AFFIDAVIT OF CYNTHIA J. MOSS, FOR PETITIONER,
IN SUPPORT OF PETITION, SWORN TO MAY 6, 2017 [A-218 - A-235]

COUNTRY OF United States)
STATE OF New York) ss:
COUNTY OF New York)

COPY

Affidavit of Cynthia J. Moss

Cynthia J. Moss being duly sworn, deposes and says:

Introduction and Qualifications

1. My name is Cynthia J. Moss.

2. I am over the age of 18 and understand the obligations of an oath.

3. I graduated with a Bachelor of Arts in Philosophy from Smith College in 1962, and received an honorary Doctorate of Science from Smith College in 2002. I reside and work in Amboseli National Park, Kenya.

4. I submit this affidavit in support of Petitioner the Nonhuman Rights Project, Inc. (NhRP), on behalf of Happy for a common law writ of habeas corpus. I am a nonparty to this proceeding.

5. I have studied and worked with elephants in Africa for the past 47 years. I am currently the Director of the Amboseli Elephant Research Project and have been since 1972, and I am currently the Director of the Amboseli Trust for Elephants and have been since 2001. Prior to founding the Amboseli Elephant Research Project, I worked: (1) as the editor for the African Wildlife Foundation's Wildlife News from 1971 to 1985; (2) part-time as a freelance journalist, mainly for Time and Life magazines, from 1970 to 1971; (3) as a research assistant on various projects with Drs. A.M. and S. Harthoorn, Dr. V. Finch, and Dr. J.B. Sale, consecutively from 1969-1970; (4) a research assistant to Dr. I. Douglas-Hamilton full time in 1968 and part-time in 1969, 1970, and 1971; (5) a reporter/researcher for Newsweek Magazine in New York from 1964 to 1968.

6. As Director of the Amboseli Elephant Research Project, and also as the director of the Amboseli Trust for Elephants, I have set up the world's longest-running research project on wild elephants in the Amboseli National Park, Kenya. My research focus

incorporates the distribution, demography, population dynamics, social organization and behavior of the Amboseli elephants. My current work includes directing and supervising research and monitoring in the Amboseli National Park; training elephant researchers from African elephant range states; outreach to the local Maasai community; carrying out surveys and training courses at other elephant study sites in Africa; disseminating scientific results; advocating for elephant welfare; promoting public awareness by writing popular articles and books and by making films about elephants; and fund raising for and administering the Amboseli Elephant Research Project.

7. Over the course of my career, I have received awards from international nongovernmental, media, academic, research, zoological, and professional organizations, including: (1) the Outstanding Achievement Award from the Jackson Hole Wildlife Film Festival in 2015; (2) the John D. & Catherine T. MacArthur Foundation Fellowship (2002-2007); (3) the Conservation Award from the Cincinnati Zoo in 2005; (4) the Guardian Award from In Defense of Animals in 2004; (5) the Distinguished Conservation Fellow Award from the Los Angeles Zoo in 2002; (6) my Honorary Doctorate Degree from Smith College in 2002; (7) an Award from Performing Animal Welfare Society in 2002; (8) elected Fellow of the Society of Women Geographers in 2001; (9) Advisor to the International Fund for Animal Welfare, ongoing since 2001; (10) sabbatical Fellowships at the National Center for Ecological Analysis & Synthesis, University of California, Santa Barbara (1999, 2000, 2001); (11) the Centennial Conservation Award from the Woodland Park Zoo in 1999; (12) the Conservation Excellence Award from the Oakland Zoo in 1999; (13) my book Little Big Ears received an award from the John Burroughs Foundation and the American Museum of Natural History in 1998; (14) elected Fellow of the Royal Geographical Society in 1997; (15) my film "Echo of the Elephants" received awards at Jackson Hole Wildlife Film Festival and the Italian Film Festival in 1993; (16) the Smith College Medal for alumnae achievement in 1985; (and 17) nomination of my book "Portraits in the Wild: Behavior Studies of East African Mammals" (1975, Houghton Mifflin, Boston) for the American Book Award for best science paperback of the year in 1982.

8. I am affiliated with a number of professional organizations, including: (1) the Author's Guild; (2) the Royal Geographic Society (elected Fellow); (3) the Society of Women Geographers (elected Fellow); (4) the Explorer's Club (Fellow); (5) the East African Natural History Society; (6) the East African Wild Life Society; (7) the Kenya Society for the Protection & Care of Animals; and (8) PEN America. I was a member of the IUCN/SSC African Specialist Group from 1988-1996. Throughout my career, I have continued to lecture on elephant social organization and behavior to university students, wildlife club members, and specialist groups in Kenya, India, the US, and the United Kingdom. I have also served as a Consultant to conservation groups, animal welfare organizations, zoos, and others on elephant-related issues throughout my career.

9. During the course of my research career, I have been awarded extramural research grants from a number of institutions and groups including: (1) the African Wildlife Foundation in 1975; (2) the Midgard Foundation from 1978-1979; (3) the New York Zoological Society as a Research Fellow from 1979-1984; (4) the Disney Conservation Foundation from 1996-2006; (5) the Delano Foundation from 1996-1999; (6) the International Fund for Animal Welfare (IFAW), ongoing; (7) Born Free Foundation, ongoing; (8) Detroit Zoological Society, ongoing; (9) East Bay Zoological Society, ongoing; (10) Detroit Zoological Society, ongoing; (11) Rettet die Elefanen, ongoing; (12) Fairplay Foundation, ongoing; (13) Rogers Family Foundation, ongoing; (14) Charles Engelhard Foundation, ongoing; and (15) Maue Kay Foundation, ongoing.

10. I have written six books concerning my work with elephants, including: (1) Portraits in the Wild: Behavior Studies of East African Mammals. (1975, Houghton Mifflin, Boston); (2) Portraits in the Wild: Behavior Studies of East African Mammals (Second Edition – Revised, 1982, University of Chicago Press, Chicago); (3) Elephant Memories: Thirteen Years in the Life of an Elephant Family. (1988, William Morrow, New York, also in Swedish, Finnish, Dutch, Italian, French & Spanish editions); (4) Die Elefanten Vom Kilmandscharo. (1990, Rasch und Rohring, Hamburg, German edition of Elephant Memories, with an additional chapter covering 1987-90); (5) Echo of the Elephants. (1992, BBC Books,

London, also in U.S., German and Japanese editions); (6) Little Big Ears: The Story of Ely. (1997, Simon & Schuster, New York).

11. I have served as co-editor for two books regarding my work with elephants: (1) Elephant Woman (with Laurence Pringle, 1997, Atheneum, New York), and (2) The Amboseli Elephants: A Long-Term Perspective on a Long-Lived Mammal (co-edited with H.J. Croze & P.C. Lee), 2011, University of Chicago Press, Chicago.)

12. Over the course of my career, I have also contributed chapters concerning elephant cognition and welfare to five additional books: (1) The World Book Encyclopedia (1991, Chicago: World Book); (2) Elephants: Majestic creatures of the wild (1992, editor - J. Shoshani, Weldon Owen, Sydney); (3) The Smile of a Dolphin: Remarkable Accounts of Animal Emotions (2000, editor - M. Bekoff, Discovery Books, New York); (4) Never Forgetting: Elephants and Ethics (2008, editors - C. Wemmer and K. Christen, Johns Hopkins University Press); and (5) An Elephant in the Room: the Science and Well-being of Elephants in Captivity (2009, editor - D. Forthman, Tufts University Press).

13. I have published 65 peer-reviewed scientific articles on the social structure, vocalization and communication (both short and long-range), cognition, mating behavior, maternal behavior, techniques for aging, determining diet and habitat use, mourning behavior, and elephant identification via sight and odor of human tribal groups. These articles have been published in many of the world's premier scientific journals and books, including: Nature, Science, PLoS One, Animal Behaviour, Behaviour, Journal of Wildlife Management, Behavioral Ecology and Sociobiology, Pachyderm, Journal of Zoology, Mammalian Social Learning, Molecular Ecology Notes, Biology Letters, Molecular Ecology, Current Biology, Journal of Consciousness Studies, Animal Welfare, and the Journal of Wildlife Diseases. My scientific work has also been published in: Symposium of the Zoological Society of London, Proceedings 2nd International NCRR Conference, A Research Update on Elephants and Rhinos: Proceedings of the International Elephant and Rhino Research Symposium, and Proceedings of the Royal Society B. Specific topics of these publications include: musth in the African elephant, oestrus behavior and female choice in the African elephant, age estimation and population age structure of elephants from footprint dimensions, early

maternal investment in male and female African elephant calves, social context of some very low frequency calls of African elephants, isotopic tracking of change in diet and habitat use in African elephants, statural growth in known-age African elephants, social context for learning and behavioural development among wild African elephants, matriarchs as repositories of social knowledge in African elephants, characterization of tetranucleotide microsatellite loci in the African Savannah Elephant, long-distance communication of cues to social identity in African elephants, locus size predicts the rate of allelic dropout in two large-scale noninvasive genotyping projects, early disruption of attachment can affect the physiology, behavior, and culture of animals and humans over generations, genetic relatedness predicts fission and fusion of social groups in wild African elephants, elephants show high levels of interest in the skulls and ivory of their own species, elephants classify human ethnic groups by odour and garment colour, can elephants show empathy, and fecundity and population viability in female zoo elephants.

