



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
1315 East-West Highway
Silver Spring, Maryland 20910

August 27, 2020

Stephen M. Coan, Ph.D.
President and CEO
Mystic Aquarium
55 Coogan Boulevard
Mystic, CT 06355

Dear Dr. Coan:

The National Marine Fisheries Service (NMFS) has issued Permit No. 22629 to Mystic Aquarium for importation of and scientific research on five captive-born beluga whales (*Delphinapterus leucas*).

This permit is effective upon your signature and is valid through August 31, 2025. To use your permit:

1. Read the permit, including appendices. If you have questions, contact your permit analyst – Amy Sloan (amy.sloan@noaa.gov), Courtney Smith (courtney.smith@noaa.gov), or Jennifer Skidmore (jennifer.skidmore@noaa.gov) before signing the permit.
2. Sign and date the signature page.
3. Keep the original signature page with your permit.
4. Return a copy of the signature page by email to your permit analyst.
5. Provide a copy of this letter and the permit to each Co-Investigator.

Please note the following:

Terms and Conditions set forth in this permit:

- **Breeding:** This permit does not authorize breeding of any of the imported beluga whales. In accordance with Condition B.6.e of the enclosed permit, prior to import, please submit a plan for the prevention of breeding for approval by the Office Director. The rationale for this decision is explained in the enclosed Recommendation Memorandum.
- **Disposition:** In accordance with Condition B.6.j, transport of any of the imported whales to Georgia Aquarium and disposition of the whales at the termination of research must be approved by the Office Director. If research will continue, please apply for a new permit one year prior to this permit's expiration.
- **Importation:** The importation of marine mammals is subject to the provisions of 50 CFR Parts 14 and 23 (i.e., the import must be conducted in accordance with U.S. Fish and Wildlife Service [USFWS] regulations for the import, export, and transport of wildlife; and, no marine mammals may be imported without the required CITES [Convention on the International Trade in Endangered Species of Wild Fauna and Flora] permits; <https://cites.org/>).



Additional requirements for importation:

- The beluga whales must be declared and cleared through a USFWS port designated for wildlife (50 CFR 14.12) and a Wildlife Declaration Form 3-177 must be filed with the USFWS inspector at the time of import. Contact the appropriate port for details about how to declare and clear your shipment prior to shipping. The list of designated ports and Form 3-177 may be obtained from: <https://www.fws.gov/le/designated-ports.html>.
- Importation of live animals into the United States requires a live animal import permit issued by the U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Veterinary Services; see: <https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-and-animal-product-import-information/imports/live-animal-imports>.

Data sharing: As included in the permit application, Mystic Aquarium's research findings will be shared with researchers who study the depleted Sakhalin Bay-Nikolaya Bay-Amur River beluga whale stock and the endangered Cook Inlet beluga whale distinct population segment, as well as beluga whale researchers world-wide. Additional data or sample sharing requirements may be added at the discretion of the Permits and Conservation Division as data needs are identified. These may include, but are not limited to, data needs related to current population status, disease outbreaks, or unusual mortality events.

Activities involving handling or close proximity to animals: We are providing guidance to remind permitted personnel who work with live or dead animals to follow the appropriate procedures to minimize disease transmission. We recommend the following routine practices be followed:

- All personnel should refer to local, State, and national requirements and public health guidance for their activities.
- All personnel should wear appropriate personal protective equipment (PPE) when working with live or dead animals or when performing close-contact activities (e.g., captures, health assessments, sedation/anesthesia, instrument attachment, or salvage).
- Work clothes, including footwear and dedicated PPE, should be worn only at work.
- Indirect contact between pets kept at home and wild animals should not occur including contact via footwear, equipment, and clothes.
- Individuals who are ill should not work with live animals until cleared by their health care provider.

For more information on specific pathogens and additional guidance see the Centers for Disease Control and Prevention (<https://www.cdc.gov/>), the USDA (<https://www.usda.gov/>), the World Organization for Animal Health (<https://www.oie.int/>), the American Veterinary Medical Association (<https://www.avma.org/>), and the World Health Organization (<https://www.who.int/>).

Please keep contact information current in our online database (<https://apps.nmfs.noaa.gov>). You will receive automated email reminders of due dates for reports and a notice prior to expiration of the permit.

Sincerely,

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Jolie Harrison
Chief, Permits and Conservation Division
Office of Protected Resources

Enclosures

cc w/ enclosures: Anna Barry, USFWS
Barbara Kohn, D.V.M., USDA/APHIS
Peter Thomas, Ph.D., Marine Mammal Commission

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
1315 East-West Highway
Silver Spring, Maryland 20910

Permit No. 22629

Expiration Date: August 31, 2025

Reports Due: November 30, annually

PERMIT TO IMPORT AND TAKE PROTECTED SPECIES¹ FOR SCIENTIFIC PURPOSES

I. Authorization

This permit is issued to Mystic Aquarium, 55 Coogan Boulevard, Mystic, Connecticut, 06355 (hereinafter "Permit Holder;" Responsible Party: Stephen M. Coan, Ph.D.), pursuant to the provisions of 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).

