



## Authorizations and Permits for Protected Species (APPS)

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**File Number: 22629 -- Report #4**

### **Applicant/Holder**

**Affiliation:** Sea Research Foundation, Inc. dba Mystic Aquarium

**City,State,Zip:** Mystic, CT 06355

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### **Report & Project Information**

**Report Number:** 4 (Annual Report)

**Report Period:** 09/01/2022 to 08/31/2023

**Report Status:** Submitted

**File Number:** 22629

**Project Title:** Health-related Research on beluga whales conducted at Mystic Aquarium to contribute knowledge and inform management and recovery of wild beluga populations...[see attached application for full title]

**Project Status:** New

**Previous Federal or State Permit/Authorization:** Scientific Research/Enhancement Permit #42-1908 (Expired 1/31/2014)

**Permit/Authorization Requested:** • MMPA Research/Enhancement permit - Issued

**Where will activities occur?** US Locations including offshore waters

**Research Timeframe:** **Start:** 08/27/2020 **End:** 08/31/2025

**Sampling Season/Project Duration:** Import is proposed to occur in January 2020. This permit is for continuous marine mammal health related research conducted on a daily basis at Mystic Aquarium. Research will occur continuously; there is no specific season or duration of the research. To gain the maximum knowledge that can be applied for beluga conservation, we are requesting the 5-year maximum for the permit. Training for research activities is already part of the Mystic Aquarium husbandry protocol and will occur on a daily basis during regular scheduled training sessions.

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## Location/Take Information

### Location

**\*\* RESEARCH WAS NOT IMPLEMENTED AT THIS LOCATION. \*\***

**Research Area:** Captivity

**Location Description:** Authorized annual research takes at Mystic Aquarium (or Georgia Aquarium) for the five beluga whales identified in Appendix 1, Table. See the details column for more information.

### Take Information

\* **Line Number:** 1 **Version:** E  
**Version:** E  
**Species:** Whale, beluga  
**Listing Unit/Stock:** Sakhalin Bay-Nikolaya Bay-Amur River Stock  
**Production/Origin:** Captive  
**Life Stage:** Adult/ Juvenile  
**Sex:** Female  
**Take Action:** Captive animals (research, enhancement, public display)  
**Observe/Collect Method:**

Captive	Not Used
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**Expected Take:** 3  
**Actual Take:** N/A  
**Procedures:** Sample, blood  
**Transport:** N/A  
**Begin Date:** 09/01/2022  
**End Date:** 08/31/2023  
**Details:** Studies 1,2,5. See Appendix 1, Table 2 of permit for details. (No Work Done)

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\* **Line Number:** 2 **Version:** E  
**Version:** E  
**Species:** Whale, beluga  
**Listing Unit/Stock:** Sakhalin Bay-Nikolaya Bay-Amur River Stock  
**Production/Origin:** Captive  
**Life Stage:** Adult/ Juvenile  
**Sex:** Female  
**Take Action:** Captive animals (research, enhancement, public display)  
**Observe/Collect Method:**

Captive	Not Used
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**Expected Take:** 3  
**Actual Take:** N/A  
**Procedures:** Sample, exhaled air  
**Transport:** N/A  
**Begin Date:** 09/01/2022  
**End Date:** 08/31/2023

**Details:** Studies 2,3,5. See Appendix 1, Table 2 of permit for details. (No Work Done)

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\* **Line Number:** 3 **Version:** E  
**Version:** E  
**Species:** Whale, beluga  
**Listing Unit/Stock:** Sakhalin Bay-Nikolaya Bay-Amur River Stock  
**Production/Origin:** Captive  
**Life Stage:** Adult/ Juvenile  
**Sex:** Female  
**Take Action:** Captive animals (research, enhancement, public display)  
**Observe/Collect Method:**

Captive	Not Used
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**Expected Take:** 3  
**Actual Take:** N/A  
**Procedures:** Other  
**Transport:** N/A  
**Begin Date:** 09/01/2022  
**End Date:** 08/31/2023  
**Details:** Study 2. Other = Sample, saliva. See Appendix 1, Table 2 of permit for details. (No Work Done)