14. In addition to my scientific publications, I have also published 30 articles in more general audience publications, including: Smithsonian, New York Times Book Review, BBC Wildlife, New Scientist, the Sunday Times Magazine, Australian Women's Weekly, Wildlife News, Ms., Swara, International Wildlife, Wildlife, Animal Kingdom, Nature's Best, ASPCA's Animal Watch, Disney's Animal Kingdom, and Geospatial Solutions.

15. In addition to my academic and general audience articles, I have also written film scripts and provided scientific consulting for several films, including: (1) "Echo of the Elephants" (1990-1992, BBC Natural History Unit, received awards at Jackson Hole Wildlife Film Festival and Italian Film Festival); (2) "Echo of the Elephants: The Next Generation" (1992-1995, BBC Natural History Unit); (3) "Africa's Forgotten Elephants" (1996-1997, Scorer Associates for BBC); (4) "Echo of the Elephants: The Last Chapter?" (2002-2005, BBC Natural History Unit); (5) "Echo and the Elephants of Amboseli (2007-2008, Animal Planet, 13-part series); (6) "Echo: An Elephant to Remember" (2009-2010, BBC Natural History Unit); and (7) "An Apology to Elephants" (2013, HBO).

16. My Curriculum Vitae fully sets forth my educational background and experience and is annexed hereto.

Basis for opinions

17. The opinions I state in this Affidavit are based on my professional knowledge, education, training, and years of experience observing and studying elephants, as well as my knowledge of peer-reviewed literature about elephant behaviour and intelligence published in the world's most respected journals, periodicals and books that are generally accepted as authoritative in the field, and many of which were written by myself or colleagues whom I have known for several years and with whose research and field work I am personally familiar. A full reference list of peer-reviewed literature cited herein is annexed hereto.

Opinions

Premise

18. Autonomy in humans is defined as self-determined behaviour that is based on freedom of choice. As a psychological concept it implies that the individual is directing their behaviour based on some non-observable, internal cognitive process, rather than simply responding reflexively. Although we cannot directly observe these internal processes in other people, we can explore and investigate them by observing, recording and analysing behaviour. For non-human animals, observing similar behaviour and recording evidence of shared cognitive capacities should, parsimoniously, lead to similar conclusions about autonomy.

19. I shall indicate which species, African (*Loxodonta Africana*) or Asian (*Elephus maximus*), specific observations relate to. If the general term 'elephants' is used with no specific delineation, it can be assumed the comment relates to both species.

Brain And Development

20. Elephants are large-brained, with the biggest absolute brain size of any land animal (Cozzi et al 2001; Shoshani et al 2006). Even relative to their body sizes, elephant brains are large. Encephalization quotients (EQ) are a standardised measure of brain size relative to body size, and illustrate by how much a species' brain size deviates from that expected for its body size. An EQ of one means the brain is exactly the size expected for that body, and values greater than one indicate a larger brain than expected (Jerison 1973).

Elephants have an EQ of between 1.3 and 2.3 (varying between sex and African and Asian species). This means an elephant's brain can be up to two and a half times larger than is expected for an animal of its size; this EQ is similar to that of the great apes, with whom elephants have not shared a common ancestor for almost 100 million years (Eisenberg 1981, Jerison 1973). Given how metabolically costly brain tissue is, the large brains of elephants must confer significant advantages; otherwise their size would be reduced. Presumably this advantage is allowing greater intelligence and behavioural flexibility (Bates et al 2008).

21. Generally, mammals are born with brains weighing up to 90% of the adult weight. This figure drops to about 50% for chimpanzees. Human baby brains weigh only about 27% of the adult brain weight (Dekaban & Sadowsky 1978). This long period of brain development over many years (termed 'developmental delay') is a key feature of human brain evolution and is thought to play a role in the emergence of our complex cognitive abilities, such as self-awareness, creativity, forward planning, decision making and social interaction (Bjorkland 1997). Delayed development provides a longer period in which the brain may be shaped by experience and learning (Furster 1992). Elephant brains at birth weigh only about 35% of their adult weight (Eltringham 1982), and elephants show a similarly protracted period of growth, development and learning (Lee 1986). This similar developmental delay in the elephant brain is therefore likely associated with the emergence of similarly complex cognitive abilities.

22. Despite nearly 100 million years of separate evolution (Hedges 2001), elephants share certain characteristics of our large brains, namely deep and complex folding of the cerebral cortex, large parietal and temporal lobes, and a large cerebellum (Cozzi et al 2001). The temporal and parietal lobes of the cerebral cortex manage communication, perception, and recognition and comprehension of physical actions (Textbook ref), while the cerebellum is involved in planning, empathy, and predicting and understanding the actions of others (Barton 2012). Thus, the physical similarities between human and elephant brains occur in areas that are relevant to capacities necessary for autonomy and self-awareness.

23. Elephant brains hold nearly as many cortical neurons as do human brains, and a much greater number than chimpanzees or bottlenose dolphins (humans: 1.15×10^{10};

elephants: 1.1 x 10^{10}, chimpanzees: 6.2 x 10^{9}; dolphins: 5.8 x 10^{9}, Roth & Dicke 2005). Elephants' pyramidal neurons (a class of neuron that is found in the cerebral cortex, particularly the pre-frontal cortex - the brain area that controls executive functions) are larger than in humans and most other species (Cozzi et al 2001). The degree of complexity of pyramidal neurons is linked to cognitive ability, with more (and more complex) connections between pyramidal neurons being associated with increased cognitive capabilities (Elston 2003). Elephant pyramidal neurons have a large dendritic tree, i.e. a large number of connections with other neurons for receiving and sending signals (Cozzi et al 2001).

24. Elephants, like humans, great apes and some cetaceans, possess *von Economo neurons*, or spindle cells – the so-called 'air-traffic controllers for emotions' - in the anterior cingulate, fronto-insular, and dorsolateral prefrontal cortex areas of the brain (Hakeem et al 2009). In humans, these cortical areas are involved - among other things - in the processing of complex social information, emotional learning and empathy, planning and decision-making, and self-awareness and self-control (Allman et al 2001; Allman et al 2002; Allman et al 2011). The shared presence of spindle cells in the same brain locations in elephants and humans strongly implies these higher-order brain functions – the building blocks of autonomous, self-determined behaviour - are common between these species (Butti et al 2009; Hakeem et al 2009).

25. As described below, evidence demonstrates that along with these common brain and life-history characteristics, elephants share many behavioural and intellectual capacities with humans, including: self-awareness, empathy, awareness of death, intentional communication, learning, memory, and categorisation abilities. Many of these capacities have previously been considered – erroneously - to be uniquely human, and each is fundamental to and characteristic of autonomy and self-determination.

Awareness Of Self And Others

26. Asian elephants have been shown to exhibit Mirror Self Recognition (MSR) using Gallup's classic 'mark test' (Gallup 1970; Plotnik et al 2006). MSR is the ability to recognise a reflection in the mirror as oneself, and the mark test involves surreptitiously

placing a coloured mark on an individual's forehead that it could not see or be aware of without the aid of a mirror. If the individual uses the mirror to investigate the mark, it is logical to assume that the individual recognises the reflection as itself. Almost all animals tested on this task fail: they do not recognise the image in the mirror as being a reflection of themselves. Indeed, the only other mammals beyond humans who have successfully passed the mark test and exhibit MSR are the great apes (chimpanzees, bonobos, gorillas and orangutans) and bottlenose dolphins (Parker and Mitchell 1994, Reiss and Marino 2001). MSR is significant because it is considered to be the key identifier of self-awareness. Self-awareness is intimately related to autobiographical memory in humans (Prebble et al 2011), and is central to autonomy and being able to direct one's own behaviour to achieve personal goals and desires. By demonstrating that they can recognize themselves in a mirror, elephants must be holding a mental representation of themselves from another perspective, and thus be aware that they are a separate entity from others (Bates and Byrne 2014).