II. Abstract

The objectives of the permitted activity, as described in the application, are to contribute knowledge and inform management and recovery of beluga whale (populations in the wild including the endangered Cook Inlet beluga whale distinct population segment and the depleted Sakhalin Bay-Nikolaya Bay-Amur River beluga whale stock. Research authorized includes the following Studies: 1) Neuroimmunological response to environmental and anthropogenic stressors; 2) Development of novel non-invasive techniques to assess health in free-ranging, stranded and endangered beluga whales; 3) Hearing and physiological response to anthropogenic sound; 4) Photogrammetry body condition studies; 5) Diving physiology; 6) Microbiome; and 8) Testing of prototype telemetry and imaging devices before deployment on wild beluga whales. This permit does not authorize Study 7 (Behavioral and reproduction studies) including breeding of any of the imported beluga whales but reproductive monitoring may be conducted as part of husbandry activities.

III. Terms and Conditions

The activities authorized herein must occur by the means, in the areas, and for the purposes set forth in the permit application, and as limited by the Terms and Conditions specified in this permit, including appendices. Permit noncompliance constitutes a violation and is grounds for permit modification, suspension, or revocation, and for enforcement action.

¹"Protected species" include species listed as threatened or endangered under the ESA, and marine mammals.





A. Duration of Permit

1. Personnel listed in Condition C.1 of this permit (hereinafter “Researchers”) may conduct activities authorized by this permit through August 31, 2025. This permit may be extended by the Director, National Marine Fisheries Service (NMFS) Office of Protected Resources or the Chief, Permits and Conservation Division (hereinafter “Permits Division”), pursuant to applicable regulations and the requirements of the MMPA.
2. Researchers must immediately stop permitted activities and the Permit Holder or Principal Investigator must contact the Chief, NMFS Permits and Conservation Division within two business days for written permission to resume:
 - a. If serious injury or mortality² of the subject beluga whales occurs (see Condition B.6.k).
 - b. If an imported female becomes pregnant or the imported male impregnates any female (not just one of the imported females), and again if a progeny is born, delivered stillborn, or miscarried (see Condition B.6.l).
 - c. If authorized take³ is exceeded (i.e., the animals are taken in a manner not authorized by this permit or the number of takes is exceeded).
 - d. Following incident reporting requirements at Conditions B.6.k, B.6.l, and E.2.

B. Number and Kinds of Protected Species, Locations and Manner of Taking

1. The tables in Appendix 1 outline the authorized species and stocks; number of animals to be imported and taken; and the manner of take, locations, and time period.
2. Researchers working under this permit may collect images (e.g., photographs, video) and audio recordings in addition to the photo-documentation authorized in

²This permit does not allow for unintentional serious injury and mortality caused by the presence or actions of researchers. This includes, but is not limited to: deaths resulting from infections related to sampling procedures; and deaths or injuries sustained by animals during transport/handling/restraint, or while attempting to escape restraint. Note that for marine mammals, a serious injury is defined by regulation as any injury that will likely result in mortality.

³By regulation, a take under the MMPA means to harass, hunt, capture, collect, or kill, or attempt to harass, hunt, capture, collect, or kill any marine mammal. This includes: the collection of parts by sampling; the restraint or detention of a marine mammal, no matter how temporary; or any negligent or intentional act which results in disturbing or molesting a marine mammal.

Appendix 1 as needed to document the permitted activities, provided the collection of such images or recordings does not result in takes.

3. The Permit Holder may use visual images and audio recordings collected under this permit, including those authorized in Tables 1 and 2 of Appendix 1, in printed materials (including commercial or scientific publications) and presentations provided the images and recordings are accompanied by a statement indicating that the activity was conducted pursuant to NMFS MMPA Permit No. 22629. This statement must accompany the images and recordings in all subsequent uses or sales.
4. The Chief, Permits Division may grant written approval for personnel performing activities not essential to achieving the research objectives (e.g., a documentary film crew in areas outside of normal incidental public display practices) to be present, provided:
 - a. The Permit Holder submits a request to the Permits Division specifying the purpose and nature of the activity, location, approximate dates, and number and roles of individuals for which permission is sought.
 - b. Non-essential personnel/activities will not influence the conduct of permitted activities or result in takes of protected species.
 - c. Persons authorized to accompany the Researchers for the purpose of such non-essential activities will not be allowed to participate in the permitted activities.
 - d. The Permit Holder and Researchers do not require compensation from the individuals in return for allowing them to accompany Researchers.
5. Researchers must comply with the following conditions related to the manner of research taking:
 - a. The Permit Holder must ensure that the authorized research has been reviewed and approved by the appropriate Institutional Animal Care and Use Committees (IACUC) in accordance with Animal Welfare Act regulations, and that the IACUC protocols are consistent with the research methods approved by this permit.
 - b. The animals undergoing research must be closely monitored to determine if research activities are having an adverse effect on the individuals. The attending veterinarian must be available for emergencies, illnesses, and for treating any health problems associated with the research procedures.

