

## **STANDARDS AND GUIDELINES**

### **ALLIANCE OF MARINE MAMMAL PARKS AND AQUARIUMS**

*These Standards and Guidelines are the very core of the Alliance accreditation program, required for membership in the organization.*

#### **PREAMBLE**

The members of the Alliance of Marine Mammal Parks and Aquariums, who collectively represent the greatest body of professional expertise and knowledge regarding marine mammal husbandry, must meet Standards and Guidelines to become accredited by the organization. These standards optimize the physical health of and environmental conditions for the individual marine mammals in members' care and maximize the educational and scientific value of their collections as a whole. The following is a discussion of the standards, how they guide species management, and the role they play in assuring exceptional care for marine mammals in Alliance member facilities.

Alliance Standards and Guidelines reflect present-day practices, which are based on current scientific data and the cumulative experience of the membership. They are updated and improved annually as the knowledge base expands to assure that Alliance members lead the marine mammal display community in the integration of advancing science and technologies.

Only those aquariums, zoos, oceanariums, research facilities and marine life parks that aspire to these high ideals and are willing to participate in this evolving process will be accepted as accredited members of the Alliance. The Standards and Guidelines demonstrate Alliance members' continuing, progressive commitment to marine mammal conservation through public display, population management, education, rescue and rehabilitation of stranded animals, and research.

#### **Acquisition and Disposition of Marine Mammals**

##### **Acquisition**

The Alliance works collectively with the marine mammal community to assure that the populations of marine mammals in our members' care remain healthy and genetically diverse. Alliance members' successful population management programs are evidenced by the fact that over 65 percent of the dolphins in our care were born in a zoological park or aquarium. The cornerstone of this success is the Alliance acquisition standards. They require that Alliance members prioritize acquisition of marine mammals for their collections through managed breeding programs involving other zoological institutions. This emphasis on propagation and commitment to partnerships with other institutions ensures that members maintain healthy collections of marine mammals into the future, while minimizing the need for collection from the wild.

Acquisition standards also require that all applicable local, state/provincial, regional, national, and international laws and regulations be followed when acquiring and exhibiting marine mammals. CITES requirements, for example, must always be met when moving animals internationally.

The Alliance supports responsible collection from the wild to support management of robust, healthy and genetically diverse populations in human care. Alliance standards require that any wild collection be conducted using safe and humane methods consistent with professionally accepted practices. Importantly, members must have scientific information to demonstrate that any removal of an animal from the wild will not compromise the sustainability of the stock or population from which the animal is taken.

### **Disposition**

Alliance members care deeply about each and every animal in their marine life park, aquarium, or zoo. Occasionally animals are moved from one facility to another to improve social groupings or provide breeding opportunities. Alliance members confirm that the level of care at the new facility is consistent with the standards and guidelines adopted by the Alliance.

In our facilities, marine mammals are attended to by qualified veterinarians, trainers and professional animal care specialists, ensuring the highest quality of animal care. Research shows that dolphins, for example, live longer in Alliance member facilities than they typically do in the wild. When an animal loss does occur, Alliance members must conduct a professional animal autopsy, called a necropsy. The results of necropsies are essential in advancing our understanding of the physiology of the animals and their natural vulnerabilities to illness and disease, information that is also important to conserving marine mammals in the wild and nursing back to health animals that strand on beaches around the world. Disposition

standards also include guidelines for humane euthanasia of animals, limiting it only to circumstances when recommended by the attending veterinarian to end an animal's suffering from illness or injury. In these ways, Alliance standards support the advancement of our understanding of species biology and the continuing development of marine mammal medical practices.

It is the Alliance's position that marine mammals cared for in zoological parks and aquariums for extended periods are not suitable candidates for release to the wild. This position was affirmed in a scientific report on efforts to release Keiko, the killer whale in the movie *Free Willy*. For these animals in long term human care, no scientifically-based release program has been successfully attempted. Whales and dolphins born in our facilities have no experience in the wild and would not survive. To protect our animals, Alliance standards require that release to the wild of a marine mammal from a member's facility can only be done if it is part of an authorized and scientifically-based experimental reintroduction program. Such a program must be anchored in the principles of conservation biology and have the ultimate goal of sustaining a threatened or endangered marine mammal stock and/or population. Since the whales and dolphins exhibited in Alliance facilities are not in danger of extinction, scientists have not initiated conservation programs that include breeding them in Alliance facilities and reintroducing them to the wild.