27. Related to possessing a sense of self is an understanding of death. Observing reactions to dead family or group members suggests an awareness of death in only two animal genera beyond humans; chimpanzees and elephants (Anderson et al 2010, Douglas-Hamilton et al 2006). Having a mental representation of the self – a pre-requisite for mirror-self recognition – probably also confers an ability to comprehend death. Wild African elephants have been shown experimentally to be more interested in the bones of dead elephants than the bones of other animals (McComb et al 2006), and they have frequently been observed using their tusks, trunk or feet to attempt to lift sick, dying or dead individuals (refs in Poole & Granli signals chapter, Amboseli book). Although they do not give up trying to lift or elicit movement from the body immediately, elephants appear to realise that once dead, the carcass cannot be helped anymore, and instead they engage in more 'mournful' behaviour, such as standing guard over the bodies, and apparently protecting it from the approaches of predators (refs in Poole & Granli signals chapter, Amboseli book). They also have been observed to cover the bodies of dead elephants with dirt and vegetation (Moss 1992; Poole 1996). In the particular case of mothers who lose a calf, although they may remain with the calf's body for an extended period, they do not behave towards the body as

they would a live calf. Indeed, the general demeanour of elephants who are attending to a dead elephant is one of grief and compassion, with slow movements and few vocalisations (Poole, pers. comm.). These behaviours are akin to human responses to the death of a close relative or friend, and illustrate that elephants possess some understanding of life and the permanence of death.

28. The capacity for mentally representing the self as an individual entity has been linked to general empathic abilities (Gallup 1982), where empathy can be defined as identifying with and understanding another's experiences or feelings by imagining what it would be like to be in their situation. Empathy is an important component of human consciousness and autonomy, and is a cornerstone of normal social interaction. It goes beyond merely reading the emotional expressions of others. It requires modelling of the emotional states and desired goals that influence others' behaviour both in the past and future, and using this information to plan one's own actions; empathy is only possible if one can adopt or imagine another's perspective, and attribute emotions to that other individual (Bates et al 2008). Empathy is, therefore, a component of and reliant on 'Theory of Mind' - the ability to mentally represent and think about the knowledge, beliefs and emotional states of others, whilst recognising that these can be distinct from your own knowledge, beliefs and emotions (Premack and Woodruff// Frith and Frith 2005).

29. Elephants clearly and frequently display empathy in the form of protection, comfort and consolation, as well as by actively helping those who are in difficulty, such as assisting injured individuals to stand and walk, or helping calves out of rivers or ditches with steep banks (Bates et al 2008, Lee 1987). Elephants have even been observed feeding those who are not able to use their own trunks to eat (see Poole and Granli signals chapter in Amboseli book).

30. In an analysis of behavioural data collected from wild African elephants over a 43-year continuous field study, we concluded that as well as possessing their own intentions, elephants can diagnose animacy and goal directedness in others, understand the physical

competence and emotional state of others, and attribute goals and mental states (intentions) to others (Bates et al 2008), as evidenced in the examples below:

> *'IB family is crossing river. Infant struggles to climb out of bank after its mother. An adult female [not the mother] is standing next to calf and moves closer as the infant struggles. Female does not push calf out with its trunk, but digs her tusks into the mud behind the calf's front right leg which acts to provide some anchorage for the calf, who then scrambles up and out and rejoins mother.'*
>
> *'At 11.10ish Ella gives a 'lets go' rumble as she moves further down the swamp . . . At 11.19 Ella goes into the swamp. The entire group is in the swamp except Elspeth and her calf [<1 year] and Eudora [Elspeth's mother]. At 11.25 Eudora appears to 'lead' Elspeth and the calf to a good place to enter the swamp — the only place where there is no mud.'*

Examples such as these demonstrate that the acting elephant (the adult female in the first example, and Eudora in the second) was able to understand the intentions of the other (the calf in the first case, and Elspeth in the second) – i.e. to either climb out of or into the water – and they could adjust their own behaviour in order to counteract the problem being faced by the other. Whilst humans may act in this helpful manner on a daily basis, such interactions have been recorded for very few non-human animals (Bates et al 2008).

31. Experimental evidence from captive African elephants further demonstrates that elephants attribute intentions to others, as they follow and understand human pointing gestures - the only animal so far shown to do so spontaneously. The elephants understood that the human experimenter was pointing in order to communicate information to them about the location of a hidden object (Smet and Byrne 2013). Attributing intentions and understanding another's reference point is central to empathy and theory of mind.

32. Evidence of 'natural pedagogy' is rare among non-human animals, with only a few potential examples of true teaching (whereby the teacher takes into account the knowledge states of the learner as they pass on relevant information) recorded anecdotally in

chimpanzees (Boesch 1991) and killer whales (Guinet and Bouvier 1995)[1]. Teaching is therefore still widely considered to be unique to humans (Csibra and Gergely 2009). Our analysis of simulated oestrus behaviours in African elephants – whereby a non-cycling, sexually experienced older female will simulate the visual signals of being sexually receptive, even though she is not ready to mate or breed again – shows that these knowledgeable females adopt false oestrus behaviours in order to demonstrate to naïve young females how to attract and respond appropriately to suitable males. The experienced females may be taking the youngsters lack of knowledge into account and actively showing them what to do; a possible example of true teaching as it is defined in humans. Whilst this possibility requires further investigation, this evidence, coupled with the data showing that they understand the ostensive cues in human pointing, suggests that elephants do share some executive skills with humans, namely understanding the intentions and knowledge states (minds) of others.

33. Further related to empathy, coalitions and cooperation have been documented in wild African elephants, particularly to defend family members or close allies from (potential) attacks by outsiders, such as when a family group tries to 'kidnap' a calf from an unrelated family (Lee 1987, Moss and Poole 1983). These behaviours are based on one elephant understanding the emotions and goals of the coalition partner (Bates et al 2008).

34. Cooperation is also evident in experimental tests with captive Asian elephants, whereby elephants demonstrated they can work together in pairs to obtain a reward, and understood that it was pointless to attempt the task if their partner was not present or could not access the equipment (Plotnik et al 2011). Problem-solving and working together to achieve a collectively desired outcome involve mentally representing both a goal and the sequence of behaviours that is required to achieve that goal; it is based on (at the very least) short-term action planning.

35. Wild elephants have frequently been observed engaging in cooperative problem solving, for example when retrieving calves that have been kidnapped by other groups, or

[1] Functional teaching has been experimentally demonstrated in various animal species including ants, babblers, meerkats, cheetahs and some primates, but this is not the same as deliberate pedagogy, as it does not rely on representing the knowledge states of the learners.

when helping calves out of steep, muddy river banks (Bates et al 2008, Moss Amboseli book…) These behaviours demonstrate the purposeful and well-coordinated social system of elephants, and show that elephants can hold particular aims in mind and work together to achieve those goals. Such intentional, goal-directed action forms the foundation of independent agency, self-determination, and autonomy.

36. Elephants also show innovative problem solving in experimental tests of insight (Foerder et al 2011), where insight can be defined as the 'a-ha' moment when a solution to a problem 'suddenly' becomes clear. (In cognitive psychology terms, insight is the ability to inspect and manipulate a mental representation of something, even when you can't physically perceive or touch the something at the time. Or more simply, insight is thinking and using only thoughts to solve problems (Byrne, in press). A juvenile male Asian elephant demonstrated just such a spontaneous action by moving a plastic cube and standing on it to obtain previously out-of-reach food. After solving this problem once, he showed flexibility and generalization of the technique to other, similar problems by using the same cube in different situations, or different objects in place of the cube when it was not available. This experiment again demonstrates that elephants can choose the appropriate action and incorporate it into a sequence of behaviour in order to achieve a goal, which they kept in mind throughout the process.

37. Further experiments also demonstrate Asian elephants ability to understand goal-directed behaviour. When presented with food that was out of reach, but with some bits resting on a tray that could be pulled within reach, the elephants learned to pull only those trays that were baited with food (Irie-Sugimoto et al 2007). Success in this kind of 'means-end' task is a demonstration of causal knowledge, which requires understanding not just that two events are associated with each other but also that there is some mediating force that connects and affects the two which may be used to predict and control events. Moreover, understanding causation and inferring object relations may be related to understanding psychological causation, i.e., the appreciation that others are animate beings that generate their own behaviour and have mental states (e.g., intentions).

Communication and social learning

38. Speech is a voluntary behaviour in humans, whereby a person can choose whether to utter words and thus communicate with another. Therefore speech and language are reflections of autonomous thinking and intentional behaviour. Elephants also use their vocalisations to share knowledge and information with others, apparently intentionally (Poole 2011). Male elephants primarily communicate about their sexual status, rank and identity, whereas females and dependents call to emphasise and reinforce their social units. Call types can generally be separated into laryngeal calls (such as rumbles) or trunk calls (such as trumpets), with different calls in each category being used in different contexts (Poole 2011; Poole and Granli 2004; Soltis et al 2005; Wood et al 2005). Field experiments have shown that African elephants distinguish between different call types (for example, contact calls – rumbles that travel long distances to maintain associations between elephants that could be several kilometres apart, or oestrus rumbles – that occur after a female has copulated) and these different call types elicit different responses in the listeners. Elephant vocalisations are not simply reflexive, they have distinct meanings to listeners and they are truly communicative, similar to the volitional use of language in humans (Leighty et al 2008; Poole 1999; Poole 2011).

