



Animal Welfare Institute

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BY ELECTRONIC MAIL

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NOAA-NMFS-2012-0158

Michael Payne, Chief
National Marine Fisheries Service/NOAA
Conservation and Education Division
Office of Protected Resources
1315 East-West Highway
Silver Spring, MD 20910

Dear Mr. Payne:

RE: 77 FR 52694, File No. 17324 Proposed Import of Beluga Whales from Russia

I am writing on behalf of the Animal Welfare Institute (AWI) to strongly oppose the request by Georgia Aquarium Inc. (GAI) for a public display permit to authorize the import of 18 wild-captured beluga whales from the Russian Federation to the United States pursuant to the Marine Mammal Protection Act of 1972 (MMPA; 16 U.S.C. 1361 et seq.) and the regulations governing the taking, importing, and exporting of marine mammals (50 CFR 216).

AWI supports the arguments against the import submitted by other NGOS including The Humane Society of the United States, and Whale and Dolphin Conservation and endorses the statement signed by 60 international organizations. This letter provides several reasons why AWI believes GAI's request does not conform to the issuance conditions of 50 CFR 216.34. Specifically, we will focus on the fact that GAI cannot adequately demonstrate any of the following three points:

- The proposed transport methods, which include a complicated transfer between containers and planes in Belgium, are humane and do not present unnecessary risks to the health and welfare of the belugas (50 CFR 216.34 (a) (1));
- Its qualifications, facilities, and resources are adequate for the proper care and maintenance of the live belugas being transported (50 CFR 216.34 (a) (6)); and
- The removal of the belugas from the wild will not likely have a significant adverse impact on the species or stock (50 CFR 216.34 (a) (4)).

Furthermore, although the National Oceanic and Atmospheric Administration (NOAA) has listed issuance of permits for public display as a category of actions that do not require preparation of an Environmental Assessment (EA) or an Environmental Impact Statement (EIS), we believe that this application is so significant that NOAA should have prepared an EIS rather than an EA.

We also assert that the proposed import fails to meet the requirements of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) for international

commercial trade in an Appendix II species and must, therefore, be rejected by the U.S.'s CITES Management Authority.

Finally, we are concerned that GAI has not properly accounted for the requirements under European Union (EU) law for the belugas to be examined by veterinarians at Liège Airport and has not taken into account welfare requirements for animals in transit under Belgian law.

GAI's proposed transport methods will present unnecessary risks to the health and welfare of the belugas and are inadequate for their proper care and maintenance while in transit.

Any transport and handling of cetaceans, even using established practices, elevates stress hormones¹ and increases mortality risk.² We believe that the transport plan created by GAI for this import, specifically the transfer the whales will undergo at Liège Airport, Belgium, is so complicated and risky that it presents unnecessary additional risks to their health and welfare. As an initial matter, AWI questions the claim in the application that the Ilyushin aircraft such as those being used to transport the captive beluga whales from Anapa, Russia to Liège, Belgium cannot be used as the primary conveyance to transport the whales to the United States. We have confirmed that Ilyushin aircraft (as long as they are stage 3 noise compliant) are authorized to land at all relevant airports in the United States (Atlanta Hartsfield, Chicago O'Hare, San Diego, Orlando, and San Antonio). In addition to noise compliance, the runways at each airport also have sufficient length for an Il-76 aircraft to land. Further, we have found numerous references to stage 3 and stage 4 IL-76 aircraft landing at airports around the U.S. in the past five years, including Ilyushin aircraft owned by a company that flies regularly into Liège airport from Russia.

Clearly, in the event NMFS were to approve this application, avoiding the need to transfer the whales between aircraft would reduce the stress and potential for an accident that may harm the whales or those personnel accompanying them during the transport. Consequently, GAI must provide additional information to justify the need for the aircraft transfer proposed to occur at the Liege Airport.

AWI is concerned that the animals may be sedated with benzodiazapines such as midazolam or diazepam during the transfer process, as such has occurred in previous beluga transports in both the U.S. and Russia.³ It is generally recognized that the use of sedatives are contraindicated for cetaceans, due to their adverse effects on both respiration and thermoregulation.⁴ Further, CITES Welfare Guidelines state that sedation should only be administered to marine mammals under exceptional circumstances.

GAI's Application for a Permit to Import Certain Marine Mammals for Public Display under the Marine Mammal Protection Act (the Application⁵) asserts repeatedly (see for example, page 6) that the transport equipment and methods are "in accordance with professionally accepted standards and techniques and in compliance with all applicable regulations, standards, and conditions set forth under the Animal Welfare

¹ St. Aubin DJ & JR Geraci. 1988. Capture and handling stress suppresses circulating levels of thyroxine (T4) and triiodothyronine (T3) in beluga whales, *Delphinapterus leucas*. *Physiological Zoology* 61: 170-175.

² Small RJ & DP DeMaster. 1995. Acclimation to captivity: A quantitative estimate based on survival of bottlenose dolphins and California sea lions. *Marine Mammal Science* 11: 510-519.

³ http://www.anesthesiologynews.com/ViewArticle.aspx?d_id=21&a_id=13432 and Abramov A.V., Rozanova E.I., Mukhametov L.M. The experience of transportation of the beluga whale (*Delphinapterus leucas*) in the Utrish Dolphinarium Ltd. "Utrish Dolphinarium" Ltd., Moscow, Russia. In *Marine Mammals of the Holarctic*. 2008

⁴ Barnett, J., Knight, A. and Stevens, M. 2001. *Marine Mammal Medic Handbook*. BDMLR, Kent. UK. While it has been noted that benzodiazapines such as diazepam can be administered to cetaceans without "significant" adverse effects, such sedatives are known to cause a decreased respiratory drive. *Marine Mammal Medicine (An Introduction to the Care and Medicine of Cetaceans and Pinnipeds)*. Tufts University.

