, the Sakhalin-Amur stock has a recent abundance estimate from 2010. Therefore, allowing harvests or removals at a PBR level under the ICES protocol is contingent upon the stock's abundance status with respect to the historical maximum. PBR would only be used under the ICES protocol if the current abundance is greater than 30% of the historical maximum. However, there is no reliable estimate of a historical maximum.

The minimum current population estimate (N_{\min}) as of 2010 was in the range of 2,891-2,972 whales (Reeves et al 2011, Chelintsev and Shpak 2011). Using the existing estimate of 10,000 whales, this is below the ICES harvest reference point of 30%. However, the historical abundance maximum is likely higher than the 10,000, and therefore, the current abundance is likely even further below the 30% criterion established by ICES.

Berzin and Vladimirov (1989) estimated the size of the summer aggregations of beluga whales in the Sakhalin-Amur area between 7,000 to 10,000 animals. The authors described this as the “largest number of whales in the summer-fall period” in the Sakhalin Bay region of the Sea of Okhotsk. Based on the findings of Berzin and Vladimirov, the application described the aggregation as “the largest group anywhere in the Sea of Okhotsk” (from Chapter 3, p. A-4, of Application). Current population surveys resulted in an estimate of 3,961 belugas in the Sakhalin-Amur area (Reeves et al. 2011). These more recent estimates are based on surveys conducted in 2009 and 2010 (Shpak et al. 2011) and further reviewed by an IUCN scientific panel of beluga experts (Reeves et al. 2011). The minimum population estimate for the Sakhalin-Amur population was determined to be 2,891 (Reeves et al. 2011) and further refined to 2,972 (Chelintsev and Shpak 2011).

There are significant differences between the 1989 estimates of beluga whales in the Sea of Okhotsk and the results of the more recent surveys. Population estimates are calculated by taking the number of animals observed and multiplying that by a correction factor determined by the researcher to account for animals that are not seen during surveys. The use of different survey methodologies and application of correction factors between surveys, at a minimum, complicates a direct comparison between the results. Shpak et al. (2011) noted that the 1989 estimate is likely inflated (due to a correction factor of 10-12X). Shpak et al. (2011) used varying correction factors depending on the stock surveyed. Therefore, a direct comparison of the estimates is not possible.

The limitations on the data available for this stock make it challenging to establish an historical maximum with any degree of certainty. However, we have little confidence in the estimate of 10,000 whales in the Sakhalin-Amur stock by Berzin and Vladimirov (1989) because of the high

correction factor used. However, it is highly likely that an historical maximum of this stock is even greater than this estimate. Large-scale beluga whaling in Sakhalin Bay occurred over a period of 25-30 years prior to, and just after, World War II. The average annual take in this harvest was approximately 1,000 beluga whales ranging from 607-2,817 over a 20 year period (Shpak et al. 2011). By the early 1960s the harvest ceased when commercial pelagic whaling for larger species increased. Based on the more reliable commercial harvest data, the population had to be at least 13,000-15,000 whales during this period to support the removal of over 20,000 whales (average 1,000 whales per year for 20 years). Therefore, we consider 10,000 as below the lower end of an historical maximum.

Based on the ICES criteria for data-poor situations, no harvest should occur because the current abundance appears to be less than 30% of the lower end of a highly conservative historical maximum. The ICES framework thus supports our conclusion that the Application should be denied until such time that abundance information for the Sakhalin-Amur stock of whales improves to such a point that the impacts can be re-evaluated.

Matrilines and site fidelity

Because all the captures occur at Chkalova Island in the Sea of Okhotsk and females show strong site fidelity during the capture season, the IUCN Panel evaluated the concern that matrilines may be unequally impacted by these removals and be more susceptible to overexploitation.

Matrilines are the basic unit of cetacean social groupings, which consists of a female (matriarch) and her descendants. As noted by the IUCN Panel, “if belugas were extirpated from [the region where captures occur], it would likely not be recolonized for a considerable time (at least decades)” and “capture operations long continued at one or two favored sites where captures are easy and safe might deplete a local, but thus far unrecognized community.”

This would suggest that even if the removal was sustainable at the population level, localized depletions may have contributed to the loss of matrilines, specifically the loss of matrilineally inherited gene complexes. In the absence of historical data regarding the sex ratios of collected belugas, the assumption is that females are preferentially targeted for collection, which may impact the overall reproductive potential of the population differently than captures targeting both sexes equally. While matrilines are smaller social groupings than the species or stock level that the MMPA requires us to consider, 216.33(e)(2)(iv) directs us to consider “any other information or data that the Office Director deems relevant.” Because this information identifies additional potential consequences to the population besides a reduction in animal numbers, we have determined that it is relevant to our decision. This is another area of uncertainty where the broader effects of the capture operations have not been adequately monitored and evaluated.

Summary:

As their justification that the proposed importation meets the MMPA criterion that the proposed activity, by itself or in combination with other activities, will not likely have a significant adverse impact on the species or stock, the Aquarium calculated a PBR level for the Sakhalin-

Amur stock and noted that the current rate of removal for the live-capture trade is below that PBR. Their analysis did not account for other sources of removal.

Generally, looking only at the PBR and comparing that to the number of animals removed by a single activity is not an appropriate way to assess whether the proposed activity by itself or in combination with other activities, would likely have a significant adverse impact on the species or stock. The appropriate use of PBR requires that the stock be increasing such that there is a net increase in the stock or population. For declining populations, any level of removal for any purpose is no longer sustainable because all removals contribute to the overall decline, thereby exacerbating the problem by increasing the rate of decline.

Our analysis suggests the Sakhalin-Amur stock is not increasing, and has declined. The live capture of beluga whales cannot be discounted as a possible contributing factor to this decline. We further cannot discount the possibility that the Sakhalin-Amur stock has experienced a small, yet significant and unsustainable decline over the past several decades that has gone undetected given the minimal amount of monitoring that has occurred over the years.

In our analysis, past estimates were back calculated from the more recent estimates to consider the size of the population in 1989 as compared to the present. When all the information is reviewed, there is no scenario that can be developed where the Sakhalin-Amur stock of beluga whales was the largest aggregation two decades ago (as suggested from historical information), the Shantar population is now twice the size of the Sakhalin-Amur stock, and PBR has not been exceeded on a regularly occurring basis in the Sakhalin-Amur stock. The most plausible scenario is one where total removals of beluga whales from the Sakhalin-Amur stock have likely exceeded the calculated PBR on an annual basis. While the data is lacking to identify the extent of all sources of removal, the ongoing live-capture trade since 1989 may have contributed to a cumulative decline over the past two decades and is likely not sustainable. Thus, it is not accurate to conclude that the proposed activity, by itself or in combination with other activities, will not likely have a significant adverse impact on the species or stock.