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\* **Line Number:** 4 **Version:** E  
**Version:** E  
**Species:** Whale, beluga  
**Listing Unit/Stock:** Sakhalin Bay-Nikolaya Bay-Amur River Stock  
**Production/Origin:** Captive  
**Life Stage:** Adult/ Juvenile  
**Sex:** Female  
**Take Action:** Captive animals (research, enhancement, public display)  
**Observe/Collect Method:**

Captive	Not Used
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**Expected Take:** 3  
**Actual Take:** N/A  
**Procedures:** Sample, fecal  
**Transport:** N/A  
**Begin Date:** 09/01/2022  
**End Date:** 08/31/2023  
**Details:** Study 2. See Appendix 1, Table 2 of permit for details. (No Work Done)

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\* **Line Number:** 5 **Version:** E  
**Version:** E  
**Species:** Whale, beluga  
**Listing Unit/Stock:** Sakhalin Bay-Nikolaya Bay-Amur River Stock  
**Production/Origin:** Captive  
**Life Stage:** Adult/ Juvenile

**Sex:** Female  
**Take Action:** Captive animals (research, enhancement, public display)  
**Observe/Collect Method:**  Captive  Not Used  
**Expected Take:** 3  
**Actual Take:** N/A  
**Procedures:** Other  
**Transport:** N/A  
**Begin Date:** 09/01/2022  
**End Date:** 08/31/2023

**Details:** Study 2. Other = Sample, skin. 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). (No Work Done)

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\* **Line Number:** 6 **Version:** E  
**Version:** E  
**Species:** Whale, beluga  
**Listing Unit/Stock:** Sakhalin Bay-Nikolaya Bay-Amur River Stock  
**Production/Origin:** Captive  
**Life Stage:** Adult/ Juvenile  
**Sex:** Female  
**Take Action:** Captive animals (research, enhancement, public display)  
**Observe/Collect Method:**  Captive  Not Used  
**Expected Take:** 3  
**Actual Take:** N/A  
**Procedures:** Other  
**Transport:** N/A  
**Begin Date:** 09/01/2022  
**End Date:** 08/31/2023

**Details:** Study 6. Other = Sample, swab. Skin swabs for microbiome: 2x per week x 50 weeks = 100 samples/whale/year (100 takes/whale/year). (No Work Done)

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\* **Line Number:** 7 **Version:** E  
**Version:** E  
**Species:** Whale, beluga  
**Listing Unit/Stock:** Sakhalin Bay-Nikolaya Bay-Amur River Stock  
**Production/Origin:** Captive  
**Life Stage:** Adult/ Juvenile  
**Sex:** Female  
**Take Action:** Captive animals (research, enhancement, public display)  
**Observe/Collect Method:**  Captive  Not Used  
**Expected Take:** 3  
**Actual Take:** N/A  
**Procedures:** Sample, blowhole swab

**Transport:** N/A  
**Begin Date:** 09/01/2022  
**End Date:** 08/31/2023  
**Details:** Study 6. Blowhole swabs for microbiome: 2x per week x 50 weeks = 100 samples/whale/year (100 takes/whale/year). (No Work Done)

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\* **Line Number:** 8 **Version:** E  
**Version:** E  
**Species:** Whale, beluga  
**Listing Unit/Stock:** Sakhalin Bay-Nikolaya Bay-Amur River Stock  
**Production/Origin:** Captive  
**Life Stage:** Adult/ Juvenile  
**Sex:** Female  
**Take Action:** Captive animals (research, enhancement, public display)  
**Observe/Collect Method:**

Captive	Not Used
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**Expected Take:** 3  
**Actual Take:** N/A  
**Procedures:** Sample, anal swab  
**Transport:** N/A  
**Begin Date:** 09/01/2022  
**End Date:** 08/31/2023  
**Details:** Study 6. Anal swabs for microbiome: 2x per week x 50 weeks = 100 samples/whale/year (100 takes/whale/year). (No Work Done)