⁵ <http://www.regulations.gov/#/documentDetail;D=NOAA-NMFS-2012-0158-0003>

Act (AWA), MMPA, CITES, U.S. Fish and Wildlife Service (USFWS) regulations, U.S. Department of Agriculture (USDA) regulations, and IATA LAR.” It is notable, however, that the “Live Animals Guidelines” of the International Air Transport Association (IATA), which have been adopted as the CITES Guidelines for live transport of animals by air, state that cetaceans should not be “subjected to noise as far as is possible.”

Similarly, CITES’s own Guidelines for transport and preparation for shipment of live wild animals note that cetaceans “should be disturbed as little as possible.”⁶ We do not believe that GAI can demonstrate that its transport plan does everything possible to avoid disturbing the whales or subjecting them to unnecessary noise.

AWI notes that there are both U.S. and Belgian (see below) marine mammal transportation standards that are relevant to this proposed shipment. In the U.S., said standards are found in regulations implementing the Animal Welfare Act (AWA). See 9 §CFR 1 et seq. Such standards include:

- A requirement applicable to both carriers and intermediant handlers to maintain a temperature within the range of 45 to 75 degrees unless the attending veterinarian provides the carrier/intermediate handler a certificate indicating that the animal or animals are acclimated to a specific air temperature range lower or higher than the standard range (9 CFR §3.112(c);
- Any straps, slings, harnesses, or other devices used to support the body of cetaceans must include “special padding to prevent trauma or injury at critical weight pressure points on the body of the marine mammals” (9 CFR §3.113(b)(2) and must be “capable of keeping the animals from thrashing about and causing injury to themselves or their attendants, and yet be adequately designed so as to not to cause injury to the animals” (9 CFR §3.113(b)(3);
- “Marine mammals transported in the same primary enclosure must be of the same species and maintained in compatible groups” but “marine mammals that have not reached puberty may not be transported in the same primary enclosure with adult marine mammals other than their dams (9 CFR §3.113(d)). “Socially dependent animals (e.g., sibling, dam, and other members of a family group) must be allowed visual and olfactory contact whenever reasonable. Id.
- “Primary transport enclosures must be positioned in primary conveyances in such a manner that, in an emergency, the live marine mammals can be removed from the conveyances as soon as possible” (9 CFR §3.114(d).
- For cetaceans transported in commerce, a sufficient number of employees or attendants must: be able to make adjustments in the position of the marine mammals when necessary to prevent necrosis of the skin at weight pressure points; keep the animal cooled and/or warmed sufficiently to prevent overheating, hypothermia, or temperature related stress; and calming the marine mammals to avoid struggling, thrashing, and other unnecessary activity that may cause overheating or physical trauma (9 CFR §3.116(d)(3-5).

The content of the GAI application does not provide assurances or sufficient detail to ensure that these conditions (and any other relevant provisions of the AWA not included herein) will be met during the proposed transport. In particular, it is unclear if provisions will be made to provide visual contact among members of a family group; how the whales are planned to be loaded in the primary conveyances that would permit rapid removal of the whales from the containers to address an emergency condition; if the slings used to hold the whales in the containers will have the requisite padding to prevent injury;

⁶ <http://www.cites.org/eng/resources/transport/E-TranspGuide.pdf>, pp. 27

and if the aircraft will be equipped with the necessary equipment to allow for the adjustment of the whales during transport if necessary to prevent necrosis of the skin at weight pressure points.

Liège Airport, one of the leading cargo-handling airports in all of Europe, operates 24/7 and is particularly busy at night; it is the fifth most heavily night-trafficked airport in Europe.⁷ If the transfer of the belugas at Liège is to occur at night in order to minimize exposure to higher temperatures, the animals will be subjected to a far greater rate of activity and noise. Conversely, if the transfer at Liège takes place during the day, the animals will experience both higher temperatures and greater sun exposure.

GAI asserts on page 13 that the “transport will be conducted in a manner designed to minimize the stress on the whales to the maximum extent practicable” and that the transfer in Liège, Belgium “poses no additional risk” (page 6). It states on page 17 that the “activities associated with the proposed importation of 18 beluga whales are not considered new or untested, nor are the impacts associated with them unknown or uncertain” and that the “proposed permit activity will not involve experimentation with new or untested transport processes or procedures.”

In contrast, AWI believes that the procedures proposed for transferring the whales between containers as well as between planes during transit in Liège are, in fact, unprecedented and will increase, not minimize, the stress on the whales. The transit will involve unloading the containers from the first two planes, moving each animal out of one container into another (presumably using noisy heavy-lifting gear to raise and lower the slings), then carrying the individual containers (up to six feet off the ground) on noisy K-loaders to the 747 planes for loading. We reject the estimate in the Application that the whales will travel “approximately 100 feet” between arriving and departing planes; considering that five planes with wide wingspans are involved (some Ilyushins) that appear to be rear-loading aircraft, while others (747s) can be nose- or side-loading) some belugas will certainly be carried further than 100 feet between planes that are not parked adjacently.

AWI also notes that the use of slings, both to maintain the belugas within their containers, as well as to move them from one container to another, runs the potential risk of causing lesions in the area around the pectoral fins. Such transport injuries as a result of pressure necrosis have been noted in various cetacean species,⁸ and the Utrish Aquarium itself has raised this issue with regard to the transport of beluga whale over long distances. Abramov et.al. (2008) noted that injuries can be caused “in the region under the front flippers, which are often caused by pressing of parts of the body with stretchers.”⁹

GAI claims that the transfer will be done “expeditiously,” but gives no estimate of time spent on the ground in Liège in the Application or in response to a direct question in the addendum. We believe that the belugas may spend more time at Liège than is indicated in the application, especially considering that they must undergo a physical assessment by EU veterinarians at an approved Border Inspection Point (BIP) before departing, according to EU Veterinary Regulations independent of their final destination, i.e. whether the animals are being imported or are in transit to a third country.¹⁰

⁷ Murphy, M., Leipold, A., Bischoff, G., and Raberg, N. 2011. Study on the Balanced Approach to Noise Management and its Influence on the Economic Impact of Air Transportation.