- c. The Researchers must halt and re-evaluate research should the animals exhibit signs of stress, pain, or suffering resulting from the authorized activities. If the animals are showing adverse reactions or are at risk of injury during the research, Researchers must immediately discontinue the activities.
 - d. For voluntary research procedures, the animals must be able to exit the research session at any time.
 - e. All research activities must be conducted in a humane manner (i.e., that which involves the least possible degree of pain and suffering), and, to the maximum extent possible, concurrent with the routine care and husbandry of the animals.
 - f. For masking hearing studies: Researchers must test the subject animals' hearing as soon as possible after each masking session for full recovery to ensure temporary threshold shift (TTS) has not occurred. If at any point TTS occurs and full recovery is not observed, researchers must discontinue further exposure until recovery to pre-testing levels is observed.
 - g. For blood sampling: Only an attending veterinarian or experienced, qualified personnel trained by and with appropriate oversight from an attending veterinarian may conduct blood sampling. Researchers must use sterile needles for blood sampling and minimize the number of needle insertions per blood collection site (e.g., no more than 2 insertions per site).
6. Personnel must comply with the following conditions related to methods of importation, supervision, care, and transportation:
- a. The marine mammals imported under the authority of this permit must be imported in a humane manner and in compliance with the MMPA and any applicable foreign law.
 - b. The importation of marine mammals is subject to the provisions of 50 CFR Parts 14 and 23 (i.e., the import of marine mammals must be conducted in accordance with the U.S. Fish and Wildlife Service regulations for the importation, exportation, and transport of wildlife and no marine mammals may be imported without the required CITES [Convention on the International Trade in Endangered Species of Wild Fauna and Flora] permits).

- c. The Permit Holder must transport and maintain marine mammals used in captive research in U.S. Department of Agriculture, Animal and Plant Health Inspection Service (APHIS) registered research facilities and/or licensed public display facilities; and, marine mammals must be held and transported in compliance with the provisions of the Animal Welfare Act and its implementing regulations “Specifications for the Humane Handling, Care, Treatment, and Transportation of Marine Mammals” (9 CFR Part 3, Subpart E).
 - i. A current copy of the APHIS research registration and/or license for any facility to be used must be attached to this permit. All medical records must accompany the animals to the destination facility.
 - ii. Prior to transport, Mystic Aquarium must have the travel plan documented at the receiving facility, and the animals must be accompanied by a health certificate signed by the attending veterinarian stating that each animal was examined within the prior 10 days and found to be in acceptable health for transport.
- d. The Permit Holder cannot import any marine mammal that is pregnant or lactating at the time of import.
- e. This permit does not authorize breeding of the five subject beluga whales. Prior to importation, the Permit Holder must submit a plan to provide safe and effective contraception or other means to prevent breeding of the five subject beluga whales, for approval by the Office Director. Any contraceptive plan must be developed in consultation with the licensed attending veterinarian(s) and other specialists experienced in beluga whale reproductive husbandry.
- f. To the maximum extent possible, the beluga whales must be trained for voluntary participation in husbandry and medical procedures.
- g. Any public display of the beluga whales authorized by this permit must be incidental to and not interfere with the research. Such incidental public display may only occur as part of an educational program. A portion of this program must describe the research activities; identify the status of the species and its endangered and depleted stocks; and, provide information regarding their natural history, distribution, population status, and threats.
- h. The beluga whales authorized by this permit must not be trained for performance or included in any interactive program with the public.

Public demonstrations in which the whales perform trained husbandry, medical, research-related, and natural behaviors are authorized.

- i. The beluga whales authorized by this permit may not be released into the wild unless such a release has been authorized under an amendment to this permit or a separate scientific research or enhancement permit issued for that purpose.
- j. Disposition: The Permit Holder shall not transport, transfer, export or otherwise dispose of the marine mammals authorized by this permit except with the approval of the Director, Office of Protected Resources, and subject to such Terms and Conditions as the Director may prescribe⁴.
- k. In addition to requirements of Condition A.2, in the event a beluga whale authorized by this permit dies, the Permit Holder must:
 - i. Contact the NMFS Marine Mammal Health and Stranding Response Program (nmfs.mmhsrp.hq@noaa.gov) and follow any recommended necropsy and sampling protocols.
 - ii. Within two weeks, submit an incident report as described in Condition E.2. Gross necropsy findings should be included as part of an incident report. Final necropsy results (e.g., gross findings, histology, and other analyses) must be submitted when complete.
- l. In addition to requirements of Condition A.2, the Permit Holder must, within two weeks, submit an incident report as described below and in Condition E.2:
 - i. In the event that a female becomes pregnant or the male impregnates any female (not just one of the imported females). This report must identify the whales by NOAA ID and when and how mating proceeded (if observed). In addition, the report must include information on the exact methods used to prevent conception, why the particular methods are hypothesized to have failed, what measures will be taken to prevent future pregnancies, and the plan for pre-natal care of the dam and for birth; and
 - ii. Again when the pregnancy ends, either when the progeny is born, delivered stillborn, or miscarried. This report must include a summary of how the birth proceeded, the status of the calf, and

⁴This includes transport of any of the imported whales to Georgia Aquarium and disposition of the whales at the termination of research.

current management of the dam and calf. The disposition of live progeny shall be determined by the Office Director.