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\* **Line Number:** 9 **Version:** E  
**Version:** E  
**Species:** Whale, beluga  
**Listing Unit/Stock:** Sakhalin Bay-Nikolaya Bay-Amur River Stock  
**Production/Origin:** Captive  
**Life Stage:** Adult/ Juvenile  
**Sex:** Female  
**Take Action:** Captive animals (research, enhancement, public display)  
**Observe/Collect Method:**

Captive	Not Used
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**Expected Take:** 3  
**Actual Take:** N/A  
**Procedures:** Other  
**Transport:** N/A  
**Begin Date:** 09/01/2022  
**End Date:** 08/31/2023  
**Details:** Study 6. Other = Oral swab. Oral swabs for microbiome: 2x per week x 50 weeks = 100 samples/whale/year (100 takes/whale/year). (No Work Done)

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\* **Line Number:** 10 **Version:** E  
**Version:** E

**Species:** Whale, beluga  
**Listing Unit/Stock:** Sakhalin Bay-Nikolaya Bay-Amur River Stock  
**Production/Origin:** Captive  
**Life Stage:** Adult/ Juvenile  
**Sex:** Female  
**Take Action:** Captive animals (research, enhancement, public display)  
**Observe/Collect Method:**

Captive	Not Used
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**Expected Take:** 3  
**Actual Take:** N/A  
**Procedures:** Other  
**Transport:** N/A  
**Begin Date:** 09/01/2022  
**End Date:** 08/31/2023  
**Details:** Study 6. Other = vaginal swab. Vaginal swabs for microbiome: 2x per week x 50 weeks = 100 samples/female whale/year (100 takes/whale/year). (No Work Done)

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\* **Line Number:** 11 **Version:** E  
**Version:** E  
**Species:** Whale, beluga  
**Listing Unit/Stock:** Sakhalin Bay-Nikolaya Bay-Amur River Stock  
**Production/Origin:** Captive  
**Life Stage:** Adult/ Juvenile  
**Sex:** Female  
**Take Action:** Captive animals (research, enhancement, public display)  
**Observe/Collect Method:**

Captive	Not Used
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**Expected Take:** 3  
**Actual Take:** N/A  
**Procedures:** Photogrammetry  
**Transport:** N/A  
**Begin Date:** 09/01/2022  
**End Date:** 08/31/2023  
**Details:** Study 4. Photogrammetry: 30 photographs/month x 12 months/year = 360 takes/whale/year. (No Work Done)

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\* **Line Number:** 12 **Version:** E  
**Version:** E  
**Species:** Whale, beluga  
**Listing Unit/Stock:** Sakhalin Bay-Nikolaya Bay-Amur River Stock  
**Production/Origin:** Captive  
**Life Stage:** Adult/ Juvenile  
**Sex:** Female  
**Take Action:** Captive animals (research, enhancement, public display)  
**Observe/Collect Method:**

Captive	Not Used
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**Expected Take:** 3  
**Actual Take:** N/A  
**Procedures:** Measure  
**Transport:** N/A  
**Begin Date:** 09/01/2022  
**End Date:** 08/31/2023  
**Details:** Study 4. Morphometric measurements: 1 set of measurements/month x 12 months = 12 takes/whale/year. (No Work Done)

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\* **Line Number:** 13 **Version:** E  
**Version:** E  
**Species:** Whale, beluga  
**Listing Unit/Stock:** Sakhalin Bay-Nikolaya Bay-Amur River Stock  
**Production/Origin:** Captive  
**Life Stage:** Adult/ Juvenile  
**Sex:** Female  
**Take Action:** Captive animals (research, enhancement, public display)  
**Observe/Collect Method:**

Captive	Not Used
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**Expected Take:** 3  
**Actual Take:** N/A  
**Procedures:** Weigh  
**Transport:** N/A  
**Begin Date:** 09/01/2022  
**End Date:** 08/31/2023  
**Details:** Study 4. Weights: 4 weights per year = 4 takes/whale/year. (No Work Done)