⁸ see for example Sweeney, J. (1988, August 10). Letter to Division of Marine Resources, Florida.

⁹ Abramov A.V., Rozanova E.I., Mukhametov L.M. The experience of transportation of the beluga whale (*Delphinapterus leucas*) in the Utrish Dolphinarium Ltd. “Utrish Dolphinarium” Ltd., Moscow, Russia. In Marine Mammals of the Holarctic. 2008

¹⁰ Langhammer, Patricia. DG Health & Consumers Unit G 6 Multilateral International Relations pers.comm. 24 October 2012.

In addition to the required physical assessment mentioned in the previous paragraph, there are other local requirements that must be met with regard to the belugas' transit through the EU. While at the Liège airport BIP, all relevant documentation must be reviewed, and veterinarians from the BIP must ensure that the belugas are being shipped in accordance with CITES and IATA regulations, as well as Belgian legislation. There will need to be an inspection of each container being used to ship the belugas to confirm that the containers meet CITES guidelines.¹¹

Although EU legislation as a whole provides no specific import conditions for marine mammals, EU Member States must apply national import conditions in accordance with Article 17 of Directive 92/65/EEC.¹² In this case, we believe that Belgian national regulation MB 02.09.1999 would apply.¹³ It requires that a live animal transporter must confirm in writing that it abides by requirements of the regulation and present a plan in case a trip lasts more than 8 hours. Additionally, we note that it specifies that animals cannot be "... lifted by the head, neck, horns, ears, legs, tails or other sensitive parts of the body". The region under the front flippers is clearly a sensitive part of the body, raising the questions whether the practice of lifting the belugas out of their containers in slings would violate the Belgian regulations. Furthermore the Belgian regulation states that sedatives must not be administered except in exceptional circumstances and if such is the case "under the control of AFSCA" (the Belgian vet and food health authority) and full documentation of such must accompany the animal to its destination.

In summary, according to 50 CFR 216.34 (a) (1), GAI must demonstrate that the proposed activity (specifically the transport procedure in Liège) will not "present unnecessary risks to the health and welfare" of the belugas. We believe that it cannot; the unprecedented transfers between containers and planes, and the additional medical checks, during transit at Liège will subject the belugas to additional handling, noise and time without food (and therefore stress and risk). We assert that the methods proposed, and the associated noise of these transfers at Liège, will increase, not minimize, the risk of injury, damage to health and inhumane treatment. Furthermore, we note that while the "chartered aircraft used to transport the belugas into the U.S. will be pressurized to avoid exposure to air pressures to which the animals may not be accustomed" (page D-16), the Application does not give the same assurance for the flights from Russia to Liège.

The qualifications, facilities, and resources of GAI and its partners are not adequate for the proper care and maintenance of live belugas.

NMFS must determine whether GAI has demonstrated that the proposed activity is humane and does not represent any unnecessary risk to the health and welfare of marine mammals, and 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. AWI has major concerns that the proposed activity is not only inhumane, but that the expertise, facilities, and resources of the applicant are not adequate to sustain the future health and welfare of the animals and their offspring if the permit is to be granted to Georgia Aquarium. The records of mortality and the physical and mental health of captive marine mammals in GAI and its partner facilities clearly indicate that captive facilities are not capable of properly caring for or maintaining live belugas.

¹¹ Lallemand, M. and Martin, P. Veterinary Inspectors at the Liège BIP. *pers.comm.* 25 October 2012.

¹² as per *supranote* 11.

¹³ ARRETE ROYAL RELATIF A LA PROTECTION DES ANIMAUX PENDANT LE TRANSPORT ET AUX CONDITIONS D'ENREGISTREMENT DES TRANSPORTEURS ET D'AGREMENT DES NEGOCIANTS, DES POINTS D'ARRET ET DES CENTRES DE RASSEMBLEMENT 09.07.1999 (M.B. 02.09.1999) ("Royal decree concerning the protection of animals during transport, and requirements for carriers and the approval of businesses, stoppage points and assembly centers")

GAI and its partner facilities have established their intent to breed the animals in order to create a more diverse captive population. However, an astonishing 56 belugas have perished within the six listed facilities since 1972; 37 of those were wild-caught and 19 died shortly after birth in captivity. Even if the mortalities are broken down into decades, there is no indication that the captive environments in these facilities have improved over the years: 4 belugas died in the 70s; 10 in the 80s; 15 in the 90s; 23 between the year 2000 and 2010; and 2 since 2010.¹⁴ These numbers indicate that the six facilities on the Application have not been able to sustain beluga whales in captivity any more than they were able to four decades ago (see attachment 1).

Longevity studies conducted for wild and captive belugas have been numerous, but controversial and inconclusive. Based on tooth ring analysis, belugas in the wild can live up to about 50 to 60 years.¹⁵ However, most captive facilities claim that adult life expectancy of belugas in wild populations is no different from those in human care. In captivity, they rarely live beyond 30 and frequently do not pass 25. The significance perhaps, is that there is not a single study that suggests that captive belugas live longer than they do in the wild. The permit application does not contradict this, noting that median and average life expectancies are “effectively identical” in captivity and the wild.¹⁶

Wild animals face a number of threats including predators, anthropogenic hazards, and food shortages. Theoretically, some species of captive animals can live significantly longer lives if given adequate care and maintenance. For example, gray squirrels have a potential life span of approximately 6 years in the wild (excluding the number of squirrels who die during their first year), and 15 years or more in captivity.¹⁷ If GAI and its partner facilities have properly managed and maintained belugas thus far, we are certainly curious as to what factors have contributed to the high mortality rates among these wild-caught and captive-born belugas who had faced neither predator or pollution while under their care.