7. The Permit Holder must comply with the following conditions, and the regulations at 50 CFR 216.37, for biological samples⁵ acquired⁶ or possessed under authority of this permit.
 - a. The Permit Holder is ultimately responsible for compliance with this permit and applicable regulations related to the samples unless the samples are permanently transferred per Conditions at B.7.d (below).
 - b. Samples must be maintained according to accepted curatorial standards and must be labeled with a unique identifier (e.g., NOAA ID number) that is connected to on-site records with information identifying the following:
 - i. Animal ID, species, age, and sex;
 - ii. Date of collection;
 - iii. Type of sample (e.g., blood, saliva);
 - iv. Origin (i.e., where collected); and
 - v. Legal authorization for original sample collection.
 - c. For temporary transfers:
 - i. The Permit Holder may transfer samples to Authorized Recipients (ARs) identified in Appendix 2 and may designate additional ARs for analysis and curation of samples related to the permit objectives. The Permit Holder must maintain a record of the transfer including the following:
 1. Name and affiliation of the AR;
 2. Address of the AR;
 3. Types of samples sent (NOAA ID, species, tissue type);

⁵Biological samples include, but are not limited to: carcasses (whole or parts); and any tissues, fluids, or other specimens from live or dead protected species; except feces, urine, and spew collected from the water or ground.

⁶Authorized methods of sample acquisition are specified in Appendix 1.

4. Type of analysis; and
 5. Whether samples will be consumed in analysis, returned to the Permit Holder, curated, or destroyed.
- ii. The Permit Holder must provide a written copy of the AR designation and the permit (per Condition D.3) when transferring samples to the AR.
 - iii. Samples remain in the legal custody of the Permit Holder while in the possession of ARs. The Permit Holder remains responsible for the samples, including any reporting requirements.
- d. If the Permit Holder wishes to permanently transfer marine mammal samples (i.e., relinquish custody), recipients must have separate authorization pursuant to 50 CFR 216.37 (e.g., a permit or regional authorization letter) prior to transfer.
 - e. Samples cannot be bought or sold.
 - f. After meeting the permitted objectives, the Permit Holder may continue to possess and use biological samples acquired under this permit, including after permit expiration, without additional written authorization. The samples must be maintained as specified in the permit and a copy of the permit must be kept with the samples forever.

C. Qualifications, Responsibilities, and Designation of Personnel

1. At the discretion of the Permit Holder, the following Researchers may participate in the conduct of the permitted activities in accordance with their qualifications and the limitations specified herein:
 - a. Principal Investigator – Tracy Romano, Ph.D.
 - b. Co-Investigators – See Appendix 2 for list of names and corresponding activities.
 - c. Research Assistants – Personnel identified by the Permit Holder or Principal Investigator and qualified to act pursuant to Conditions C.2, C.3, and C.4 of this permit.

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2. Individuals conducting permitted activities must possess qualifications commensurate with their roles and responsibilities. The roles and responsibilities of personnel operating under this permit are as follows:
 - a. The Permit Holder is ultimately responsible for activities of individuals operating under the authority of this permit. Where the Permit Holder is an institution/facility, the Responsible Party is the person at the institution/facility who is responsible for the supervision of the Principal Investigator.
 - b. The Principal Investigator (PI) is the individual primarily responsible for the taking, import, export and related activities conducted under the permit. This includes coordination of activities of all personnel working under the permit. The PI must be on site during activities conducted under this permit unless a Co-Investigator named in Condition C.1 is present to act in place of the PI.
 - c. Co-Investigators (CIs) are individuals who are qualified to conduct activities authorized by the permit, for the objectives described in the application, without the on-site supervision of the PI. CIs assume the role and responsibility of the PI in the PI's absence.
 - d. Research Assistants (RAs) are individuals who work under the direct and on-site supervision of the PI or a CI. RAs cannot conduct permitted activities in the absence of the PI or a CI.
3. Personnel involved in permitted activities must be reasonable in number and essential to conduct of the permitted activities. Essential personnel are limited to:
 - a. Individuals who perform a function directly supportive of and necessary to the permitted activity (including operation of vessels or aircraft essential to conduct of the activity),
 - b. Individuals included as backup for those personnel essential to the conduct of the permitted activity, and
 - c. Individuals included for training purposes.
4. Persons who require state or Federal licenses or authorizations (e.g., veterinarians) to conduct activities under the permit must be duly licensed/authorized and follow all applicable requirements when undertaking such activities.

5. The Permit Holder cannot require or receive direct or indirect compensation from a person approved to act as PI, CI, or RA under this permit in return for requesting such approval from the Permits Division.
6. The Permit Holder or PI may add CIs by submitting a request to the Chief, Permits Division that includes a description of the individual's qualifications to conduct and oversee the activities authorized under this permit. If a CI will only be responsible for a subset of permitted activities, the request must also specify the activities for which they would provide oversight.
7. The Responsible Party may request a change of PI by submitting a request to the Chief, Permits Division that includes a description of the individual's qualifications to conduct and oversee the activities authorized under this permit.
8. Submit requests to add CIs or change the PI by one of the following:
 - a. The APPS system at <https://apps.nmfs.noaa.gov>;
 - b. An email attachment to the permit analyst for this permit; or
 - c. A hard copy mailed or faxed to the Chief, Permits Division, Office of Protected Resources, NMFS, 1315 East-West Highway, Room 13705, Silver Spring, MD 20910; phone (301)427-8401; fax (301)713-0376.

D. Possession of Permit

1. This permit cannot be transferred or assigned to any other person.
2. The Permit Holder and persons operating under the authority of this permit must possess a copy of this permit when:
 - a. Engaged in a permitted activity.
 - b. A protected species is in transit incidental to a permitted activity.
 - c. A protected species imported or taken under the permit is in the possession of such persons.
3. A duplicate copy of this permit must accompany or be attached to the container, package, enclosure, or other means of containment in which a protected species or protected species part is placed for purposes of storage, transit, supervision or care.