39. Furthermore, elephants have been shown to vocally imitate the sounds they hear around them, from the engines of passing trucks to the commands of human zookeepers (Poole et al 2005, Stoeger et al 2012). Imitating another's behaviour is demonstrative of a sense of self, as it is necessary to understand how one's own behaviour relates to the behaviour of others.

40. Elephants display a wide variety of gestures, signals and postures, used to communicate information to the audience (Poole and Granli gestures chapter 2011). Such signals are adopted in many different contexts, such as aggressive, sexual or socially integrative situations, and each signal is well defined and results in predictable responses from the audience. That is, each signal or gesture has a specific meaning both to the actor and recipient. Elephants' use of gestures demonstrates that they communicate intentionally and

purposefully to share information with others and/or alter the others' behaviour to fit their own will.

41. Experimental evidence demonstrates that African elephants recognize the importance of visual attentiveness of the intended recipient (in this case, human experimenters) of gestural communication (Smet & Byrne 2014), further supporting the suggestion that elephants' gestural communication is intentional and purposeful. Furthermore, the ability to understand the visual attentiveness and perspective of others is crucial for empathy and mental-state understanding.

Memory And Categorisation

42. Elephants have both extensive and long-lasting memories, just as the folk stories and adages encourage us to believe. McComb et al. (2000), using experimental playback of long-distance contact calls in Amboseli National Park, Kenya, showed that African elephants remember and recognize the voices of at least 100 other elephants. Each adult female elephant tested was familiar with the contact-call vocalizations of individuals from an average of 14 families in the population. When the calls were from a familiar family— that is, one that had previously been shown to have a high association index with the test group—the test elephants contact-called in response and approached the location of the loudspeaker. When a test group heard unfamiliar contact calls (from groups with a low association index with the test group), they bunched together and retreated from the area.

43. McComb et al (2001) went on to show that this social knowledge accrues with age, with older females having the best knowledge of the contact calls of other family groups. McComb et al (2011) also showed that older females are better leaders, with more appropriate decision-making in response to potential threats (in this case, in the form of hearing lion roars). Younger matriarchs under-reacted to hearing roars from male lions, potential predators of elephant calves. Sensitivity to hearing this sound increased with increasing matriarch age, with the oldest, most experienced females showing the strongest response to this danger. These experimental studies show that elephants continue to learn and remember information about their environments throughout their lives, and this accrual of

knowledge allows them to make better decisions and better lead their families as they grow older.

44. Further demonstration of elephants' long-term memory comes from data on their movement patterns. African elephants are known to move over very large distances in their search for food and water. Leggett (2006) used GPS collars to track the movements of elephants living in the Namib Desert. He recorded one group traveling over 600 km in five months, and Viljoen (1989) showed that elephants in the same region visited water holes approximately every four days, even though some of them were more than 60km apart. Elephants inhabiting the deserts of both Namibia and Mali have been described traveling hundreds of kilometers to arrive at remote water sources shortly after the onset of a period of rainfall (Blake et al. 2003; Viljoen 1989), sometimes along routes that researchers believe have not been used for many years. These remarkable feats suggest exceptional cognitive mapping skills, reliant on the long-term memories of older individuals who traveled that path sometimes decades earlier. Indeed it has been confirmed that family groups with older matriarchs are better able to survive periods of drought. The older matriarchs lead their families over larger areas during droughts than those with younger matriarchs, again apparently drawing on their accrued knowledge (this time about the locations of permanent, drought-resistant sources of food and water) to better lead and protect their families (Foley, Pettorelli, and Foley 2008).

45. It has recently been shown that long-term memories, and the decision-making mechanisms that rely on this knowledge, are severely disrupted in elephants who have experienced trauma or extreme disruption due to 'management' practices initiated by humans. Shannon et al (2013) demonstrated that elephants in South Africa who had experienced trauma decades earlier showed significantly reduced social knowledge. During archaic culling practices, these elephants were forcibly separated from family members and subsequently translocation to new locations. Two decades later, they still showed impoverished social knowledge and skills and impaired decision-making abilities, compared with an undisturbed population in Kenya. Disrupting elephants' natural way of life can negatively impact their knowledge and decision-making abilities.

46. Elephants demonstrate advanced 'working memory' skills. Working memory is the ability to temporarily store, recall, manipulate and coordinate items from memory. Working memory directs attention to relevant information, and results in reasoning, planning, and coordination and execution of cognitive processes through use of a 'central executive' (Baddeley 2000). Adult human working memory is generally thought to have a capacity of around seven items. In other words, we can keep about seven different items or pieces of information in mind at the same time (Miller 1956). We conducted experiments with wild elephants in Amboseli National Park, Kenya, manipulating the location of fresh urine samples from related or unrelated elephants. The elephants' responses to detecting urine from known individuals in surprising locations showed that they are able to continually track the locations of at least 17 family members in relation to themselves, as either absent, present in front of self, or present behind self (Bates et al. 2008a). This remarkable ability to hold in mind and regularly update information about the locations and movements of a large number of family members is best explained by predicting that elephants possess an unusually large working memory capacity, apparently much larger than that of humans.

47. Elephants show sophisticated categorisation of their environment, with skills on a par with those of humans. We experimentally presented the elephants of Amboseli National Park, Kenya, with garments that gave olfactory or visual information about their human wearers - either Maasai moran (male warriors who traditionally attack and spear elephants on occasion as part of their rite of passage), or Kamba men (who are agriculturalists and traditionally pose little threat to elephants). In the first experiment, the only thing that differed between the cloths was the smell, derived from the ethnicity and/or lifestyle of the wearers. The elephants were significantly more likely to run away when they sniffed cloths worn by Maasai than those worn by Kamba men or no one at all. In a second experiment, we presented the elephants with two cloths that had not been worn by anyone, but here one was white (a neutral stimulus) and the other was red—the color that is ritually worn by Maasai moran. With access only to these visual cues, the elephants showed significantly greater reaction to red garments than white, often including signs of aggression. We concluded that elephants are able to categorize a single species (humans) into sub-classes (i.e. 'dangerous' or

'low risk') based on either olfactory or visual cues alone (Bates et al. 2007). McComb et al went on to show that the same elephants can also distinguish between human groups based on our voices. The elephants reacted differently (and appropriately) depending on whether they heard Maasai or Kamba men speaking, and also when they heard male or female Maasai (where female Maasai pose no threat as they are not involved in spearing events), and adult Maasai men or young Maasai boys (McComb et al 2014). Scent, sounds and visual signs associated specifically with Maasai men are categorized as 'dangerous', while neutral signals are attended to but categorized as 'low risk'. These sophisticated, multi-modal categorization skills may be exceptional among non-human animals.

Summary

48. Both African and Asian elephants evidently share many key traits of autonomy with humans, and so parsimoniously it must be concluded that elephants are also autonomous beings.

49. Scientific knowledge about elephant intelligence has been increasing rapidly in the past decade: what we currently know is only a tiny fraction of what elephant brains are likely capable of, and yet more amazing abilities are still likely to be discovered.

Cynthia J. Moss

Subscribed and sworn to before me
this 6 day of May, 2017

KEVIN ROBERT SCHNEIDER
Notary Public, State of New York
No. 02SC6301718
Qualified in New York County
Commission Expires April 21, 2018

Notary Public

Signature

My Commission Expires: April 21, 2018

A-236

EXHIBIT A TO MOSS AFFIDAVIT - CURRICULUM VITAE OF CYNTHIA J. MOSS [A-236 - A-242]

CURRICULUM VITAE

NAME: Cynthia J. Moss

ADDRESS: P.O. Box 15135
Langata 00509
Nairobi, Kenya
Tel: +254 722 208 762
E-mail: cmoss@elephanttrust.org

DATE OF BIRTH: July 24, 1940

PLACE OF BIRTH: Ossining, New York

NATIONALITY: U.S.A. (resident of Kenya)

EDUCATION: BA, Smith College, 1962; D.Sc., Smith College, 2002

PRESENT POSITION: Director, Amboseli Elephant Research Project
Amboseli Trust for Elephants

PROFESSIONAL HISTORY:

1972-present: Director Amboseli Elephant Research Project and since 2001 Director of the Amboseli Trust for Elephants. Set up long-term research project on the elephant population in the Amboseli ecosystem in southern Kenya. Conducted research on the distribution, demography, population dynamics, social organization and behavior of the Amboseli elephants. Present activities include: directing and supervising research and monitoring; training elephant researchers from African elephant range states; outreach to Maasai community; carrying out surveys and training courses at other elephant study sites in Africa; disseminating scientific results; advocating for elephant welfare; promoting public awareness by writing popular articles and books and by making films about elephants; fund raising for and administering Project.