When we take note of the natural behaviors exhibited by wild belugas and the difference between a wild beluga habitat and a captive facility, it sheds light on the possible factors for the high captive beluga mortality rate. According to the IUCN Redlist,¹⁸ belugas occupy coastal waters, and deep offshore waters in conditions of open water, loose ice, and heavy pack ice. They inhabit estuaries, rivers, continental shelf and slope waters, and they often undertake large-scale annual migrations. These migrations over thousands of miles might occur for feeding purposes, to provide thermal advantage to neonates, or to facilitate skin shedding during molt. Belugas have a diverse diet, which varies from area to area. They feed on a variety of fish including salmon, herring, and Arctic cod, as well as a wide variety of mollusks (such as squid and octopus), and crustaceans such as shrimps and crabs. Belugas are capable of diving up to 25 minutes and can reach depths of 800 meters, over 2,500 feet.

The main habitat for belugas at Georgia Aquarium holds approximately 800,000 gallons of water and the pool is 24 feet deep. While it may indeed look impressive to an uninformed patron, 24 feet is less than 1 % of the distance that a beluga whale can dive. In fact, the surface area of a typical main enclosure is less than 1/10,000ths of 1% of most cetaceans’ home ranges.

¹⁴ Two additional belugas died, but the dates are unknown

¹⁵ R.E.A. Stewart et al., “Bomb radiocarbon dating calibrates beluga (*Delphinapterus leucas*) age estimates,” *Canadian Journal of Zoology* 84 (2006): 1840-1852; C. Lockyer et al., “Age determination in belugas (*Delphinapterus leucas*): A quest for validation of dentinal layering,” *Aquatic Mammals* 3 (1007):293-304.

¹⁶ Willis, K. 2012. Beluga (*Delphinapterus leucas*) adult life expectancy: wild populations vs the population in human care. Attachment to Permit Application File No. 17324.

¹⁷ Thorington, Richard W and Katie E. Ferrell, “Squirrels: the animal answer guide,” (2006), The Johns Hopkins University Press, p 100.

¹⁸ The IUCN Red List of Threatened Species. 2012.2. Available at <http://www.iucnredlist.org/details/6335/0>

Another welfare concern, which has not been addressed in the Application, is the increase in mortality caused by a metabolic muscle disease associated with the stress of capture, restraint, and transportation. This phenomenon, known as capture myopathy (CM), is a widely studied and established syndrome that often develops after restraint of wild animals.¹⁹ Affected animals may die acutely from lactic acidosis – a condition that causes nausea or weakness in humans – or may live several days and show muscular stiffness or become recumbent. Indeed, pathologic descriptions of CM in a striped dolphin indicate that the animal died 48 hours after stranding due to acute rhabdomyolysis affecting both cardiac and skeletal muscles, and myoglobinuric nephrosis. Rhabdomyolysis²⁰ is a condition in which damaged skeletal muscle tissue breaks down rapidly. In humans, common symptoms of rhabdomyolysis include painful, swollen, bruised or tender areas of the body; muscle weakness, nausea or vomiting, confusion, fever, or lack of consciousness; and irregular heartbeat as well as cardiac arrest. For other highly developed mammals with a central nervous system, i.e. dolphins and beluga whales, it is logical to assume that the pain and suffering of this condition are comparable to that experienced by humans. In the referenced study involving the striped dolphin, the main causes of this condition were determined to be the stress, exertion, trauma, and injury caused during the stranding, restraint, and transportation.

However, it is important to note that causes of CM are vast. In addition to the factors that consequently led to the striped dolphin's death, other causes include long periods of restraint (as occurs during transportation), struggling from unnatural positioning, or lengthy pursuit during capture.²¹ In all likelihood, all of these factors were present during the initial capture and transportation of the beluga whales and will be relevant to the proposed transport to the United States of the animals who are the subject of this Application.

Furthermore, according to a report submitted by the Department of Commerce, NOAA, and National Marine Fisheries Service (NMFS), there is a clear recognition that “human interactions can also cause various internal injuries to marine mammals that cannot be detected by visual or external observations,”²² as well as the need to re-evaluate whether a particular injury to a marine mammal would likely result in the death of that animal. The specific injury relevant to this Application is, of course, the “hidden” injuries that may occur during transport, and while the report addresses myopathy only in relation to entanglement, it would seem woefully and willfully ignorant to overlook the potential for CM resulting from the proposed handling and long-distance transport of these animals from Russia to the United States.

Beyond the belugas who have been taken from a potentially recovering population, CM and the detrimental consequences arising from each individual animal's stress response may also affect those wild belugas who may have been subject to harassment during one or more capture efforts but avoided capture or were subsequently released. Thus, the proposed action represents an unnecessary risk to the

¹⁹ The Merck Veterinary Manual, 10th Edition. Cynthia M. Kahn (editor), Scott Line (Associate Editor) *Capture Myopathy of Wild Animals*. Merck Sharp & Dohme Corp. Whitehouse Station, NJ USA, 2011.

²⁰ Herraes P, E. Sierra, M. Arbelo, et al, Rhabdomyolysis and Myoglobinuric Nephrosis (Capture Myopathy) in a Striped Dolphin, *Journal of Wildlife Diseases*. October 1 2007, Vol. 43 No. 4 pgs 770-774. Available at <http://www.jwildlifedis.org/content/43/4/770.full>

²¹ Williams, E. S., and E. T. Thorne. 1996. Exertional myopathy (capture myopathy). In *Noninfectious diseases of wildlife*. 2nd Edition, A. Fairbrother, L. N. Locke and G. L. Hoff (eds.). Iowa State University Press, Ames, Iowa, pp. 181–193.