E. Reporting

1. The Permit Holder must submit incident and annual reports containing the information and in the format specified by the Permits Division.
 - a. Reports must be submitted to the Permits Division by one of the following:
 - i. The APPS system at <https://apps.nmfs.noaa.gov>;
 - ii. An email attachment to the permit analyst for this permit; or
 - iii. A hard copy mailed or faxed to the Chief, Permits Division (see Condition C.8).
 - b. You must contact your permit analyst for a reporting form if you do not submit reports through the APPS.
 - c. Additional information on reports can be found at <https://www.fisheries.noaa.gov/national/reports-protected-species-permits>.
2. Incident Reporting
 - a. If a serious injury or mortality occurs, authorized takes have been exceeded, upon diagnosis of an unauthorized pregnancy, or following the end of pregnancy (i.e., birth, stillbirth, or miscarriage of progeny), as specified in Condition A.2, the Permit Holder must:
 - i. Contact the Permits Division by phone (301-427-8401) as soon as possible, but no later than two business days of the incident;
 - ii. Submit a written report within two weeks of the incident as specified below; and
 - iii. Receive approval from the Permits Division before resuming research. The Permits Division may grant authorization to resume permitted activities based on review of the incident report and in consideration of the Terms and Conditions of this permit.
 - b. The incident report must include 1) a complete description of the events, and 2) identification of steps that will be taken to reduce the potential for additional incidents (see Conditions B.6.k for deaths, B.6.l.i for

unauthorized pregnancy, and Condition B.6.l.ii for a birth, stillbirth, or miscarriage).

3. Annual reports describing activities conducted during the previous permit year (from September 1 to August 31) must:
 - a. Be submitted by November 30 each year for which the permit is valid, and
 - b. Include a tabular accounting of takes and a narrative description of activities and their effects.
4. A joint annual/final report including a discussion of whether the objectives were achieved must be submitted by November 30, 2025, or, if the research concludes prior to permit expiration, within 90 days of completion of the research.
5. Research results must be published or otherwise made available to the scientific community in a reasonable period of time. Copies of technical reports, conference abstracts, papers, or publications resulting from permitted research must be submitted the Permits Division upon request.

F. Notification and Coordination

1. Inventory Reporting:
 - a. Inventory reports and notifications must be submitted to the Permits Division by one of the following:
 - i. Email (NIMM.Inventory@noaa.gov); or
 - ii. Mail (NMFS Permits and Conservation Division (F/PR1), 1315 East-West Hwy, Silver Spring, MD 20910).
 - b. Upon completion of the importation from Canada, Mystic Aquarium must complete the attached Marine Mammal Data Sheets (MMDS) for the subject animals and submit as specified above in Condition F.1.
 - c. In the event of a death of a beluga whale held under the authority of this permit, the Permit Holder must submit an updated MMDS within 30 days. A copy of the necropsy report, histopathology, and any other relevant reports must be submitted when available (see Conditions B.6.k and E.2).
 - d. If an unauthorized pregnancy results in a live birth, the Permit Holder must submit an MMDS for the calf concurrently with the incident report

(see Condition B.6.l.ii and E.2). A blank MMDS can be obtained at <https://www.fisheries.noaa.gov/webdam/download/70834590>.

- e. The Permit Holder must provide written notification of any authorized transfers or transports (pursuant to Condition B.6.j), in the requested format (<https://www.fisheries.noaa.gov/webdam/download/70834588>), at least 15 days prior to the authorized transport/transfer. Authorized transfers/ transports must be verified within 30 days by submitting an updated MMDS.
 - f. The Permit Holder must review and verify the accuracy of its Marine Mammal Inventory upon request.
2. Researchers must coordinate permitted activities with activities of other Permit Holders conducting the same or similar research on beluga whales. Contact the Permits Division to obtain contact information for coordinating with other Permit Holders.

G. Observers and Inspections

- I. NMFS may review activities conducted under this permit. At the request of NMFS, the Permit Holder must cooperate with any such review by:
 - a. Allowing an employee of NOAA or other person designated by the Director, NMFS Office of Protected Resources to observe and document permitted activities; and
 - b. Providing all documents or other information relating to the permitted activities.

H. Modification, Suspension, and Revocation

1. Permits are subject to suspension, revocation, modification, and denial in accordance with the provisions of subpart D [Permit Sanctions and Denials] of 15 CFR Part 904.
2. The Director, NMFS Office of Protected Resources may modify, suspend, or revoke this permit in whole or in part:
 - a. In order to make the permit consistent with a change made after the date of permit issuance with respect to applicable regulations prescribed under Section 103 of the MMPA;

- b. In a case in which a violation of the terms and conditions of the permit is found;
 - c. In response to a written request⁷ from the Permit Holder; and
 - d. If NMFS determines that the application or other information pertaining to the permitted activities (including, but not limited to, reports pursuant to Section E of this permit and information provided to NOAA personnel pursuant to Section G of this permit) includes false information.
3. Issuance of this permit does not guarantee or imply that NMFS will issue or approve subsequent permits or amendments for the same or similar activities requested by the Permit Holder, including those of a continuing nature.

