

## Georgia Aquarium Facility Description

**Describe the care and maintenance of the animals, including a complete description of the facilities where they will be maintained. This includes but is not limited to:**

- **dimensions of the pools or other holding facilities**
- **number, sex, and age of animals by species to be held in each**
- **water supply, amount, and quality**
- **diet, amount and type**
- **sanitation practices.**

Georgia Aquarium is a not for profit zoological facility that opened to the public in November 2005. It is located in Atlanta Georgia, USA, and is committed to inspiring awareness and preservation of oceans and aquatic animals worldwide. It has the very highest standards for animal care and welfare, is accredited by the Association of Zoos and Aquariums (AZA) and the Alliance of Marine Mammal Parks and Associations (AMMPA), and Humane Certified by the American Humane. Additionally, its animal trainer development program is accredited by the International Marine Animal Trainers Association (IMATA).

The area where belugas are housed is an 800,000-gallon system configured with 3 pools including a primary habitat, secondary habitat, and medical pool. The medical pool connects the primary and secondary habitat and has gates at both ends. The primary habitat is 75ft. long, 40ft wide, and ranges in depth from 12-25ft. The secondary habitat is 32ft. long, 29ft wide, and 14ft deep. The medical pool is 20ft. long, 15ft wide, and 7ft deep.

Presently, there are five beluga whales (2 adult males ages 9 and 31, and 3 adult females ages 10, 13, and 19) living at Georgia Aquarium; however, the facility is large enough to accommodate 14 beluga whales per USDA 3.104. Two adult male and one adult female harbor seals cohabitate in the exhibit with the beluga whales. The main exhibit pool includes a slide out scale where animals can be trained to voluntarily slide onto a scale for routine body mass assessments. The secondary pool meets Animal and Plant Health Inspection Service (APHIS) standards as a primary enclosure. A medical pool includes a hydraulic-lift bottom allowing access to the animals within 2 to 5 minutes. An overhead crane rail system will allow any newly acquired animals to be placed in any one of the three pools upon arrival and allows staff to place the animals on closed cell foam on the adjacent deck for veterinary access.

The life-support system for the beluga whale exhibit comprises high rate sand filters, protein skimmers, ozonators, and heat exchangers. The entire system's water is filtered every 60 minutes and the design temperature is 54 degrees Fahrenheit (°F). The water in the system is a seawater mix with a combination of major salts as found in the ocean. The system is fully automated and can be monitored by technicians via the Internet. Laboratory technicians monitor various water chemistries daily including temperature, pH, salinity, oxidants, oxidant reduction potential (ORP), ammonia, nitrite, nitrates, and dissolved oxygen. The Georgia Aquarium lab also conducts weekly tests for coliform and enterococcus bacteria. In addition, the Aquarium's exhibit is indoor with a filtered and temperature-controlled air supply and a skylight allowing natural sunlight into the space.

The beluga whale habitat is cleaned and maintained by zoological staff on a daily basis which includes cleaning from the surface. Additionally, SCUBA divers service the habitat for detritus removal and algae maintenance on a routine basis. High standards are maintained for providing high quality safety and animal care in compliance with USDA/APHIS and OSHA regulations, and accrediting organization standards. Above water surfaces are rinsed with a non-aerosolizing spray nozzle on a non-potable fresh water hose, sanitized with dilute simple green™ and disinfected with dilute chlorhexidine gluconate. The disinfectant remains in contact with the surfaces for at least 10 minutes before being thoroughly rinsed. Any standing water left after rinsing is removed by moving it to a sanitary drain with a squeegee. Surface skimmers are located on the east and west side of the main habitat and north side of the holding pool and covered with a fiberglass grate.

The Nutritional Services Program is an integral part of the Animal Health Department at the Georgia Aquarium and is under the direction of the Nutritionist, and functions in coordination with the Zoological Operations Management Team and Veterinary Staff to meet the nutritional needs of a diverse and dynamic aquatic animal collection including the beluga whales. Belugas at Georgia Aquarium are fed a diet of high-quality fish, prepared according to the Animal Welfare Act requirements including high and low fat herring, capelin, squid and Mazuri analog diet. Fish types are selected based on the specific nutrient content, quality, availability, sustainability, price, and animal preference. Beluga food intake and caloric consumption are individually developed, monitored and recorded on a daily basis.

Target weights are established, and morphometric measurements are routinely monitored for each beluga based on species and individual historical data, sex, and age. Daily Caloric intake is established based on body condition, expected growth rates, reproductive status, and trainer assessment of animal food drive during feedings and training sessions. Since each fish type provides different nutritive qualities and there is also great value to provide the belugas with a variable diet of fish, the daily diet and caloric intake for each beluga is formulated on fish variety, nutritive value, palatability and the Nutritionist's recommended % calories of fish type that can be consumed each day. The nutritive value of fish is obtained through proximate analysis that is run on each of the products that is purchased and fed to the belugas. Food fish is routinely analyzed throughout the year for nutritional content. It is also screened for toxins to ensure the food being fed is safe for the animals to consume.

Georgia Aquarium practices preventative medicine through a routine and proactive program that monitors the health and welfare of all animals through daily observations and routine diagnostic testing. Most diagnostic samples are obtained through animal training of husbandry behaviors. Bloodwork performed includes complete blood count, chemistry panel and specific serology as directed by the attending veterinarian. Additional testing is performed when possible including trace mineral, vitamin and nutrient analyses, serum electrophoresis, and hormone levels. Experienced animal trainers provide for the daily care of the belugas, and a robust animal health/veterinary teams is available 24/7 to respond to any medical concerns. The animal health team has a state-of-the-art veterinary hospital and portable diagnostic equipment including ultrasound, radiograph, and endoscopy equipment that can be brought to the habitat for pool-side diagnostics to avoid any need to move the belugas for this purpose.

The use of behavioral conditioning plays a vital role in the care of belugas at Georgia Aquarium and greatly supports the ability to deliver high quality animal care and provide for optimal welfare. The goal of the training program is to train the animals to participate in their own healthcare on a voluntary basis, as well as providing mental stimulation and enrichment for the animals. The Aquarium's behavioral conditioning program is designed and structured to meet the standards and guidelines established by the Association of Zoos and Aquariums, the Alliance of Marine Mammal Parks and Aquariums and International Marine Animal Trainers Association, emphasizing positive reinforcement utilizing standard operant conditioning.