²² Differentiating Serious and Non-serious Injury of Marine Mammals: Report of the Serious Injury Technical Workshop 10-13 September 2007, Seattle Washington, United States Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, NOAA Technical Memorandum NMFS-OPR-39 September 2008. Available at http://www.nmfs.noaa.gov/pr/interactions/fkwtrt/meeting1/background/serious_injury.pdf

health and welfare of marine mammals and will likely have a significant adverse impact at the population level.²³

There is a clear lack of foresight or concern in the Application for the welfare of animals who might be harmed during transport. The Application does not establish any plan for how animals who fall ill or become injured before arriving at their final destination will be treated. Belugas are not companion animals or livestock who are relatively easy to quarantine, house, treat, and sustain for extended periods of time. Similarly, the Application is unclear about who is responsible for determining an animal's fitness for transport and important treatment options, including euthanasia or return to Russia. The lack of contingency planning over a very realistic and probable situation increases our concern for the soundness of the Application.

The proposed activity clearly represents unnecessary risks – unnecessary because there was no need for the capture to take place – to the health and welfare of marine mammals; and the import, in combination with the captive environment will adversely affect the welfare, and as a result, the mortality of the animals. Given that the captive population cannot be sustained, this proposed action would set a precedent for future captures and imports as well, which would unquestionably impact the wild beluga population.

The removal of the belugas from the wild could have a significant adverse impact on the population

Reeves et al. (2011) concluded that the Potential Biological Removal (PBR), i.e., the number of animals who could be removed annually from the area without initiating a population decline, of beluga whales from the area subject to the Application, is 29 per year over a five year period.²⁴ The Application claims that a mean of 22.4 belugas have been removed over the last five years, but this does not consider any removals from the summer of 2012, and includes 2007 when no belugas were captured. AWI notes with concern that PBR was exceeded in both 2010 (30 captured) and 2011 (33 captured) and would like to see figures for 2012, as well as an updated five year mean, to be confident that this is not a continuing trend.

Also, as Reeves et al. reported, the sustainability of capturing belugas from the Sakhalin-Amur population is affected by the site fidelity of females during the feeding season (which is the capture period).²⁵ AWI is concerned that targeting small, distinct summer feeding aggregations increases susceptibility to overexploitation and the risk, in particular, of devastating entire matrilineal lines. This risk is increased because all captures were made from one location and the operation preferentially (56%) targeted young females (i.e. aged 1.5 - 9.5 years).

The PBR is intended to consider all forms of removal with the exception of natural mortality. Reeves et al. (2011) reports on potential forms of mortality (i.e., ship strikes, entanglement, accidental drowning,

²³ Wright, A.J, Soto, N.A, Baldwin, A.L, et al. 2007, Do Marine Mammals Experience Stress Related to Anthropogenic Noise? International Journal of Comparative Psychology, UCLA Department of Psychology, UC Los Angeles, P. 286. Available at <http://escholarship.org/uc/item/6t16b8gw#page-2>

²⁴ Reeves, R.R., Brownell, R.L., Jr., Burkanov, V., Kingsley, M. C. S., Lowry, L. F. and Taylor, B. L. 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. ISBN: 978-2-8317-1143-0. Copyright: © 2011 International Union for Conservation of Nature and Natural Resources.

²⁵ Ibid.

potential implications of contaminants) but the associated mortality rates are reported to be low (i.e., entanglement, ship strikes, accidental drowning) or unknown (i.e., contaminants). It is unclear, however, what effort, if any, has been made by the scientific community in Russia to engage in studies to quantify such levels of mortality. As a result, if such levels are higher than currently estimated, this in combination with known removals could cause removals to exceed PBR which would affect the sustainability of the affected beluga populations. It would, therefore, appear to be advisable to obtain more quantifiable information about non-capture forms of mortality/removals before continuing to capture and remove animals from these populations.

Similarly, as mentioned above, the PBR concept does not include consideration of natural mortalities which surely must merit some consideration since it will also influence the impact of capture and non-capture form of mortality/removals on population sustainability. Neither the application nor Reeves et al. (2011) provides any information about overall, population-specific, or, preferably age-specific survival rates for those beluga populations targeted by the capture operation. Nor was any information provided about the potential for a stochastic event (i.e., disease outbreak, change in ocean ecology affecting prey availability) that could substantially increase, short-term, natural mortality rates for beluga populations.

Finally, despite the conclusion by Reeves et al. (2011) indicating that a PBR of 29 was accurate for these populations, they identified a number of concerns with the ongoing study of beluga whales in the Sakhalin-Amur region. These concerns are directly relevant to the estimate of population size, determination of population trend, estimate of PBR, and impacts of removals on the sustainability and integrity of the beluga populations. Such concerns included:

- The decades it would take for a the demographically independent beluga populations to recover if they were extirpated (due to captures/removal operations or in response to some stochastic event);
- A lack of clarity as to the extent the tissue sampling design and methods to use to study the genetics of the beluga populations approached the ideal of equiprobable (random and independent) sampling;
- Evidence that tissue samples had been taken from some of the same groups and a high priority need for further genetic sampling and satellite tagging within the Sakhalin-Amur region, particularly in the Amur River and estuary, Zotov Bank, Bailkal Bay, Nikolaya Bay, and Ulbansky Bay;
- The need to document the exact location of future biopsy samples as they are taken as well as other ancillary data such as the number of samples obtained from each sampling episode and the presentation of results supported by full descriptions of sampling protocols;
- Inadequate descriptions of the aerial survey methods used including which of three analysis methods – total count, line transect without extrapolation to areas between transect, line transect with inter-transect extrapolation – was applied to which flow segments;
- Inadequate description of the Belukha2 analysis software which prevented the panel from having confidence in the software's methods or algorithms;
- The practice of estimating a different sighting curve for each transect even when the entire survey was flow with the same methods which, in some cases, resulted in sighting curves estimated from as few as two or three sightings;
- A lack, in some cases, of an explanation for the area to which the density estimate has been applied;
- Questions related to extrapolating density estimates from a truncated sighting strip to sighting strips whose width was defined by the sighting farthest from the trackline;