1971-1985: Editor of African Wildlife Foundation's *Wildlife News.*

1970-1971: Part-time work as freelance journalist, mainly for *Time* and *Life* magazines.

1969-1970: Research assistant to Drs. A.M. and S. Harthoorn, veterinary research, Nairobi, 6 months; compiled and wrote a 75-page report on elephants for Cinema Center Films' "The African Elephant", 6 months; research assistant to Dr. V. Finch, environmental physiology project on eland, hartebeest, zebra, wildebeest, ostrich, and Boran cattle, Athi Plains, Kenya, 2 months; research assistant to Dr. J.B. Sale, U. of Nairobi, feeding ecology of elephants in Tsavo National Park, Kenya, 2 months.

1968: Research Assistant to Dr. I. Douglas-Hamilton, elephant behaviour and ecology, Lake Manyara National Park, Tanzania, 8 months. (Subsequently worked on the project for shorter periods in 1969, 1970, and 1971.)

1964-1968: Reporter/Researcher, *Newsweek* Magazine, New York.

GRANTS, FELLOWSHIPS, AWARDS:

1975	African Wildlife Foundation grant
1978 - 1979	Midgard Foundation grant
1979 - 1984	Research Fellow, grants, New York Zoological Society
1982	*Portraits in the Wild* nominated for American Book Award for best science paperback of the year
1985	Smith College Medal for alumnae achievement
1993	"Echo of the Elephants" received awards at Jackson Hole Wildlife Film Festival and Italian Film Festival.
1996-2006	Disney Conservation Foundation grants
1996-1999	Delano Foundation grants
1997	Elected Fellow of the Royal Geographic Society
1998	*Little Big Ears* received an award from the John Burroughs Foundation and the American Museum of Natural History
1999	Conservation Excellence Award from the Oakland Zoo
1999	Centennial Conservation Award from Woodland Park Zoo
1999, 2000, 2001	Sabbatical fellowships at National Center for Ecological Analysis & Synthesis, University of California, Santa Barbara
2000	Howard Gilman Foundation grant
2001-ongoing	Advisor to the International Fund for Animal Welfare
2001	Elected Fellow of the Society of Women Geographers
2002-2007	John D. & Catherine T. MacArthur Foundation Fellowship
2002	Award from Performing Animal Welfare Society (PAWS)
2002	Smith College Honorary Doctorate Degree
2002	Distinguished Conservation Fellow Award, LA Zoo
2004	Guardian Award from In Defense of Animals
2005	Conservation Award, Cincinnati Zoo

PROFESSIONAL ACTIVITIES:

1988-1996	IUCN/SSC African Elephant Specialist Group member
Ongoing:	Lectures on elephant social organization and behaviour to university students, wildlife club members, and specialist groups in Kenya, India, U.S., and U.K.
Ongoing:	Consultant to conservation groups, animal welfare organizations, zoos and others on elephant-related issues

MEMBERSHIPS:

American Museum of Natural History
Authors Guild
East African Natural History Society
East African Wild Life Society
Flying Doctors Society of Kenya
Kenya Society for the Protection & Care of Animals
PEN America
Royal Geographic Society (Fellow)
Society of Women Geographers (Fellow)
Explorers Club (Fellow)

PUBLICATIONS

BOOKS:

Moss, Cynthia (1975) *Portraits in the Wild: Behavior Studies of East African Mammals.* Houghton Mifflin, Boston.
(1982) *Portraits in the Wild: Behavior Studies of East African Mammals* (Second Edition - Revised). University of Chicago Press, Chicago.
(1988) *Elephant Memories: Thirteen Years in the Life of an Elephant Family.* William Morrow, New York. (Also in Swedish, Finnish, Dutch, Italian, French & Spanish editions.)
(1990) *Die Elefanten Vom Kilmandscharo.* Rasch und Rohring, Hamburg (German edition of *Elephant Memories,* with an additional chapter covering 1987-90).
(1992) *Echo of the Elephants.* BBC Books, London. (Also in U.S., German and Japanese editions.)
(1997) *Little Big Ears: The Story of Ely.* Simon & Schuster, New York.
Pringle, Laurence & **Moss, Cynthia** (1997) *Elephant Woman.* Atheneum, New York.
Moss, C.J. & Croze, H.J. (eds) (2011) *The Amboseli Elephants: A Long-Term Perspective on a Long-Lived Mammal.* University of Chicago Press, Chicago.

BOOK CHAPTERS:

Moss, Cynthia (1991) Elephant. In: *The World Book Encyclopedia,* Chicago: World Book, pp. 224-230.
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Lee, P.C. & **Moss, C.J.** (2009). Welfare and well-being of captive elephants: perspectives from wild elephant life histories. In: Forthman, D. (Ed) *An Elephant in the Room: the Science and Well Being of Elephants in Captivity.* Tufts University Press, MA.

SCIENTIFIC PUBLICATIONS IN JOURNALS AND BOOKS:

1. Poole, J.H. & **Moss, C.J.** (1981) Musth in the African elephant, Loxodonta africana. *Nature,* 292, 830-831.
2. Douglas-Hamilton, I., Hillman, A.K.K. & **Moss, C.J.** (1981) Notes on vertical photography of elephants for age determination. *ILCA Monographs,* 4, 131-142.
3. **Moss, C.J.** & Poole, J.H. (1983) Relationships and social structure of African elephants. In *Primate Social Relationships: An Integrated Approach* (ed R.A. Hinde), pp. 315-325. Blackwell Scientific Publications, Oxford
4. Poole, J.H. & **Moss, C.J.** (1983) Musth discovered in the African elephant. *African Elephant and Rhino Newsletter,* 1:8.
5. **Moss, C.J.** (1983) Oestrous behaviour and female choice in the African elephant. *Behaviour,* 86, 167-196.
6. Western, D., **Moss, C.J.** & Georgiadis, N. (1983) Age estimation and population age structure of elephants from footprint dimensions. *JWildlManage,* 47, 1192-1197.

7. Lee, P.C. & **Moss, C.J**. (1986) Early maternal investment in male and female African elephant calves. *BehavEcolSociobiol*, 18, 353-361.
8. Poole, J.H., Payne, K., Langbauer Jr., W.R. & **Moss, C.J.** (1988) The social context of some very low frequency calls of African elephants. *BehavEcolSociobiol*, 22, 385-392.
9. Poole, J.H. & **Moss, C.J.** (1990) Elephant mate searching: group dynamics and vocal and olfactory communication. *Symposium of the Zoological Society of London*, 61, 111-125.
10. **Moss, C.J.** (1990) Elephants in Tarangire. *Pachyderm*, 13, 26-30.
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12. **Moss, C.J.** (1991) Chobe *National Park elephant age structure survey*. Report to Dept. of Wildl. & Nat. Parks, Botswana,
13. **Moss, C.J.** (1994) Some reproductive parameters in a population of African elephants, Loxodonta africana. In *Proceedings 2nd International NCRR Conference* (ed C.H. Bambra), pp. 284-292. Institute of Primate Research, Nairobi.
14. Koch, P.L., Heisinger, J., **Moss, C.**, Carlson, R.W., Fogel, M.L., & Behrensmeyer, A.K. (1995) Isotopic tracking of change in diet and habitat use in African elephants. *Science*, 267:1340-1343.
15. Lee, P.C. & **Moss, C.J.** (1995) Statural growth in known-age African elephants (*Loxodonta africana*). *J.Zool., Lond.* 236: 29-41.
16. **Moss, C.J.** (1996) Getting to know a population. In: Kangwana, K. (ed.), *Studying Elephants*. Nairobi: African Wildlife Foundation Technical Handbook Series, 7: 58-74.
17. Lee, P.C. & **Moss, C.J.** (1999) The social context for learning and behavioural development among wild African elephants. In: Box, H.O. & Gibson, K.R. (eds) *Mammalian Social Learning*. Cambridge University Press, Cambridge, 102-125.
18. McComb, K., **Moss, C.J.**, Sayialel, S. & Baker, L. (2000) Unusually extensive networks of vocal recognition in African Elephants. *Animal Behaviour, 59: 1103-1109.*
19. Muruthi, P., Stanley Price, M, Soorae, P., **Moss, C.**, Lanjouw, A. (2000) Conservation of large mammals in Africa. What lessons and challenges for the future? In: Entwistle, A & Dunstone, N. (eds) *Priorities for Conservation of Mammalian Diversity. Has the Panda had its Day?* Cambridge University Press, Cambridge, 207-219.
20. McComb, K. **Moss, C.**, Durant, S.M., Baker, L. & Sayialel, S. (2001) Matriarchs as repositories of social knowledge in African elephants. *Science, 292: 491-494.*
21. **Moss, C.J.** (2001) The demography of an African elephant (*Loxodonta africana)* population in Amboseli, Kenya. *J. Zool., Lond. 255: 145-156*
22. **Moss, C.J.** (2002) Elephant research in Amboseli: a perspective from 28 years. In: Schwammer, H.M, Foose, T.J., Fouraker, M, & Olson, D. (eds) *A Research Update on Elephants and Rhinos: Proceedings of the International Elephant and Rhino Research Symposium, Vienna, June 7-11, 2001,* Schuling, Munster, 96-102.
23. Archie, E.A., **Moss, C.J.** and Alberts, S.C. (2003) Characterization of tetranucleotide microsatellite loci in the African Savannah Elephant (*Loxodonta africana africana*). *Molecular Ecology Notes*, 3: 244-246.
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25. Morrison, T.A., Chiyo, P., **Moss, C.J.**, & Alberts, S.C. (2005). Measures of dung bolus size for known age African elephants: implications for age estimation. *Journal of Zoology,* (London) 266: 89-94.
26. Buchan, J.C., Archie, E.A., Van Horn, R.C., **Moss, C.J.**, Alberts, S.C. (2005) Locus size predicts the rate of allelic dropout in two large-scale noninvasive genotyping projects. *Molecular Ecology Notes.*