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\* **Line Number:** 14 **Version:** E  
**Version:** E  
**Species:** Whale, beluga  
**Listing Unit/Stock:** Sakhalin Bay-Nikolaya Bay-Amur River Stock  
**Production/Origin:** Captive  
**Life Stage:** Adult/ Juvenile  
**Sex:** Female  
**Take Action:** Captive animals (research, enhancement, public display)  
**Observe/Collect Method:**

Captive	Not Used
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**Expected Take:** 3  
**Actual Take:** N/A  
**Procedures:** Instrument, suction-cup  
**Transport:** N/A  
**Begin Date:** 09/01/2022  
**End Date:** 08/31/2023  
**Details:** Study 8. Testing suction-cups for animal borne imaging (ABI) systems and tags: 3 sessions per week x 50 weeks = 150 takes/ whale/year. (No Work Done)

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\* **Line Number:** 15 **Version:** E  
**Version:** E  
**Species:** Whale, beluga  
**Listing Unit/Stock:** Sakhalin Bay-Nikolaya Bay-Amur River Stock  
**Production/Origin:** Captive  
**Life Stage:** Adult/ Juvenile  
**Sex:** Female  
**Take Action:** Captive animals (research, enhancement, public display)  
**Observe/Collect Method:**

Captive	Not Used
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**Expected Take:** 3  
**Actual Take:** N/A  
**Procedures:** Auditory brainstem response test  
**Transport:** N/A  
**Begin Date:** 09/01/2022  
**End Date:** 08/31/2023  
**Details:** Study 3. Hearing and physiological response to anthropogenic sound. See Appendix 1, Table 2 of the permit for details. (No Work Done)

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## Location

**Research Area:** Captivity

**Location Description:** Importation (from Marineland of Canada to Mystic Aquarium) and captive maintenance of five beluga whales for over the duration of the permit. See Appendix 1, Table 1 of the permit for details.

## Take Information

\* **Line Number:** 1 **Version:** A  
**Version:** A  
**Species:** Whale, beluga  
**Listing Unit/Stock:** Sakhalin Bay-Nikolaya Bay-Amur River Stock  
**Production/Origin:** Captive  
**Life Stage:** Adult/ Juvenile  
**Sex:** Female  
**Take Action:** Captive animals (research, enhancement, public display)  
**Observe/Collect Method:**

Captive	Used
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**Expected Take:** 1  
**Actual Take:** 1  
**Procedures:** Captive, maintain; Transport; Import  
**Transport:** N/A  
**Begin Date:** 09/01/2022  
**End Date:** 08/31/2023



**Details:** Jetta/NOA0010684. Captive-born at Marineland 7/17/14; Offspring of dam Skyla (wild capture, Sea of Okhotsk, Russia); potential sires: Andre (wild capture, Barents or White Sea, Russia), Kodiak, Orion, or Tuktoyaktuk (wild capture, Sea of Okhotsk, Russia).

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\* **Line Number:** 2 **Version:** E  
**Version:** E  
**Species:** Whale, beluga  
**Listing Unit/Stock:** Sakhalin Bay-Nikolaya Bay-Amur River Stock  
**Production/Origin:** Captive  
**Life Stage:** Juvenile  
**Sex:** Male  
**Take Action:** Captive animals (research, enhancement, public display)  
**Observe/Collect Method:**

Captive	Not Used
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**Expected Take:** 1  
**Actual Take:** N/A  
**Procedures:** Captive, maintain; Transport; Import  
**Transport:** N/A  
**Begin Date:** 09/01/2022  
**End Date:** 08/31/2023

**Details:** Havok/NOA0010685. Captive-born at Marineland 8/10/15; Offspring of dam Secord (wild capture, Sea of Okhotsk, Russia); potential sires: Tuktoyaktuk or Orion (wild capture, Sea of Okhotsk, Russia). Died at Mystic Aquarium 8/6/2021.