I. Penalties and Permit Sanctions

- 1. A person who violates a provision of this permit, the MMPA, or the regulations at 50 CFR 216 is subject to civil and criminal penalties, permit sanctions, and forfeiture as authorized under the MMPA and 15 CFR Part 904.
- 2. The NMFS Office of Protected Resources shall be the sole arbiter of whether a given activity is within the scope and bounds of the authorization granted in this permit.
 - a. The Permit Holder must contact the Permits Division for verification before conducting the activity if they are unsure whether an activity is within the scope of the permit.
 - b. Failure to verify, where the NMFS Office of Protected Resources subsequently determines that an activity was outside the scope of the permit, may be used as evidence of a violation of the permit, the MMPA, and applicable regulations in any enforcement actions.

J. Acceptance of Permit

- 1. In signing this permit, the Permit Holder:
 - a. Agrees to abide by all terms and conditions set forth in the permit, all restrictions and relevant regulations under 50 CFR Part 216 and all restrictions and requirements under the MMPA;

⁷The Permit Holder may request changes to the permit related to: the objectives or purposes of the permitted activities; the species or number of animals taken; and the location, time, or manner of taking or importing protected species. Such requests must be submitted in writing to the Permits Division in the format specified in the application instructions.

- b. Acknowledges that the authority to conduct certain activities specified in the permit is conditional and subject to authorization by the Office Director; and
- c. Acknowledges that this permit does not relieve the Permit Holder of the responsibility to obtain any other permits, or comply with any other Federal, State, local, or international laws or regulations.

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Director, Office of Protected Resources
National Marine Fisheries Service

Date Issued



Stephen M. Coan, Ph.D.
President and CEO, Mystic Aquarium
Responsible Party

12/01/2020

Date Effective



Appendix 1: Tables Specifying the Kinds of Protected Species, Locations, and Manner of Taking

Table 1. Importation and captive maintenance of five beluga whales for over the duration of the permit. Importation from Marineland of Canada, Inc. (Niagara Falls, Ontario, Canada) to Mystic Aquarium (Mystic, Connecticut) pursuant to MMPA Section 104 for scientific research (see Table 2). Captive maintenance pursuant to MMPA Section 112(c) (captive maintenance) and Section 104 (scientific research) at Mystic Aquarium. Transport from Mystic Aquarium to Georgia Aquarium (Atlanta, Georgia) under the same authorities for captive maintenance and scientific research if approved by the Office Director per Condition B.6.j. Captive maintenance includes husbandry, health assessments, and medical sampling; treatments as warranted by the attending veterinarian¹; and, humane euthanasia if warranted for medical reasons, and necropsy. Beluga whales may be displayed to the public incidental to research.

Species	Stock ^{2,3}	Origin	Current Life Stage	Sex	No. Animals	Activities Procedures	Details
Whale, beluga	Offspring of dam Aurora (wild capture, Sea of Okhotsk, Russia); sire Kodiak (wild capture, Sea of Okhotsk, Russia)	Captive born	Juvenile; Born 07/20/14	Female	1	Import; Captive, maintain permanent; Transport	KHARABALI; NOA0010671
Whale, beluga	Offspring of dam Oceanna (wild capture, Sea of Okhotsk, Russia); sire Andre (wild capture, Barents or White Sea, Russia)	Captive born	Adult; Born 07/13/09	Female	1	Import; Captive, maintain permanent; Transport	MIRA; NOA0010672
Whale, beluga	Offspring of dam Isis (wild capture, Sea of Okhotsk, Russia); sire definitively unknown, but thought to be Andre (wild capture, Barents or White Sea, Russia)	Captive born	Adult; Born 6/6/10	Female	1	Import; Captive, maintain permanent; Transport	QILA; NOA0010673
Whale, beluga	Offspring of dam Sierra (wild capture, Sea of Okhotsk, Russia); sire Andre (wild capture, Barents or White Sea, Russia)	Captive born	Juvenile; Born 6/11/12	Male	1	Import; Captive, maintain permanent; Transport	FRANKIE; NOA0010674
Whale, beluga	Offspring of dam Kelowna (wild capture, Sea of Okhotsk, Russia); sire Andre (wild capture, Barents or White Sea, Russia)	Captive born	Juvenile; Born 07/23/15	Female	1	Import; Captive, maintain permanent; Transport	HAVANA; NOA0010675

¹This includes reproductive monitoring (described in Study 7 in the permit application and including behavioral observations [video monitoring], biological sampling [blood, breath, and vaginal swabs], and ultrasound) and contraception or other means (e.g., physical separation) to prevent breeding.

²NMFS considers the parents captured in the Sea of Okhotsk to be from the depleted Sakhalin Bay-Nikolaya Bay-Amur River Stock, and Kharabali is thus considered to be a member of that depleted stock. For the purposes of this permit, NMFS is treating the whales with mixed-stock parentage as members of the depleted stock.

³The permit application stated that Andre was collected from the Barents Sea. However, there is evidence suggesting Andre may have been collected from the White Sea and that the Barents and White Sea populations may be of one stock.

Table 2. Authorized annual research takes at Mystic Aquarium (or Georgia Aquarium if approved by the Office Director per Condition B.6.j) for the five beluga whales identified in Table 1. No unintentional serious injury or mortality caused by the research activities is authorized.