## **Training**

The training of marine mammals in Alliance member facilities is much more than meets the eye. For these highly social animals, training includes enrichment and exercise programs that keep our animals stimulated both mentally and physically. Husbandry training — teaching animals to participate in routine physical examinations — is essential to their health and assists animal care staff in managing successful preventative health programs as well as performing necessary medical procedures.

Training practices are designed to provide a positive experience for the marine mammals in our care. This positive approach strengthens the strong bonds between our animals and their trainers — a bond based on mutual respect and trust. The animals are provided food rewards, which are part of the healthy, balanced diet they receive each day. They also enjoy being rubbed, playing with toys, and showing off their favorite behaviors.

Alliance standards require every member to have an animal training policy that includes the facility's philosophy, principles, and management oversight, as well as a behavior

development and management plan. The latter must describe training program objectives, methods of accomplishments, and criteria for success.

The standards require that animal training staff be appropriately sized and qualified to meet program requirements. Alliance members must assure that their trainers have the support and opportunities to learn and grow professionally, a formal program based on the guidelines of the International Marine Animal Trainers' Association. The IMATA guidelines recommend a library of educational materials for trainers including professional journals, teaching programs for new trainers that provides hands-on experience and learning theories, internships, training information exchange activities, and membership in professional organizations.

## **Education**

Seeing living, breathing marine mammals is important. These unique and fascinating animals foster educational opportunities at Alliance member facilities that instill an awareness of environmental and ocean issues and inspire a strong, active commitment to conservation of marine mammals and their habitats in the wild. An informed public is more likely to support research benefiting the conservation of marine mammal populations and their ecosystems worldwide.

Alliance public display facilities are the primary source of educational programming about marine mammals for the public. We are grateful that the public appreciates our education efforts. According to a 2005 Harris Interaction poll, a full 97 percent of respondents agree that marine life parks, aquariums, and zoos play an important role in educating the public about marine mammals they might not otherwise have the chance to see. Ninety-one percent agreed that seeing a living marine mammal at a marine life park, aquarium or zoo fosters a connection to the animal.

We take our responsibility to educate the public about marine mammals and their environments very seriously and our education standards reflect that. They require members to offer multiple levels of learning opportunities, which include advanced education programming for all ages as well as teacher training. Information for the public must be based on the best current scientific knowledge and programs must be overseen by a qualified professional. The variety of techniques used to educate children and adults at Alliance member facilities range from interpretive graphics to guided tours to audio visual materials to formal education programs. Our standards recommend that member educators join professional organizations, attend educational conferences, and maintain an up-to-date library of reference materials on the marine mammals housed at the facility.

Each member must have a written education plan that clearly delineates the facility's education goals, mission statement, and an evaluation strategy. The standards also recommend that education programs use the professionals and experts on staff, such as animal behaviorists, veterinarians, research scientists, trainers, and educators, as a marine science resource to local, community professional groups and teachers when appropriate and practicable.

### **Husbandry**

Alliance husbandry standards are aimed at assuring all marine mammals in Alliance marine life parks, aquariums, and zoos receive healthy and nutritious food and state-of-the-art veterinary care. These standards are based on the decades of professional experience and knowledge that Alliance members have gained in marine mammal biology, physiology, behavioral science, anatomy, reproduction, and veterinary medical care. They ensure that the animals in Alliance members' care live high quality, healthful lives.

### **Food/Nutrition**

Alliance members feed their marine mammals high quality seafood designed to meet the dietary preferences of individual species. Nutritional adjustments are made for pregnant, aging, and young animals.

Alliance standards require that all members have a quality control system in place and test the animals' food on a routine basis to assure it is wholesome. As with food for people, there is an "eat-by-date" approach to feeding marine mammals in Alliance member facilities. Standards require that fish and other foods be kept at proper temperatures and stored in a manner that maintains full nutrient values and prevents contamination. Each animal has a vitamin regimen. Food is tested for caloric values, with evaluations similar to what one would find on human food labels. Under the Alliance husbandry standards, food preparation areas must be kept clean and sanitized. Food and nutrition records are required for every animal in a members' collection. These essential records inventory the quantity and type of food fed to each animal every day.

### **Veterinary-Medical Programs**

Every Alliance member must employ a qualified, experienced attending veterinarian who supervises the preventive medicine and clinical care programs for the animals, and who is involved in all programs relevant to the health of each and every marine mammal in the

marine life park, aquarium, or zoo. Countries have laws governing the practice of veterinary medicine by which Alliance veterinarians must abide.