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\* **Line Number:** 3 **Version:** E  
**Version:** E  
**Species:** Whale, beluga  
**Listing Unit/Stock:** Sakhalin Bay-Nikolaya Bay-Amur River Stock  
**Production/Origin:** Captive  
**Life Stage:** Juvenile  
**Sex:** Female  
**Take Action:** Captive animals (research, enhancement, public display)  
**Observe/Collect Method:**

Captive	Not Used
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**Expected Take:** 1  
**Actual Take:** N/A  
**Procedures:** Captive, maintain; Transport; Import  
**Transport:** N/A  
**Begin Date:** 09/01/2022  
**End Date:** 08/31/2023

**Details:** Havana/NOA0010675. Captive-born at Marineland 7/23/15; Offspring of dam Kelowna (wild capture, Sea of Okhotsk, Russia); sire Andre (wild capture, Barents or White Sea, Russia). Died at Mystic Aquarium 2/11/2022.

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\* **Line Number:** 4  
**Version:**

**Species:** Whale, beluga  
**Listing Unit/Stock:** Sakhalin Bay-Nikolaya Bay-Amur River Stock  
**Production/Origin:** Captive  
**Life Stage:** Adult/ Juvenile  
**Sex:** Female  
**Take Action:** Captive animals (research, enhancement, public display)  
**Observe/Collect Method:**  Captive  Used  
**Expected Take:** 1  
**Actual Take:** 1  
**Procedures:** Captive, maintain; Transport; Import  
**Transport:** N/A  
**Begin Date:** 09/01/2022  
**End Date:** 08/31/2023  
**Details:** Kharabali/NOA0010671. Captive-born at Marineland 07/20/14; Offspring of dam Aurora (wild capture, Sea of Okhotsk, Russia); sire Kodiak (wild capture, Sea of Okhotsk, Russia).

\* **Line Number:** 5 **Version:** A  
**Version:** A  
**Species:** Whale, beluga  
**Listing Unit/Stock:** Sakhalin Bay-Nikolaya Bay-Amur River Stock  
**Production/Origin:** Captive  
**Life Stage:** Adult/ Juvenile  
**Sex:** Female  
**Take Action:** Captive animals (research, enhancement, public display)  
**Observe/Collect Method:**  Captive  Used  
**Expected Take:** 1  
**Actual Take:** 1  
**Procedures:** Captive, maintain; Transport; Import  
**Transport:** N/A  
**Begin Date:** 09/01/2022  
**End Date:** 08/31/2023  
**Details:** Sahara/NOA0010683. Captive-born at Marineland 07/23/14; Offspring of dam Acadia (wild capture, Sea of Okhotsk, Russia); potential sires: Andre (wild capture, Barents or White Sea, Russia), Kodiak or Orion (wild capture, Sea of Okhotsk, Russia).

## Transport Information

### 1. Mode(s) of transportation

Transport #1 (Importation from Marineland of Canada to Mystic Aquarium). See attached Final Application.

**The name of the transportation company, if applicable, and the qualifications of the common carrier to transport live animals**

See attached Final Application.

**Maximum length of time from capture to arrival at destination**

See attached Final Application.

**Description of the container (e.g., cage, tank) used to hold the animal during transit**

See attached Final Application.

**Any special care procedures (e.g., moisture, medicines, aeration) to be administered during transport**

See attached Final Application.

**A statement as to whether the animals will be accompanied by a veterinarian or some similarly qualified person**

See attached Final Application.

**Facility Information**

Mystic Aquarium,55 Coogan Blvd,Mystic,CT 06355

**How will the animals be contained at the destination facility?**

See attached Final Application.

**The final disposition of the animals**

See attached Final Application.

**2. Mode(s) of transportation**

Transport #2 (Potential transport from Mystic Aquarium to Georgia Aquarium). See attached Final Application.

**The name of the transportation company, if applicable, and the qualifications of the common carrier to transport live animals**

See attached Final Application.

**Maximum length of time from capture to arrival at destination**

See attached Final Application.

**Description of the container (e.g., cage, tank) used to hold the animal during transit**

See attached Final Application.

**Any special care procedures (e.g., moisture, medicines, aeration) to be administered during transport**

See attached Final Application.