- Failure to always use randomly placed aerial flight lines in regard to the distribution of whales (a necessary condition in line-transect analyses) and, instead, intentionally surveying areas with known concentrations of whales or areas where whale concentrations were expected resulting in population estimates biased upwards;
- Potential for belugas to be missed close to the trackline possibly resulting in an underestimate of population size;
- A lack of data to calculate the maximum population growth rate for belugas in the Okhotsk Sea;
- The need to consider belugas killed or injured in fishing gear, struck by vessels, or accidentally drowned during live-capture operations when evaluating the sustainability of any level of intentional removals;
- The need to assess levels of fat-soluble contaminants in beluga blubber and to test beluga blood for hormonal reactions to toxins given increasing industrial development in the region and known contamination of the lower reaches of the Amur;
- Potential for capture operations if focused on select sites to deplete a local, potentially unrecognized community of beluga whales if site fidelity among belugas operated on a very local scale;
- A need to better define the boundaries of the affected stock (management unit);
- A need to use additional microsatellite markers to improve the statistical power of genetic analyses;
- A need to know more about movements (both local and Long-range) of animal summering in the south-western Sakhalinsky Bay to enable evaluation of the potential population-level implications of the geographically fixed character of the catching operation (such as possible local depletions);
- A need to: report transect spacing, flying altitude, and other flight details in survey descriptions; analyze survey data using internationally accepted, peer-reviewed methods; incorporating a finite population correction in the calculations of uncertainty; emphasizing the use of systematic parallel transects, randomly placed with respect to the distribution of belugas; using photography or other methods to get more accurate counts in strata containing dense aggregations.

Considering such concerns, if GAI, the other aquaria involved in this application process and NOAA/NMFS were genuinely interested in conservation and in ensuring that the trade in wild-caught belugas is sustainable, they would all agree to terminate the current application pending more expansive studies of the relevant beluga populations to address these concerns.

In light of the foregoing evidence, we do not believe that GAI can demonstrate that the removal of the belugas from the wild will not likely have a significant adverse impact on the species or stock in conformity with 50 CFR 216.34 (a) (4).

The Draft EA is Inadequate and An EIS is warranted under NEPA

NEPA requires federal agencies to evaluate the environmental impacts of their actions before the actions are implemented. NEPA requires that “environmental information is available to public officials and citizens before decisions are made and before actions are taken.”²⁶ The information disclosed in a NEPA document must be of “high quality,” and both “accurate scientific analysis” and “public scrutiny” are essential to NEPA implementation.²⁷

²⁶ 40 CFR §1500.1(b).

²⁷ Id.

The Draft EA fails to meet the standards required of a NEPA document. As an initial matter, NOAA/NMFS claim that the proposed importation of wild-caught belugas whales would normally be categorically excluded from NEPA review (Draft EA at 4) but that it elected to prepare an EA “to assist in making the decision about permit issuance under the MMPA.”²⁸ This claim that such an import decision would normally be categorically excluded from NEPA review is incorrect. The Department of Commerce NEPA implementing regulations identify a number of exceptions to the use of categorical exclusions. They include whether the proposed action involves a geographic area with unique characteristics; is the subject of public controversy based on potential environmental consequences; has unique or unknown risks; would establish a precedent or decision in principle about future proposals; may result in cumulative significant impacts; or may have adverse effects on endangered or threatened species or their habitats.²⁹ Only one of these criteria has to be satisfied in order for a categorical exclusion not to be applicable. In this case, several of these criteria are clearly met or exceeded by the proposed action. For example, the proposed action is the subject of public controversy as to its environmental impacts (see above), it will have unique and unknown risks in regard to the transport of beluga whales and their transfer from one set of aircraft to other aircraft while en route, and it would establish a precedent – an alarming one – in regard to the potential for future decisions regarding applications to import other wild-caught marine mammals into the United States. Finally, though beluga whales are not listed as threatened or endangered under the U.S. Endangered Species Act, they are internationally protected under CITES as an Appendix II species. While these arguments are moot considering that NOAA/NMFS has prepared a Draft EA, it is important for it to make clear in its Final EA that in fact, compliance with NEPA and preparation of the Draft EA was mandatory and not discretionary as claimed.

Whether mandatory or not, the current Draft EA is deficient in several respects. For example, the Draft EA only considers two alternatives – a no-action alternative and the proposed action. This does not satisfy the requirement that agencies consider a range of “reasonable alternatives... that will avoid or minimize adverse effects ... on the quality of the human environment.”³⁰ Examples of alternatives that could have been considered include: 1) no import of any beluga whales requiring aquaria to improve management of current captive stock to address future needs; 2) permit the importation of only captive-born beluga whales for the purpose of augmenting current captive population in the United States; and 3) the importation of fewer wild caught beluga whales. AWI would not necessarily support any of these alternatives, but rather, offers them to demonstrate the lack of consideration of an appropriate range of reasonable alternatives in the Draft EA. Not only were such alternatives not analyzed but NMFS did not even consider but reject such reasonable alternatives.

In regard to the analysis of the affected environment, environmental consequences, and cumulative impacts of the proposed action, it appears as if NOAA/NMFS relied nearly exclusively on information contained in the application, Reeves et al. (2011), and a handful of other studies without attempting to identify other sources of information that could be relevant to the environmental analysis. For example, NOAA/NMFS have accepted the conclusions made by Reeves et al. (2011) without any apparent consideration of the many concerns identified in that study as to how the population estimates are collected, the genetic sampling procedures used, or potential adverse impacts to local population (see above).

²⁸ Draft EA at 4.

²⁹ See NOAA Administrative Series Order 216-6, Section 5.05(c).

³⁰ 40 CFR §1500.2(e).

Furthermore, NOAA/NMFS has accepted the claims that non-capture mortality rates are low without any apparent effort to determine if such claims are true or if they are merely the result of no substantive effort to study and quantify such impacts. At a minimum, it should have developed a model to predict the impact to the affected beluga populations at varying levels of capture and non-capture removal or mortality rates.