The attending veterinarian establishes and oversees a program of ongoing animal health assessment that includes regular veterinary rounds, daily monitoring by husbandry staff of each animals' physical appearance, activity, temperament and /or changes in behavior. Trainers and animal care staff are much attuned to the animals in their care, and quickly identify even minor changes in the animals' behavior. Reporting these changes to the attending veterinarian assures that, if necessary, an examination will be done quickly and effectively, and laboratory testing conducted as needed.

Complete physical examinations must be performed at regular intervals on each marine mammal in an Alliance member collection. Normal physiological values and serum banks for retrospective studies are established for each marine mammal in the collection. Individual health records are detailed and important duplicate records are kept in a safe place.

### **Clinical Medicine**

The required program of clinical medicine includes a protocol for communication within the animal care staff, a treatment regimen, and an emergency medical protocol — all administered by the attending veterinarian. Members must maintain an up-to-date inventory of pharmaceuticals and medical equipment. In addition, this section of Alliance standards requires a protocol for disinfection and maintenance of animal handling equipment and areas and a program of facility design and maintenance that includes monitoring and prevention of any potential animal injury.

### **In-Water Interactive Programs**

Interacting with marine mammals at Alliance member facilities is very popular with the public. These peak lifetime experiences with dolphins and other marine mammals foster a unique connectedness between the visitor and the animal that helps shape personal responsibility for protecting wild marine mammals and their ocean habitats.

Because these programs bring guests in close proximity to animals, safety is a top priority. Alliance member programs have a 99.99 percent positive safety record. This record reflects the experience of animal trainers at member facilities and the importance placed on maintaining an active awareness of the animals, and the guests, during an interaction.

These concepts are emphasized in the U.S. government's review and approval of interactive programs. (Quantitative Behavior Study of Bottlenose Dolphins in Swim-with-the-Dolphin Programs in the United States, Final Report to the National Marine Fisheries Service Office of Protected Resources, A. Samuels and T. Spradlin, 25 April 1994)

Alliance standards for interactive programs require that animals be fully and properly trained, that staff be experienced, and that appropriate action be taken to maintain a safe interaction. Standards also require that any member of the public who refuses to participate responsibly in a program be removed immediately. Members' behavior development and management plans detail every aspect of interactive activity offered to the public, describing the animal training program, its objectives, and methods of accomplishment. For example, the plan includes the amount of time a marine mammal is asked to participate in interactive activities based on behavioral criteria compiled for the individual animal.

Participation in an interactive program is the choice of each and every animal; members delineate an area of the pool the public may not enter, where the animal may choose to go. Educational programs must include information about the marine mammal the guest is about to meet. Pre-interaction instructions must also include rules outlining appropriate guest behavior for the protection of both the animals and the participants.

## **Propagation**

Alliance members are committed to maintaining their marine mammal collections with minimal, if any, collection of animals from the wild, making successful reproduction programs for the animals currently in Alliance marine life parks, aquariums, and zoos an essential priority. And, these propagation efforts are very successful. As previously noted, over two-thirds of the dolphins now in Alliance member zoological parks and aquariums were born in our care.

Alliance standards for propagation detail the requirements for producing and caring for healthy calves and pups. Members utilize human medical technology and techniques to assure healthy babies and to enhance reproduction. Veterinarians use sonograms to monitor pregnancies and in-vitro techniques to diversify the genetics of particular families of animals.

Every member must have a comprehensive propagation plan for each species in its facility. These plans assure that experienced professionals are on staff, that enclosures are conducive to rearing the calves and pups, that the mother's health is closely monitored during the pregnancy, and that the animals are assured of social environments beneficial to the successful rearing of offspring. It is important that the plans include heightened monitoring

during delivery and the early stages of rearing calves and pups, and that nutritional requirements unique to pregnant females are determined for the individual mother.

Also, propagation standards require that contingency plans stipulate responses to any emergencies that might arise, document protocols well in advance of pregnancies, and require detailed records on each birth.

## **Quarantine**

Alliance members are deeply attached to the animals they care for daily. Therefore, any new animal arrivals must be evaluated by the attending veterinarian, and separated (quarantined) if necessary for at least 30 days if there is concern the new arrival might harbor an illness that could affect the health of the marine mammals in the current collection. This is especially important if the facility rescues and nurses back to health stranded wild animals, as stranded animals are often health-compromised, and have been exposed to parasites and diseases which could be transmitted to other species. These animals are treated in separate pools.

Alliance quarantine standards require close veterinary supervision of the animals, protocols for assuring all equipment is disinfected and kept clean, a dedicated animal care staff to monitor the animal, and the use of appropriate protective clothing. The standards also delineate medical testing that should be done for commonly-found conditions and recommend vaccinations, where appropriate.