**A statement as to whether the animals will be accompanied by a veterinarian or some similarly qualified person**

See attached Final Application.

**Facility Information**

Georgia Aquarium,225 Bakers Street NW,Atlanta,GA

**How will the animals be contained at the destination facility?**

See attached Final Application.

**The final disposition of the animals**

See attached Final Application.

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## Report Comments and Analysis

What progress did you make toward meeting your objectives this year?

For example:

- Summarize which permitted activities you did and did not do.
- Did you meet your sample sizes? Explain. For example, if you used less than 50% of your annual takes, describe why those takes were unused.
- Did you conduct repeated surveys in the same location? Elaborate.
- How many individuals did you intentionally take multiple times and by what methods?
- Were you able to have samples analyzed, did your tags successfully transmit data, etc.?
- Did you identify any new threats to the conservation or recovery of a species or DPS?
- Were you able to make progress in analyzing and/or publishing your data?
- List citations for any new reports, publications, and presentations. We may request electronic copies.

LOCATION 1 Research sampling has been on hold since August 6, 2021 per NOAA's directive.

LOCATION 2: Progress was made with training focused behaviors. These behaviors will facilitate the voluntary collection of future research samples when research is allowed to resume. All whales made progress with this training as summarized below:

Sahara NOA0010683

- Blood Collection – Layout duration up to 1 minute 45 seconds
- Breath – Multiple strong exhales in a row and allows for collection onto a plate
- Saliva – Allows for sample to be collected
- Microbiome – Fecal collection has been trained and will allow for rectal swab/collection. Has not started open blow hole sample collection until “breath” behavior is more solid
- Layouts/Stationing for tape measurements – Allows for one girth at pectoral flippers, training team to continue to work towards other measurements
- Layouts/stationing for suction cup electrodes/hearing tests – Performing layouts for up to 2 minutes in duration, will allow tactile on multiple locations on body to mimic suction cups.
- Layouts/stationing for dive studies – Working to solidify extended target training
- Photogrammetry Swim-bys (under camera) – Working towards dorsal swim-bys, participates in multiple layouts under photogrammetry camera monthly for body condition photos

Kharabali NOA0010671

- Blood Collection – Layout duration up to 2 minutes and 30 seconds
- Breath – Multiple strong exhales in a row and allows for collection onto a plate
- Saliva – Allows for sample to be collected
- Microbiome – Fecal collection has been trained and will allow for rectal swab/collection. Has not started open blow hole sample collection until “breath” behavior is more solid
- Layouts/Stationing for tape measurements – Allows for one girth at pectoral flippers, training team to continue to work towards other measurements
- Layouts/stationing for suction cup electrodes/hearing tests – Performing layouts for up to 2 minutes in duration, will allow tactile on multiple locations on body to mimic suction cups.
- Layouts/stationing for dive studies – Working to solidify extended target training
- Photogrammetry Swim-bys (under camera) – Working towards dorsal swim-bys,

participates in multiple layouts under photogrammetry camera monthly for body condition photos

Jetta NOA0010684

- Blood Collection – Layout duration up to 1 minute 30 seconds
  - Breath – Multiple exhales in a row and allows for collection onto a plate
  - Saliva – Allows for sample to be collected
  - Microbiome – Fecal collection in training. has not started open blow hole sample collection until “breath” behavior is more solid
  - Layouts/Stationing for tape measurements – Girth behavior in training.
  - Layouts/stationing for suction cup electrodes/hearing tests – . Performing layouts for up to 1 minute in duration, will allow tactile on multiple locations on body to mimic suction cups.
  - Layouts/stationing for dive studies – Working to solidify layouts and extended target training
  - Photogrammetry Swim-bys (under camera) – Working towards dorsal swim-bys,
- participates in multiple layouts under photogrammetry camera monthly for body condition photos

Health Summary [1 Sept 2022 to 31 Aug 2023]

Sahara NOA0010683: Throughout the reporting period this animal remained mostly healthy with no major medical concerns. In June 2022, Sahara did develop mild to moderate lung lesions on ultrasound and was mildly off behaviorally. She responded well to antimicrobial therapy and returned to normal. Sahara also developed mild gastrointestinal signs in mid to late July, which also responded well to medical management. There are currently no medical concerns with Sahara.