NOAA/NMFS claim that the proposed import, if allowed, “is not expected to impact the annual quota for live beluga captures set by the Russian government.”³¹ While this may be true, it is indisputable that if the import is allowed this will make more captive space available for new captures to commence, which will result in the harassment, potential injury, and mortality of wild beluga populations; and stress, injury, or mortality to belugas successfully captured and relegated to a lifetime in captivity; and if such captures focus on previously targeted wild populations, increased adverse impacts to those populations.

NOAA/NMFS have also accepted the GAI claim that the handling procedures and transport plan for the whales involves no unique or unknown risks to the animals when, as explained above, that clearly is not the case.

With regard to cumulative impacts, NOAA/NMFS identify other existing threats to wild belugas in Russia but discount any possibility that the proposed import could have an adverse cumulative impact on such populations. It claims, for example, that there are no active permits which currently authorize the importation of beluga whales into the U.S. or which authorize the direct capture of marine mammals from U.S. waters but entirely ignore the potential precedent that this decision may have in terms of providing other aquaria with incentive to request permission to import other wild caught belugas, other wild caught marine mammals, or to request permission to capture and possess marine mammals from U.S. waters.

Finally, though NOAA/NMFS prepared the Draft EA to assist in the decision-making process, it clearly should have prepared an EIS instead. Regulations implementing NEPA -- that all federal agencies must follow -- identify ten factors that agencies are required to evaluate to determine if a proposed action requires the preparation of an EIS. In comparing the proposed action to the ten factors, it is clear that at least six of the ten factors are met or exceeded by the proposed action.

For example, the proposed action will have impacts that may be both beneficial and adverse. 40 CFR §1508.27(b)(1). GAI claims that the action will result in beneficial impact in regard to augmenting the captive population of belugas in the United States and by providing additional opportunities for conservation education.³² Conversely, AWI and others assert that the proposed action will result in adverse impacts to the belugas themselves particularly given the track record of GAI and other aquaria of maintaining belugas in captivity, to any offspring that may be born in captivity, and to other marine mammals that may be impacted if this application is approved and subsequently provides incentive to other captive facilities to seek similar permissions.

The proposed action is also likely to be highly controversial.³³ In addition to the obvious controversy associated with the import, for the first time in 20 years, of wild-caught marine mammals into the United

³¹ Draft EA at 13.

³² AWI strongly disagrees that the imprisonment of animals in a captive environment provides any meaningful or long-term conservation education value and that, in fact, facilities like GAI by retaining animals, including protected species in captivity, may reduce public concern for the plight of imperiled species in the wild.

³³ 40 CFR §1508.27(b)(4).

States, there is, as explained in this letter, controversy relevant to the environmental impacts of the proposed action. GAI *et al.* claim such impacts are non-existent while AWI and others have raised concerns about how significant such impacts may be.

The proposed action does involve, as explained above, unique or unknown risks contrary to the claims of GAI.³⁴ Though GAI claims that the procedures to be used to handle and transport the belugas are commonly used and well tested, AWI's analysis of the plan suggests otherwise particularly in regard to the transfer of whales between aircraft and from one container type to another in Liege, Belgium. Given all that could go wrong during this process, the entire plan should be subject to more critical review in an EIS.

The potential precedent that could be set if the application is approved is alarming and significant.³⁵ If GAI is provided permission to import wild-caught belugas into the United States this would set the stage for and give incentive to other aquaria or captive animal facilities to seek similar permissions and/or to seek permission to capture and possess marine mammals from U.S. waters. NOAA/NMFS has entirely ignored the precedential impacts of this application which should be carefully and thoroughly evaluated in an EIS.

The cumulative impacts of the proposed action are also a serious concern and are yet another factor that justifies the preparation of an EIS.³⁶ While the 18 beluga whales in question have already been removed from the wild, their import will free up space to facilitate the capture of more whales for eventual sale to interested buyers. Considering that the Sakhalin-Amur region is undergoing considerable industrial development that is contributing to impacts to the environment, including an increase in contamination of lands and waters, this import of belugas could be part of a series of events that, collectively or cumulatively, may adversely impact wild beluga populations. Similarly, if the application is approved and subsequently opens the floodgates for similar applications seeking such permissions, the affected beluga populations, other beluga populations, or other marine mammal populations may be impacted.

Finally, as explained above, the proposed action threatens to violate of federal laws including the AWA and MMPA which should also trigger an EIS.³⁷ Though not included in this criterion, AWI would also note, as explained in this letter, that the proposed action threatens to violate international laws and treaties as well.

For these reasons, an EIS is the appropriate level of environmental impact analysis in this case.

CITES issues

According to Article IV of CITES, the export of these belugas requires the prior grant and presentation of an export permit by the Russian Federation. First, however, the Scientific Authority of the Russian Federation must advise that the export "will not be detrimental to the survival" of the species and the Management Authority must be satisfied that the belugas will be "so prepared and shipped as to minimize the risk of injury, damage to health or cruel treatment" (Article IV (2) (a) and (c) respectively).³⁸

³⁴ 40 CFR §1508.27(b)(5).

³⁵ 40 CFR §1508.27(b)(6).

³⁶ 40 CFR §1508.27(b)(7).

³⁷ 40 CFR §1508.27(b)(10).

³⁸ for additional information on CITES requirements and the transport of cetaceans see Fisher, S.J., and R.R. Reeves. 2005. The global trade in live cetaceans: Implications for conservation. *J. International Wildlife Law and Policy* 8:315-340.

Based on our concerns about the complicated, unprecedented and, we believe, risky, procedure for transferring the animals between planes at Liège airport, we believe that the methods proposed will increase, not minimize, the risk of injury, damage to health and cruel treatment to the animals.