Line	Species	Life Stage	Sex	No. Animals	Takes Per Animal ¹¹	Procedure	Details
1	Whale, beluga	Adult and Juvenile	Male and Female	5	83	Sample, blood	<p>Routine blood samples: 2x month x 12 months/per year = 24 samples/whale/year (24 takes/whale/year) for use in characterization of the nervous and immune systems, reagent and assay development (Study 1); to help validate measurements from other tissue matrices (Study 2, Study 5); and for in vitro diving studies (Study 5)</p> <p>Blood samples for diurnal variation assessment (Study 1): 4 time points per day x 4 days/per year (one in each season) = 16 samples/whale/year (4 takes/whale/year)</p> <p>Blood samples before and after transport (Study 1): 4 time points (1 baseline, 1 upon arrival, 2 post-transport - under behavioral control) = 4 samples/whale/transport (3 takes/whale/year)</p> <p>Blood samples for OWEs associated with being lifted out of the water via a hydraulic lift for weights or veterinary examination (Study 1): 5 time points x 4 OWE (one in each season) = 20 samples/whale/year (8 takes/whale/year)</p> <p>Blood samples for novel training exercises and/or novel social interactions (Study 1): 2 samples (1 before and after training session) x 12 sessions (6 control and 6 experimental) x 3 novel training exercises = 72 samples/whale/year (36 takes/whale/year)</p> <p>Blood samples for diving physiology (Study 5): 2 dive activities (1 stationary dive, 1 active dive) x 2 durations x 2 blood samples (1 before and after the dive) x 2 repetitions = 16 samples/whale/year (8 takes/whale/year)</p>

Line	Species	Life Stage	Sex	No. Animals	Takes Per Animal ⁹	Procedure	Details
2	Whale, beluga	Adult and Juvenile	Male and Female	5	222	Sample, exhaled air (i.e., breath)	<p>Breath samples for gene expression, immune components, hormone measurements (Study 2): 2x per week x 50 weeks/year x 3 plates per session = 300 samples/whale/year (100 takes/whale/year)</p> <p>Breath samples for diurnal variation assessment (Study 2): 4 time points per day x 4 days/per year (one in each season) = 16 samples/whale/year (4 takes/whale/year)</p> <p>Breath samples before, during and after transport (Study 2): 13 time points (1 baseline, 2, 4, 6, 8, 10 hour during transport, 1 upon arrival, 1, 2, 4, 6, 12, 24 hour post transport = 13 samples /whale/year (3 takes/whale/year)</p> <p>Breath samples for out of water events associated with being lifted out of the water via a hydraulic lift for weights or veterinary examination (Study 2): 9 time points x 4 OWE (one in each season) = 36 samples/whale/year (12 takes/whale/year)</p> <p>Breath samples for novel training exercises/interactions (Study 2): 2 samples (1 before and after training session) x 12 sessions (6 control and 6 experimental) x 3 novel training exercises/interactions = 72 samples/whale/year (36 takes/whale/year)</p> <p>Breath samples for transition to collect breath on wild whales (Study 2): 8 samples x 3 replicates = 48 samples (6 takes) plus 6 breaths x 2 methods = 12 samples (12 takes) for a total of 60 sample/whale/year (18 takes/whale/year)</p> <p>Breath samples for diving physiology (Study 5): 2 dive activities (1 stationary dive, 1 active dive) x 2 durations x 3 breath samples x 2 repetitions = 24 breath samples /whale/year (8 takes/whale/year)</p> <p>Breath samples for hearing and physiological response to anthropogenic sound (Study 3): Baseline = 5 sessions year (1 breath sample before and after) = 10 breath samples/whale/year (5 takes/whale/year)</p> <p>Breath samples for masked hearing sessions (Study 3): up to 3 sessions per day, 6 days per week, 2 weeks per month, for 3 months per year = 108 sessions/year x 2 breath samples (1 before and after) = 216 breath samples/whale/year (36 takes/whale/year)</p>

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Line	Species	Life Stage	Sex	No. Animals	Takes Per Animal ⁹	Procedure	Details
3	Whale, beluga	Adult and Juvenile	Male and Female	5	155	Sample, saliva	<p>Other = Saliva samples for development, validation, and measurement of hormones (Study 2): 2x per week x 50 weeks/year = 100 samples/whale/year (100 takes/whale/year)</p> <p>Saliva samples for diurnal variation assessment (Study 2): 4 time points per day x 4 days/per year (one in each season) = 16 samples/whale/year (4 takes/whale/year)</p> <p>Saliva samples before and after transport (Study 2): 8 time points (1 baseline, 1 upon arrival, 1, 2, 4, 6, 12, 24 hour post transport = 8 samples/whale/ transport (3 takes/whale/year)</p> <p>Saliva samples for out of water events associated with weights or veterinary examinations: 8 time points x 4 OWE (one in each season) (Study 2) = 32 samples/whale/year (12 takes/whale/year)</p> <p>Saliva samples for novel training exercises and/or social interactions (Study 2): 2 samples (1 before and after training session) x 12 sessions (6 control and 6 experimental) x 3 novel training exercises/interactions = 72 samples/whale/ year (36 takes/whale/year)</p>
4	Whale, beluga	Adult and Juvenile	Male and Female	5	115	Sample, feces	<p>Fecal samples for development, validation, and measurement of hormones (Studies 2 and 7): 2x per week x 50 weeks = 100 samples/year (100 takes/whale/year)</p> <p>Fecal samples before and after transport (Study 2): 6 time points (1 baseline, 6, 12, 24, 36,48 hours post transport = 6 samples/whale/ transport (3 takes/whale/year)</p> <p>Fecal samples for out of water events associated with weights or veterinary examinations: 5 time points x 4 OWE (one in each season) = 20 samples/whale/ year (12 takes/whale/year)</p>
5	Whale, beluga	Adult and Juvenile	Male and Female	5	200	Sample, skin	<p>Skin scrapes for development, validation, and measurement of gene expression (Study 2): 4x per week x 50 weeks = 200 samples/year (200 takes/whale/year)</p>
6	Whale, beluga	Adult and Juvenile	Male and Female	5	100	Sample, swab	<p>Skin swabs for microbiome (Study 6): 2x per week x 50 weeks = 100 samples/whale/year (100 takes/whale/year)</p>
7	Whale, beluga	Adult and Juvenile	Male and Female	5	100	Sample, swab	<p>Blowhole swabs for microbiome (Study 6): 2x per week x 50 weeks = 100 samples/whale/year (100 takes/whale/year)</p>
8	Whale, beluga	Adult and Juvenile	Male and Female	5	100	Sample, swab	<p>Anal swabs for microbiome (Study 6): 2x per week x 50 weeks = 100 samples/whale/year (100 takes/whale/year)</p>