Kharabali NOA0010671: Kharabali remained healthy through much of the early part of the reporting period, with weekly monitoring of chronic, mild, low grade, intermittent pleural (lung) changes on ultrasound. In late April to early May 2023, Kharabali showed an increasing number of changes on ultrasound and showed a mildly inflammatory pattern in her blood work. She was started on antimicrobial therapy. Kharabali’s lung changes and bloodwork changes continued intermittently, and her medical treatment was adjusted as appropriate. She remained stable but on treatment for the remainder of the reporting period and was monitored regularly by bloodwork and ultrasound.

Jetta NOA0010684: Jetta was relocated from the Aquatic Animal Study Center back to the Arctic Coast beluga habitat in mid-August 2022, and remained in the beluga habitat for the entirety of this reporting period. Jetta acclimated well to both the habitat and the other belugas. She was weaned off all remaining medication that she was on at the beginning of the reporting period and has remained in good health for the remainder of the reporting period.

Breeding Prevention Plan (All Whales):

The breeding prevention efforts undertaken during this reporting period included administration of the oral contraceptive Regumate, which was prescribed in February 2023 to the three younger female belugas. All whales were allowed to come in. The female whales did well on the oral medication and no pregnancies have occurred.

The year-round monitoring program included taking monthly blood for reproductive hormone levels and ultrasound images. This frequency allowed the trainers to maintain the behaviors. The data will greatly contribute to the larger body of knowledge for cetacean reproductive biology.

A Beluga Health Committee was established per conditions of the permit and reports annually to the Institutional Animal Care and Use Committee. The committee met on 8/21/2023 to discuss the effectiveness of the current plan and finalize a breeding prevention plan for the next breeding season. The plan will be adjusted as needed based on the recommendations of the committee, in conjunction with NMFS.

### **Describe the following observations during your activities:**

- **The physical condition of the animals you encountered and conducted procedures or activities on.**
- **How the animals reacted to specific procedures or activities. Describe normal and abnormal responses of target and non-target animals.**
- **Where possible, provide quantitative data and estimate the proportion of animals (%) that had those physical conditions or reactions.**

LOCATION 1 Research sampling has been on hold since August 6, 2021 per NOAA's directive.

LOCATION 2: Response during husbandry and health assessments:

Jetta NOA0010684, Kharabali NOA0010671, and Sahara NOA0010683 had normal responses to husbandry and health assessments e.g., clinical blood collection, routine ultrasounds, blow collections, routine weights, and gastric samples 100% of the time.

Response during gender separation: In 2022, Mystic sought, and received from NMFS, temporary and permanent authority to administer contraceptives as an alternative to gender separation and therefore did not have to separate target animals from male.

### **Explain your efforts to conduct follow-up monitoring. Report your findings. Photographs are useful to document things like wound healing.**

**We are especially interested in:**

- **Animal responses to new or novel procedures or activities.**
- **Time it takes to resume normal behavior after harassment.**
- **Time it takes to re-populate rookeries or haul outs after harassment.**
- **Condition of animals when resighted or recaptured.**
- **Recovery from sedation and/or handling and post-release behavior.**
- **Healing at site of invasive sampling (e.g., biopsy).**
- **Healing at site of invasive tag deployment (e.g., surgical tag implants requiring sutures, remotely deployed dart/barb, deep-implant, medial ridge, and pygal tags).**
- **Tag retention and tag breakage (i.e., is the tag still attached and what condition is the tag in?).**

LOCATION 1 Research sampling has been on hold since August 6, 2021 per NOAA's directive.

LOCATION 2: Whales have been monitored 24 hours a day throughout this period. Whales have adapted well and generally responded well to new/novel procedure.