Complete medical records must be kept on all quarantined animals.

## **Record Keeping**

Maintenance of detailed, comprehensive records on the husbandry and health care provided every animal in Alliance member facilities is not only essential for the well-being of the individual marine mammal, but enables members to share this knowledge for the collective benefit of the species. These records are invaluable over time, providing continuity of quality care for animals at Alliance member locations, as well as comparative baseline indicators important to scientists who study the health of marine mammal populations in our oceans. The information is also beneficial to facilities that treat stranded marine mammals from the wild.

Recordkeeping requirements specific to a discreet activity are included in the appropriate section of the Alliance standards. This general section addresses the information that must be



recorded, the timeframe during which records are to be kept, and the maintenance of duplicate records to protect from potential loss from fire, flooding, and other hazards. All Alliance members are urged to participate in regional, national and/or international studbooks and breeding management programs, which are so important to animal management of each species.

## **Scientific Research and Conservation**

Advancing the scientific knowledge about marine mammals in the wild and in human care, and learning how best to preserve the animals' ocean environments is a priority for Alliance members. Members continuously strive for new and effective ways to provide their dolphins, whales, sea lions, seals, manatees and other marine mammals with long, healthy lives. Passionate concern and caring for their animals extends to those in the wild. They understand that our challenging environment demands fresh and informed data if we are to conserve species, habitats, and biodiversity.

Members' research falls into distinct categories: comparative biology, which includes field and basic research; conservation biology; and animal stewardship. For example, infant formula developed for a specific marine mammal species, which might supplement the nutritional needs of newborns in Alliance parks, proves essential to saving the life of an orphaned wild animal that is found stranded on a beach. Alliance research is responsible for vaccines for diseases found in wild populations and for medical treatments for diseases or conditions common to various species of marine mammals. Human impacts on the ocean environment — such as contamination and pollution of our waters and harmful fishing practices — can take a devastating toll on marine mammals in the wild. Alliance members contribute to assessments of wild populations and fund studies of their feeding habits, social lives, distribution patterns, and threats they face from human activities such as those listed above.

Alliance member parks and their conservation actions, in collaboration with research organizations, universities, and government partners, have contributed millions of dollars in direct funding and in-kind services to support a vast array of scientific studies to benefit marine mammals in the wild and in human care. This significant support for marine mammal research is made possible by the 40 million children and adults who visit Alliance member parks each year.

Alliance research standards encourage ongoing, active research programs that benefit the conservation of marine mammals in the wild and further enrich the lives of the animals in our care. Members must conduct research at their facility; provide biological specimens, staff,

animals, and/or records to support research; or financially contribute to outside, bona fide studies such as conservation research with marine mammals in the wild. The animals in our facilities provide researchers unique opportunities to work with marine mammals, which cannot be duplicated in their natural environments. Therefore, members are encouraged to cooperate with the scientific community and make these animal resources available for study, when practicable and with consideration of the animals' well-being. Importantly, the standards recognize the significance of sharing research results with the worldwide marine mammal community by promoting attendance at scientific meetings and publishing in peer-reviewed scientific journals.

The best interests of the animals are served by animal care committees that review any proposed research at their member parks, a requirement of Alliance standards. Members must establish research policies for the organization with individual animal welfare as the highest priority. Research objectives must take into consideration the goals for animal management and the benefits to the species as a whole.

Alliance standards also urge members to support and collaborate with outside marine mammal researchers by providing operational support, biological samples, recordkeeping data, and staff time.

## **Spatial Requirements For Marine Mammal Enclosures**

Marine mammals are very special animals that live in unique aquatic environments. As leaders in marine mammal husbandry and care, Alliance members provide their animals with environments that promote good health, longevity, and the opportunity to display behaviors they exhibit in our oceans and rivers. Alliance space standards afford members the flexibility to meet specific needs of each species, as well as design innovative enclosures and naturalistic settings that are in the best interests of the animals.

Using life-expectancies and successful births as measures of good homes, Alliance members have succeeded in providing exceptional environments for their animals. Dolphins live longer in Alliance members' parks and aquariums and over two-thirds of those in members' care today were born in our facilities.

Building on this success, Alliance space standards encourage members to continue optimizing the size, shape, number, and design features of their enclosures. Enclosure design should promote social interaction between the animals. The display of a solitary animal is prohibited by Alliance standards except under direct supervision of the attending veterinarian and when essential to the animal's health and well-being.