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30. McComb, K. Baker, L., & **Moss, C.** (2006) Elephants show high level of interest in the skulls and ivory of their own species. *Biology.Letters*, 2: 26-28.
31. Archie, E.A., Hollister-Smith, J.A., Poole, J.H., Lee, P.H., **Moss, C.J.**, Maldonado, J.E., Fleischer, R.C., Alberts, S.C. (2007) Behavioural inbreeding avoidance in wild African elephants. *Molecular Ecology*, 16: 4128-4148.
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35. Hollister-Smith, J.A., Poole, J.H., Archie, E.A., Vance, E.R., Georgiadis, N.J., **Moss, C.J.**, & Alberts, S.C. (2007). Older is better: reproductive success increases with age in wild male African elephants. *Animal Behaviour*, 74: 287-296.
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45. Wild female African elephants (Loxodonta africana) exhibit personality traits of leadership and social integration. Lee PC, **Moss CJ**. J Comp Psychol. 2012 Aug;126(3):224-32. doi: 10.1037/a0026566. PMID: 22905995 [PubMed - indexed for MEDLINE]
46. Enduring consequences of early experiences: 40 year effects on survival and success among African elephants (Loxodonta africana). Lee PC, Bussière LF, Webber CE, Poole JH, **Moss CJ**. Biol Lett. 2013 Feb 13;9(2):20130011. doi: 10.1098/rsbl.2013.0011. Print 2013 Apr 23. PMID: 23407501 [PubMed - indexed for MEDLINE]
47. The influence of social structure, habitat, and host traits on the transmission of Escherichia coli in wild elephants. Chiyo PI, Grieneisen LE, Wittemyer G, **Moss CJ**, Lee PC, Douglas-Hamilton I, Archie EA. PLoS One. 2014 Apr 4;9(4):e93408. doi: 0.1371/journal.pone.0093408. eCollection 2014. PMID: 24705319 [PubMed - in process] Free PMC Article

POPULAR ARTICLES:

Moss, Cynthia (1975) The ugly hyena turns out to be a superb predator. *Smithsonian,* 6(3): 38-45.
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(1976) Serengeti perhaps will die (Review of The Last Place on Earth by Harold T.P. Hayes). *The New York Times Book Review,* April 17, pp. 11, 29.
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(1992) Ely's battle for life. *The Sunday Times Magazine,* October 4, pp. 20-24.
(1993) Echo's entourage. *BBC Wildlife,* 11(1): 34-38.
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(1993) How to flog a dead zebra. Review of: *At the Hand of Man: Peril and Hope for Africa's Wildlife* by Raymond Bonner, in *New Scientist,* 11 December, No. 1903: 43-44.
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(1999) Thirty baby elephants. *ASPCA's Animal Watch,* Spring, pp. 21-23.
(1999) Three days in Amboseli. *Disney's Animal Kingdom,* Preview Issue, pp. 100-104.
Moss, Cynthia & Croze, Harvey (2002) Spatial elephant memories. *Geospatial Solutions,* October, pp. 32-37.

FILM SCRIPTS AND SCIENTIFIC CONSULTING FOR FILMS:

1990-1992	"Echo of the Elephants", BBC Natural History Unit
1992-1995	"Echo of the Elephants: The Next Generation", BBC Natural History Unit
1996-1997	"Africa's Forgotten Elephants", Scorer Associates for BBC
2002-2005	"Echo of the Elephants: The Last Chapter?", BBC Natural History Unit
2007-2008	"Echo and the Elephants of Amboseli, Animal Planet 13-part series
2009-2010	"Echo: An Elephant to Remember", BBC Natural History Unit
2013	"An Apology to Elephants", HBO.

SUPPLEMENTAL AFFIDAVIT OF JOYCE POOLE, FOR PETITIONER, IN SUPPORT OF PETITION, OCTOBER 1, 2018 [A-243 - A-245]

COUNTRY OF NORWAY)
PROVINCE OF VESTFOLD) ss.: COPY
MUNICIPALITY OF SANDEFJORD)

Supplemental Affidavit of Joyce Poole

Joyce Poole being duly sworn, deposes and says:

Introduction and Qualifications

1. My name is Joyce Poole. My background and qualifications are set out in my original affidavit in this matter.

2. I submit this affidavit in support of The Nonhuman Rights Project, Inc. (NhRP). I have personal knowledge of the facts to which I attest, and am not a party to this proceeding.

3. Elephants are highly intelligent, social animals. In elephant society an intricate network of relationships radiates outward from the mother-offspring bond through the extended family and the bond group, to clan, population and beyond to strangers, including the primary predatory threat to their survival: Humans. Some 300 documented behaviors, gestures and calls have evolved helping to mediate and maintain these relationships, to communicate over miles, and to direct extraordinarily coordinated bonding ceremonies and group defense.

4. Over millions of years elephants have roamed the earth as intelligent and social mammals, capable of planning, negotiating and engaging in collective decision making. Active more than 20 hours each day elephants move many miles across landscapes to locate resources to maintain their large bodies, to connect with friends and to search for mates. Elephants have evolved to move. Holding them captive and confined prevents them from engaging in normal, autonomous behavior and can result in the development of arthritis, osteoarthritis, osteomyelitis, boredom and stereotypical behavior. Held in isolation elephants become bored, depressed, aggressive, catatonic and fail to thrive. Human caregivers are no substitute for the numerous, complex social relationships and the rich gestural and vocal communication exchanges that occur between free-living elephants.

5. For elephants in captivity, especially those born into it or kept there for a majority of their lives, going back to the "wild" is unfortunately not an option. For these

elephants, human-run sanctuaries are currently the best option. And while a captive elephant is generally better off with the company of another elephant, this is at best a small comfort and no justification for the deprivation of autonomy and free movement that results.

Joyce Poole, Ph.D.

Sworn to before me
this ____ day of _____, 2018

_____
Notary Public

The undersigned Notary Public hereby certifies that Joyce Hatheway Poole signed this document in my presence

Sandefjord tingrett, 1 October 2018

Notary Public
Ailin Therese Ugland

SANDEFJORD NOTARIUS PUBLICUS

A-245

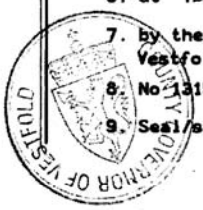
APOSTILLE

(Convention de La Haye du octobre 1961)

1. Country: Norway
2. This public document has been signed by:
   Ailin Therese Ugland
3. Acting in the capacity of:
   Notary public
4. bears the seal/stamp of:
   The Notarius publicus of Sandefjord

Certified

5. at Tønsberg 6. the 01.10.2018
7. by the Governor of the counties of Vestfold
8. No 13150
9. Seal/stamp
10. Signature



Hildegunn Fagerheim
executive officer

This Apostille only certifies the authenticity of the signature and the capacity of the person who has signed the public document, and, where appropriate, the identity of the seal or stamp which the public document bears. This Apostille does not certify the content of the document for which it was issued.

A-246

AFFIDAVIT OF ED STEWART, FOR PETITIONER, IN SUPPORT OF PETITION, SWORN TO SEPTEMBER 26, 2018 [A-246 - A-251]

COUNTRY OF _____)
)
STATE OF _____) ss:
)
COUNTY OF _____)

See attached Jurat

9

AFFIDAVIT OF ED STEWART

Ed Stewart being duly sworn, deposes and says:

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Introduction

1. My name is Ed Stewart and I am the President and Co-Founder of the Performing Animal Welfare Society ("PAWS"), a sanctuary dedicated to the protection of and caring for abandoned, abused, or retired captive wildlife, including elephants.