Line	Species	Life Stage	Sex	No. Animals	Takes Per Animal ⁹	Procedure	Details
9	Whale, beluga	Adult and Juvenile	Male and Female	5	100	Sample, swab	Oral swabs for microbiome (Study 6): 2x per week x 50 weeks = 100 samples/whale/year (100 takes/whale/year)
10	Whale, beluga	Adult and Juvenile	Female	4	100	Sample, swab	Vaginal swabs for microbiome (Study 6): 2x per week x 50 weeks = 100 samples/female whale/year (100 takes/whale/year)
11	Whale, beluga	Adult and Juvenile	Male and Female	5	360	Photo-grammetry	Photogrammetry (Study 4) 30 photographs/month x 12 months/year = 360 takes/whale/year
12	Whale, beluga	Adult and Juvenile	Male and Female	5	12	Measure	Morphometric measurements (Study 4): 1 set of measurements/month x 12 months = 12 takes/whale/year
13	Whale, beluga	Adult and Juvenile	Male and Female	5	4	Weigh	Weights (Study 4): 4 weights per year = 4 takes/whale/year (Study 4)
14	Whale, beluga	Adult and Juvenile	Male and Female	5	150	Instrument, suction-cup tag	Testing suction-cups for animal borne imaging (ABI) systems and tags (Study 8): 3 sessions per week x 50 weeks = 150 takes/ whale/year
15	Whale, beluga	Adult and Juvenile	Male and Female	5	41	Auditory brainstem response test	Hearing and physiological response to anthropogenic sound (Study 3): Baseline hearing sessions: 5 sessions/whale/year (5 takes/whale/year) Masked hearing sessions: up to 3 sessions per day, 6 days per week, 2 weeks per month, for 3 months per year = 108 sessions/whale/year (36 takes/whale/year).

¹¹All research procedures conducted in a single day for a given row are counted as 1 take per day per animal.

Appendix 2: NMFS-Approved Personnel for Permit No. 22629.

Table 1. The following individuals are approved personnel pursuant to the terms and conditions under Section C (Qualifications, Responsibilities, and Designation of Personnel) of this permit.

Name/Affiliation	Role	Authorized Activities
Tracy Romano, Ph.D., Mystic Aquarium, Mystic, CT	Principal Investigator and Authorized Recipient	Supervise and perform all activities under the permit
Allison D. Tuttle, DVM, Dipl. ACZM, Mystic Aquarium, Mystic, CT	Co-investigator and Authorized Recipient	Oversee the beluga whale husbandry and veterinary program at Mystic Aquarium; oversee beluga whale health and sampling procedures for all activities.
Jennifer Flower, DVM, MS, Dipl. ACZM, Mystic Aquarium, Mystic, CT	Co-investigator and Authorized Recipient	Oversee beluga whale health and sampling procedures for all activities
Laura Thompson, Ph.D., Mystic Aquarium, Mystic, CT	Co-investigator and Authorized Recipient	Conduct breath and swab sampling and analyze samples
Ebru Unal, Ph.D., Mystic Aquarium, Mystic, CT	Co-investigator and Authorized Recipient	Conduct breath and swab sampling and analyze samples
Maureen Driscoll, Ph.D., Mystic Aquarium, Mystic, CT	Co-investigator and Authorized Recipient	Conduct breath and swab sampling and analyze samples
Manuel Castellote, Ph.D., University of Washington and Alaska Fisheries Science Center, NOAA Fisheries, Seattle, WA	Co-investigator	Conduct auditory evoked potentials (AEPs)/hearing studies
Aran Mooney, Ph.D., Woods Hole Oceanographic Institution, Woods Hole, MA	Co-investigator	Conduct AEPs/hearing studies
Greg Marshall, Marshall Innovation, Washington DC	Co-investigator	Conduct Critter Cam studies (external camera attachment via suction cups)
Justin Richard, Ph.D., University of Rhode Island, Kingston, RI	Authorized Recipient	Analyze breath samples
Dennis Christian, Georgia Aquarium, Atlanta, GA	Co-investigator	Oversee beluga whale husbandry and veterinary program at Georgia Aquarium (if whales are moved there, per Condition B.6.j)