**Answer and discuss the following:**

- **Did serious injuries or mortalities occur?**
- **Did you exceed the number of takes authorized in any row of the take table?**
- **Did you take animals in a manner not authorized in the permit?**
- **Did you take a protected species you were not permitted?**

**If so, and you already submitted an incident report, please briefly describe the event here and refer to the incident report.**

**If such an incident occurred and you have not yet reported it, provide:**

- **A full description of the incident (date and location of event; species and circumstances of how the take occurred; photographs; necropsy and histopathology reports, or other information to confirm cause of death or extent of injuries; etc.).**
- **Steps that were or will be taken to reduce the possibility of it happening again.**

LOCATION 1 No injuries or mortality occurred as a result of research sampling which has been on hold since August 6, 2021 per NOAA's directive.

LOCATION 2: No injuries or mortalities occurred during this reporting period.

**Describe any other problems encountered during this reporting period and steps taken or proposed to resolve them. Examples include equipment failure, weather delays, safety issues, and unanticipated effects to habitats or other species.**

LOCATION 1 Research sampling has been on hold since August 6, 2021 per NOAA's directive.

LOCATION 2: No other problems were encountered during this reporting period.

**Discuss your efforts to coordinate and collaborate with others:**

- **Which NMFS Regional Office(s) and permit holder(s) did you contact for coordination?**
- **How did you collaborate (e.g., avoiding field work at the same time or working together on the same animals, sharing vessels, sharing data)?**

LOCATION 1 Research sampling has been on hold since August 6, 2021 per NOAA's directive.

LOCATION 2: No coordination/collaborations were necessary during this reporting period.

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## **Attachments**

**Application Archive** - P22629\_i22414T14Submitted.pdf (Added Nov 30, 2023)

**Report** - RP22414T4Beluga\_Current\_Summaries\_Aug\_2023\_Nov\_2023.docx (Added Nov 30, 2023)

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## **Report Status**

**Report Type:** Annual

**Report Status:** Submitted

**Start Date of report period:** September 1, 2022

**End date of report period:** August 31, 2023

**Date Due:** November 30, 2023

**Date Received:** November 30, 2023

**Submitted By:** Gayle Sirpenski



## **Current Status of Belugas Kharabali, Sahara, and Jetta (1 August 2023 to 28 November 2023)**

### **Kharabali**

Kharabali has been in average body condition throughout the period listed above. Through October 23, 2023, she ate full diet or close thereto. She had a more inconsistent appetite between October 24 and November 2, and then appetite again improved thereafter.

Kharabali has been monitored for changes noted in her lungs on ultrasound since August 1, 2023, the start of this reporting period. To address these, she was prescribed antimicrobial therapy. A bronchoscopy showed an abnormal appearing glottis (goose beak) from what has been observed in other whales. In November, Kharabali started showing signs consistent with lower gastrointestinal discomfort, and antimicrobial therapy was adjusted to address, which was successful. She is being monitored for position in the water, which is periodically abnormal. The cause of this is not presently known. She remains under close veterinary care currently. Kharabali received oral contraception consistently until she was moved to the medical pool for veterinary care and no longer had access to a male, at which time it was discontinued.

Kharabali routinely participates in voluntary health assessments and morphometrics including blood draws, gastric samples, ultrasounds, and photogrammetry for body condition, including axillary girth. Her trained research behaviors include saliva sampling, forced exhales for blow collection and fecal collection.

### **Sahara**

Sahara is bright, alert, and responsive with normal activity level. She is in a normal, healthy body condition with no major medical concerns.

Sahara receives oral contraception per the approved breeding prevention plan. She routinely participates in voluntary health assessments and morphometrics including blood draws, gastric samples, ultrasounds, and photogrammetry for body condition. Her trained research behaviors include saliva sampling and forced exhales for blow collection. Her voluntary girth behavior is still in the process of being trained.

### **Jetta**

Jetta is bright, alert, and responsive with normal activity level. There are currently no medical concerns.

Jetta receives oral contraception per the approved breeding prevention plan. She participates in voluntary health assessments and morphometrics including blood draws, gastric samples, ultrasounds, and photogrammetry for body condition. Her trained research behaviors include saliva sampling and exhales for blow collection.