2. I have agreed to provide permanent sanctuary to the elephant Happy should she be released by court order in any and all of the habeas corpus cases filed by the Nonhuman Rights Project, Inc. ("NhRP") on her behalf in the State of New York.

3. I submit this affidavit in support of the NhRP's petition for habeas corpus for Happy.

History and Background of PAWS

4. PAWS is a 501(c)(3) non-profit organization incorporated in 1984. PAWS maintains three captive wildlife sanctuaries: the original 30-acre PAWS sanctuary in Galt, California; the 100-acre Amanda Blake Memorial Wildlife Refuge in Herald, California; and the 2,300-acre ARK 2000 sanctuary in San Andreas, California, which is home to elephants, bears, and big cats. The Galt sanctuary was the first sanctuary in the country equipped to care for elephants.

5. PAWS sanctuaries provide rescued animals with specially designed, peaceful, natural habitats where they are at liberty to engage in natural behaviors.

6. The mission of PAWS is to protect performing wild animals, provide sanctuary to abused, abandoned or retired captive wildlife, promote the best standards of care for all captive wildlife, preserve wild species and their habitat, and educate the public about captive wild animals. PAWS typically accepts elephants who are being relocated as a

result of decisions made by zoo officials, local or federal governments, or the outcome of a legal agreement.

7. PAWS was founded in 1984 by former Hollywood animal trainer Pat Derby and me in response to the cruelty and neglect of wild animals that we witnessed while working in the entertainment industry. I have managed elephants for more than 30 years, including raising calves and caring for allegedly "dangerous" elephants, without the use of bullhooks, weapons, or aversive training techniques. I serve on the Director's Advisory Committee on the Humane Care and Treatment of Wild Animals for the California Department of Fish & Wildlife and the Advisory Committee for the Detroit Zoological Society's Center for Zoo Animal Welfare.

8. The ARK 2000 sanctuary is located near the Sierra Nevada Mountains in San Andreas, California. It has five elephant barns, one for female Asian elephants, one for female African elephants, and three for bull elephants. The property encompasses 2,300 acres of rolling foothills with varied natural terrain; habitats include natural grasses, trees, lakes and pools in which the elephants may bathe. The Asian and African barns are each 20,000 square feet in size. Barns are equipped with heaters, hydraulic gates, restraint devices for veterinary procedures, heated and padded concrete floors, dirt floors, spacious sleeping stalls and pipe hallways for introduction and socialization of new elephants. The African elephant barn has an indoor therapy pool. The Asian elephant barn contains soft soil-floored sleeping stalls specially designed for older elephants with foot and joint problems.

9. In addition to providing sanctuary, PAWS advocates on behalf of captive wildlife through campaigns, protective legislation and public education. I also provide consultation on sanctuary design, management, and animal care world-wide.

PAWS' Organizational Values

10. PAWS' organizational values include:

a. Dedication to the protection of performing animals, to providing sanctuary to abused, abandoned or retired captive wildlife, to promoting the best standards of

care for all captive wildlife, to the preservation of wild species and their habitat, and to educating the public about captive wildlife issues.

b. Providing sanctuary where abandoned, abused, or retired performing animals and victims of the exotic animal trade can live in peace and dignity.

c. Protection of wild species and their habitat. I have personally worked with international programs in Asia to diminish human/elephant conflict and to establish protected areas for wildlife. PAWS financially supports anti-poaching efforts in Africa, and has worked to ban the sale of ivory and rhino horn in the United States.

d. A commitment to never breed, sell, rent, exploit, or force any animal to perform in any way.

Facilities at PAWS in San Andreas, California

11. PAWS has 21 paid employees at its ARK 2000 sanctuary in San Andreas.

12. The 2,300-acre ARK 2000 consists of grasslands and oak trees. The south fork of the Calaveras River runs the entire length of the property. The elephant habitats are enclosed with steel pipe fencing and pipe-and-cable fencing. The larger African elephant habitat includes a system of gates that can be used to control access to particular areas for management purposes. PAWS is located in San Andreas, California, where the weather allows the elephants to be outdoors year-round.

13. Most of the elephants at ARK 2000 have indoor-outdoor access during the night. Older elephants may be kept indoors overnight to ensure they are lying down regularly and are able to rise without difficulty. When indoors they are provided fresh browse, enrichment, and keepers can perform husbandry tasks such as foot care. Indoor accommodations are necessary even in California's generally warm climate, in order to provide protection during inclement weather (e.g. heavy storms, lightning) or extreme drops in temperature. A PAWS keeper is on site overnight.

14. The spacious elephant habitats are designed to support social group activity, with pastures large enough to allow elephants to interact with social partners or engage in foraging and other species-specific activities on their own.

15. In the wild, elephants live in matriarchal family groups that can number as many as 30 individuals, and include adult females, juvenile males and females, and infants. Female elephants remain with their mothers for life; males leave the family at about age 14. PAWS has five African elephants and three Asian elephants. Though naturally social, it is unnatural for unrelated elephants to live together, as they do in captivity, and social interactions can range from harmonious to acrimonious. At PAWS, the habitats allow for separation of elephants with compatible social partners, and elephants can engage in species-specific behaviors such as foraging, exploring, dust bathing, and mud wallowing.

16. The natural life span of an elephant ranges from 60-70 years, depending on species. By contrast, one scientific study (Clubb et al, 2008) found that zoo-born African elephants in Europe have a median life span of under 17 years (meaning half of the elephants are dead by that age), and under 19 years for captive-born Asian females.

Veterinary Care at PAWS

17. The elephants at PAWS receive high quality medical care. PAWS has a veterinary staff composed an attending veterinarian, associate veterinarian, and veterinary technician. The veterinarians visit the sanctuary five times each week and are on-call 24-hours a day for emergencies. PAWS has its own veterinary clinic for on-site diagnosis and treatment of animals.

18. PAWS' attending veterinarian works when necessary with consulting specialists, technicians, and specialists at the University of California, Davis, School of Veterinary Medicine, to guarantee that any health issues are addressed with the latest diagnostics and best medical care available.

19. PAWS provides full medical coverage including:

a. Dental procedures

b. Treatment of foot and joint disease

c. Care of older elephants and those with pre-existing conditions: Elephants come to PAWS with a host of chronic medical conditions such as arthritis and foot disease that may progress with age. PAWS has a therapeutic pool in the African elephant barn specially designed to help elephants with medical issues such as

joint problems, and soft soil flooring in the Asian elephant barns to ease foot and joint ailments.

Accreditation by Global Federation of Animal Sanctuaries

20. PAWS is accredited by the Global Federation of Animal Sanctuaries ("GFAS").

21. All GFAS organizations must adhere to policies set out in its standards including, but not limited to: 1) no commercial sale or trade in animals and their offspring, animal by-products or animal parts; 2) no animals may be removed from enclosures for exhibition; 3) no direct contact between the public and animals (with some allowable exceptions, such as for some equines and under carefully supervised circumstances); 4) measures in place to prevent breeding, either through segregation of sex or through a program of contraception, unless the animals are part of a bona fide release program; 5) open to the public only by way of a structured visitor program in which tours are guided and where there is a bona fide educational component to the visiting program.

22. GFAS defines a "sanctuary" as "an establishment that provides lifetime care for animals that have been abused, injured, abandoned, or are otherwise in need. The animals may come from sources including but not limited to, private owners, research laboratories, government authorities, the entertainment industry, and zoos."

23. GFAS's set of standards for elephants, which are listed in a 69-page document, detail: housing; physical facilities and administration, nutritional requirements, veterinary care; well-being and handling; general staffing; safety policies, protocols and training; governing authority; financial records and stability; education and outreach; policies: acquisition and disposition; policies: public contact and restriction on use and handling release into the wild (where applicable). A copy of GFAS's set of standards for elephants is annexed hereto as "Exhibit A."

Ed Stewart

Sworn to before me
this 26 day of Sept., 2018

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Calaveras

Subscribed and sworn to (or affirmed) before me on this 26th day of September, 2018, by Ed Stewart, proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.

KATE E. JESUS
Notary Public – California
Calaveras County
Commission # 2198387
My Comm. Expires Jun 7, 2021

(Seal)

Signature

A-252

EXHIBIT A TO STEWART AFFIDAVIT -
COPY OF GFAS SET OF STANDARDS FOR ELEPHANTS [A-252 - A-318]

Global Federation of Animal Sanctuaries

Standards For Elephant Sanctuaries

Version:
January 2015

Table of Contents

INTRODUCTION

GFAS PRINCIPLES

The Global Federation of Animal Sanctuaries (GFAS) will designate an organization as "verified" or "accredited" based upon its substantial compliance with the standards listed below. GFAS recognizes that some organizations under consideration will operate valid rescue and rehabilitation programs with a goal of releasing wildlife to the wild pursuant to IUCN and/or other international or national standards. For those animals, lifetime sanctuary care may not be part of the organization's mission. While the care for these animals may be provided on an interim basis only, the organization is still expected to meet the standards below with regard to all animals in its care and for purposes of these standards it will be identified as a "sanctuary."