Furthermore, we believe that the potential impacts on the wild population from capturing these whales that are outlined above and in other letters from NGOs demonstrate 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. This would render GAI's application for import permits under the MMPA redundant.

AWI would also note that it contacted Russia's CITES Scientific Authorities (obtained from the CITES website) seeking a copy of the NDF but, to date, has not received any reply. AWI would, therefore, strongly encourage NOAA/NMFS to seek a copy of the NDF to confirm that it has been made and that it is credible prior to engaging in any further review of this application.

In conclusion, AWI believes that GAI cannot fulfill the Issuance Criteria for a public display permit under 50 CFR 216.34 and strongly encourages NOAA/NMFS to deny the application.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Susan Millward", with a small flourish at the end.

Susan Millward
Executive Director

Encl.

Attachment 1: Beluga Mortality in the Aquariums of Application 17324

Facility	Animal	Details	Source
Georgia Aquarium Georgia, Atlanta	<i>only opened in 2006; currently houses 4 belugas, all captive born; So far, <u>three belugas died there</u>: In 2007, within a month Georgia Aquarium lost its two wild caught belugas; in 2012, a captive born baby died (http://www.ceta-base.com/lugalogue/ddl/ddl_ga.html)</i>		
	Maris' calf	2012: died 5 days after birth	Captive born
	Marina	2007: died 20 yrs after capture	Wild
	Gasper	2007: died 10 yrs after capture	Wild
Sea World Orlando, Florida	<i>Currently houses 4 belugas, all captive born and transported in from SeaWorld Texas or Marineland of Canada; Historically, <u>three belugas have died</u>, two of them wild caught. (http://www.ceta-base.com/lugalogue/dl_swf.html)</i>		
	Spooky	2007: died 28 yrs after capture	Wild
	Bandit	2006: died 19 yrs after capture	Wild
	Hudnall	2003: died 4 yrs after birth	Captive born
Sea World San Diego, California	<i>The park now has just five belugas left, four wild caught, and one born in captivity 16 belugas died there over the years, 14 of them wild caught and two babies shortly after birth. (http://www.ceta-base.com/lugalogue/dl_sw.html)</i>		
	Ruby's calf	2008: died 3 weeks after birth	Captive-bred
	Muk Tuk	2007: died 30 yrs after capture	Wild
	Sikku	2000: died 16 yrs after capture	Wild
	Nukilik	1990: died 13 yrs after capture	Wild
	Anana	1989: died 12 yrs after capture	Wild
	Casper?	1987: died 8 yrs after capture	Wild
	Kojak	1986: died 11 yrs after capture	Wild
	unknown	1986: died 7 yrs after capture	Wild
	Belinda's calf	1984: died 4 days after birth	Captive-bred
	Snoopy	1981: died 2 yrs after capture	Wild
	unknown	1981: died 2 yrs after capture	Wild
	Edwina	1979: Died 6 yrs after capture	Wild
	x	1973: died within 1 yr after capture	Wild
	Too Too	1972: Died within 1 month after capture	Wild
	Snow white	Date of death unknown (caught in 1968)	Wild
	Tubby	Date of death unknown (caught in 1968)	Wild

Sea World San Antonio, Texas	<i>Currently eight belugas in facility (four wild-caught, four captive born) 18 belugas deceased since 1993, eight of those wild caught; the remainder were born in captivity and then died shortly afterwards. (http://www.ceta-base.com/lugalogue/ddl/ddl_swt.html)</i>		
	Sikku	2011: died 24 yrs after capture	Wild
	Martina	2009: died 21 yrs after capture	Wild
	Nico	2009: died 13 yrs after capture	Wild
	Whisper's Calf (twin	2008: died within 1 st yr	Captive born
	Whisper's Calf (twin	2008: died 3 weeks after birth	Captive born
	Whisper's Calf	2006: stillbirth	Captive born
	Sikku's Calf	2006: died at day 5 after birth	Captive born
	Olivia	2005: died 7 yrs after capture	Wild
	Kia	2001: died 14 yrs after capture	Wild
	Kia's calf	2001: fetus, found in dead mother	
	Martha's Calf	2000: died in year of birth	Captive born
	Luke	2000: died 13 yrs after capture	Wild
	Unknown	1998: died < 3 yrs after capture	Wild
	A.J.	1998: died 11 yrs after capture	Wild
	Roxanne	1996: died 8 yrs after capture	Wild
	unknown	1995: died 8 yrs after capture	Wild
	unknown	1995: died 1.5 yrs after capture	Wild
	Spooky's Calf	1993: stillbirth	Captive born
John G. Shedd Aquarium Chicago, Illinois	Presently 6 belugas in facility; Nine belugas have died since 1992 (http://www.ceta-base.com/lugalogue/ddl/ddl_jgs.html)		
	Naya's Calf	2009: dies 2 days after birth	Captive bred
	Mauyak's Calf	2005: stillbirth	Captive bred
	Naya's Calf	2002: stillbirth	Captive bred
	Puiji's Calf	1999: died 1 yr after birth	Captive bred
	Puji	1999: died 10 yrs after capture	Wild
	Immiayuk	1999: died 10 yrs after capture	Wild
	Mauyak's Calf	1998: died at day of birth	Captive bred
	# 4	1992: died 5 weeks after capture	Wild
	# 6	1992: died 5 weeks after capture	Wild
Mystic Marinelife Aquarium Connecticut	at present four belugas in facility (3 wild-caught, 1 captive born); Seven belugas died since 1975, all of them wild-caught (http://www.ceta-base.com/lugalogue/dl_mystic.html)		
	Inuk	2010: died 26 yrs after capture	Wild
	Aurora	1999: died 15 yrs after capture	Wild

	Winston	1998: died 14 yrs after capture	Wild
	Nanuk	1984: died four months after capture	Wild
	Alex	1984: died 23 yrs after capture	Wild
	Okanitoo	1983: died 8 yrs after capture	Wild
	unknown	1975: died 6 days after capture	Wild