Whales and dolphins in member facilities may have daily access to a complex of pools that vary in configuration. These may include a main pool, commonly used for educational presentations to the public, one or more ancillary pools, and a medical pool. For marine mammals such as sea lions, walrus, polar bears, and seals, dry resting and social activity areas must be close enough to the surface of the water to allow easy access for entering and leaving the water.

Members are committed to their animals' safety. Alliance standards require that enclosures be structurally sound, durable, nontoxic, and maintained in good repair. They also require members to develop detailed contingency plans to protect animals in the face of a disaster or emergency situation.

If a member is worried about an animal's health or is preparing an animal for transport, the animal may be moved to a holding or medical pool. Alliance standards require that the veterinarian include a written note in the animal's health records justifying the action if the animal is to be separated from his or her conspecifics for more than 14 days.

Member facilities with breeding programs must have adequate provisions for separating pregnant females or mothers with calves, if necessary. For whales and dolphins, enclosures holding mothers with calves should have sufficient straight-line glide paths for nursing.

Alliance standards also specifically address the special needs of seals, sea lions, otters, and other pinnipeds, requiring dry resting areas as well as access to water for their comfort. These standards call for separate areas should the facility's collection include two or more mature males.

Alliance members are located throughout the world; members are required to comply with any relevant government regulations in their respective countries, including spatial requirements.

## **Transportation**

Alliance members are expert at transporting marine mammals. Animals are generally moved between facilities for optimum social groupings or to provide opportunities to increase successful breeding of a particular species. The Alliance transportation standards are based on decades of experience. They assure that marine mammals are conveyed in a manner that is both safe and comfortable, and that meets the unique requirements of each of these aquatic or semi-aquatic species. Alliance members' transport safety record is exemplary.

Importantly, the first, required step is a health assessment of the animal by the attending veterinarian prior to the transport to ascertain the animal is in a good physical condition appropriate to travel. Next, the facility must develop a thorough, written transport plan that ensures a safe and efficient move of the animal from one location to another. A final transport planning meeting, held within 24 hours of the move, allows for a final review of the animal's health and transport contingency plans. A veterinarian accompanies cetacean transports. All marine mammals are monitored by professionals throughout the transport; the required number of attendants monitoring the animals is determined by the number of animals being moved.

Alliance transportation standards specifically consider each individual animal's behavior, freedom for normal postural adjustments, anatomy, nutritional needs, and metabolic rate, and the need for protection from extremes of temperature. All transports meet or exceed government standards for marine mammals.

Alliance members have specially designed, comfortable "transport containers" that are appropriate for each species. Because of Alliance members' knowledge of and expertise with the transport of sirenians, our experts were asked to assist in developing new international guidelines for the transport of this species.

## **Water and Environmental Quality**

The health of the marine mammals in Alliance member facilities is always the top priority. Since these animals live in aquatic and semi-aquatic environments, Alliance standards for these parameters are detailed, emphasizing the importance of optimum water quality and environmental conditions to assure the animals' health and comfort.

### **Standards and Guidelines for Water Quality**

The water in marine mammal aquarium homes replicates their environments in the wild. Some Alliance members located in coastal communities care for their animals in ocean water environments. For other Alliance members, the water in their animals' aquarium homes is supplemented with natural minerals and salts to approximate the normal levels found in natural sea waters, which also provides buoyancy similar to that of the ocean.

Alliance standards address water recycling and filtration, the establishment of optimum water parameters, and the efficiency of the water processing techniques. They require specific parameters known to ensure animals' well-being and require specific monitoring schedules.

The standards also address cleaning and maintenance of habitats as well as appropriate construction materials. Members with facilities incorporating water that is open to the ambient sea environment must monitor their water source and discharge to be sure that conditions remain compatible with sound animal management as well as federal, state, and local water quality standards.

Water quality records must include: test parameters for water quality, tests for and documentation of any appropriate substance added to the water, bacterial culture test results, and the facility's maintenance and filtration operation log.

### **Standards and Guidelines for Environmental Quality**

Alliance members are very knowledgeable and attentive to environmental needs essential to the species for which they care. These include acoustics/sound, ventilation, and temperatures. Requirements can sometimes differ for animals housed in facilities and in natural lagoons.

Alliance standards reflect these environmental needs. Members must provide adequate heating or chilling for marine mammal pool systems to maintain water temperatures appropriate to the species cared for. Indoor facilities must take into consideration vertical air space, the area between the pool and the overhead ceiling or canopy, and provide a flow of fresh air. Monitoring is required for acoustics, to detect and minimize any sounds audible to marine mammals.