Consistent with GFAS' philosophy and the standards below, it is expected that a sanctuary does not adopt policy positions that are in opposition to the welfare of the species of animals in the care of the sanctuary (for example, while it is not required that a primate sanctuary affirmatively promote a policy against laboratory research using primates, it should not promote a policy in favor of such research).

Note: Several standards make reference to a sanctuary's "Director." GFAS recognizes that a sanctuary may use a different title, and the term "Director" is intended to reference the sanctuary's Sanctuary Director, who may be called an Executive Director or Chief Executive Officer, etc.

GFAS also recognizes that sanctuaries may rely on volunteers for certain functions, including some aspects of animal care (such as food preparation). Standards referencing "staff" may take into account appropriately qualified and trained volunteers as well as employees.

Appendix I of this document provides further guidance/suggestions on facility design and elephant care. These are not requirements but rather provide sanctuaries with access to knowledge gained from experience at other sanctuaries/felid care facilities.

GFAS Standards for Elephant Care are based in part on the Coalition for Captive Elephant Well-being's Best Practices for Captive Elephant Well-being, as found at http://www.elephantcare.org/protodoc_files/new%2006/CCEWBCoreBestPractices.2.pdf.

ANIMALS COVERED BY THESE STANDARDS

Family / Genus

Family: Elephantidae

Genus	Species	Common Names
Elephas	*maximus*	Asian elephant
Loxodonta	*africana*	African elephant

Version Updates:
New and Updated content released on February 2015

- G-1 Nonprofit/ Non-Commercial Status, P-3 Disposition Ethics and Responsibility, P-4 Disposition of Live Elephants, P-5 Euthanasia

This is a summary of the new and changed content released on January 2015.

ELEPHANT STANDARDS

GFAS notes that there may be other acceptable ways of meeting the intent of each standard, aside from those detailed below, and that in some instances there may be legal, cultural or other significant barriers to meeting GFAS requirements. The standards are considered mandatory, but GFAS will consider specific exceptions to some of the listed requirements (e.g., exact enclosure size, manner of record keeping, legal requirements that impact a sanctuary's acquisition policy, etc.). GFAS encourages sanctuaries to offer feedback on the standards and to explain any reasons why it believes it cannot meet a particular standard, or why the standard is not applicable and/or appropriate to its situation. Sanctuaries are also welcome to indicate a timeline for meeting a standard if the standard is not yet met at the time of application for accreditation or verification.

The exceeding of the standards is encouraged. In addition to meeting these standards, an organization is expected to comply with all applicable international, national, state/province, and local laws and regulations.

ELEPHANT HOUSING

H-1 Types of Space and Size

Unless otherwise directed by a veterinarian, elephants are provided sufficient opportunity and space to move about freely and comfortably, and to exercise choice in location so as to reduce stress and maintain good physical condition.

General

a. The habitat and living conditions are species-appropriate and replicate, in as much as possible, the elephants' wild habitat with a balance between hygiene and the species' physiological and psychological needs. This includes adequate space, both vertical and horizontal, and appropriate space, in terms of diversity and complexity.

b. The physical space provides varied opportunities for the elephants to interact with the environment and key elements are changed often, resulting in a dynamic living space.

c. Facility design takes into account caregiver-elephant safety and ease of maintaining a positive relationship.

d. Elephants are provided access to as many areas of the enclosures as possible, except during staff maintenance activities, unless security concerns dictate otherwise. All enclosures interconnect without creating 'dead ends' to allow for freedom of movement of subordinate individuals.

e. In areas where solid barriers are not used, equipment, *e.g.* machinery and heaters placed outside the enclosure, is positioned far enough away from the enclosure that the elephants cannot manipulate them through the barrier.

f. The habitat ideally provides appropriate visual, olfactory, and acoustic barriers.

g. The habitat provides security from predators and unauthorized human access.

h. Sanctuaries that routinely accept infant elephants have a nursery unit.

- Nursery units include sleeping areas for caregivers and elephants in close proximity.
- Both indoor and outdoor areas of the nursery unit are designed to allow infant great elephants to explore and play.

Open Space Settings

i. Open space enclosures are designed to provide the maximum possible freedom and complexity for enclosure residents. The enclosures have sufficient area per animal to accommodate natural individual and group activities. While it may not be possible to monitor every animal in an open space enclosure on a daily basis, design allows for regular inspection of animals and facility maintenance as needed.

j. Where open space settings are the primary enclosure, two other areas may also be provided:

- Indoor enclosure or other means of providing night housing and secure shelter during inclement and extreme weather. This space also provides alternate housing for sick or injured individuals while in close proximity to the social group.
- Shift yards for use while the primary enclosure is serviced and/or for animal management needs including introduction of new individuals to a group, or temporary separation for health or social reasons. Shift yards should include a small pen area accessible from indoor housing, and a minimum of one entrance to the primary enclosure.

Controlled Access Settings

k. Controlled access enclosures, which may be indoor or outdoor units, provide sufficient space for natural activities but are also designed to allow caregivers to monitor each individual animal on a daily basis, to easily shift individuals, pairs or small groups as needed and to isolate animals for individual care. As with open space enclosures, design also includes:

- Shelter which can serve as night housing and/or secure space during inclement and extreme weather.
- Space for use while the primary enclosure is serviced and/or for animal management needs including introduction of new individuals to a group, or temporary separation for health or social reasons. (Note: This space might also be night housing, lockout, shift yard, etc.)
- Alternate housing for sick or injured individuals.

Indoor Housing

l. Elephants must be allowed to stay outdoors as much as possible. Elephants should have free access to the outdoors day and night, in the absence of adverse weather, safety or health conditions [E1].

m. Indoor housing provides year-round protection from the elements. For sanctuaries located in northern climates (where freezing temperatures occur regularly during any part

of the year), indoor space is large enough to allow for all forms of species-specific behavior.

Note: GFAS strongly recommends against creating elephant sanctuaries in climates where temperature extremes would require extended periods without access to outdoor enclosures.

Dimensions

m. Many factors influence the minimum space required for a group of elephants, including, but not limited to: group size, group composition, and enclosure complexity. The following are general minimum requirements. Facilities should provide as much space as is possible and/or practical.

n. Sanctuaries meeting only the minimum requirements for enclosure space employ additional environmental enrichment, focusing on physical and mental exercise rather than food, to compensate for reduced space and complexity.

o. Outdoor enclosures for elephants Healthy elephants shall have sufficient space to travel a minimum of 10km (7 miles) on a daily basis while engaged in natural behaviors like foraging, feeding, exploring, socializing and the like. Enclosure shape may be variable to take in natural features in the landscape such as rock formations, hills and trees, and for roofed enclosures there should be a minimum vertical dimension of 20 ft. (6 m). Space includes a minimum of one (1) animal transfer door leading to the indoor enclosure, where applicable.

p. Indoor enclosures/shift yards for elephants have a minimum of two 'rooms' or one indoor room and one shift yard per group of compatible elephants. Room dimension is dependent on intended purpose and/or duration of confinement. Minimum dimension of 2600 sq. ft. (240 sq. m) per 4 adult females, with an additional 860 sq. ft. (80 sq. m) per additional animal.

- Bull stalls/rooms, where used, are a minimum of 1200 sq. ft. (110 sq. m) per animal.
- A minimum vertical height of 24 ft. (7.3 m) is recommended for all roofed elephant spaces.
- Rooms interconnect without creating 'dead ends' to allow for freedom of movement for subordinate individuals.
- Rooms include a minimum of one transfer door to an outdoor enclosure.
- Whenever possible, separated elephants have visual and tactile access to group members to facilitate reintroduction.

H-2 Containment

Elephants are safely contained.

General

Other than when being transported or for medical reasons, elephants are kept at all times in secure enclosures or other appropriate areas.

Enclosures and buildings are designed to allow for elephants' normal defense reactions and appropriate 'flight' or escape distances.

All enclosures and buildings are designed, constructed and maintained to securely contain elephants and to present no likelihood of harm or injury to them. [E2]

Distance or barriers between elephants and between enclosures and personnel is sufficient to minimize stress to the animals as well as reduce the risk of disease transmission.

- Clear markings delineating safe zones or safety wall mesh with a maximum dimension of 2 in. x 2 in. (5 x. 5 cm) are used in areas where caregivers must work in close proximity to enclosures.

Enclosures are designed to allow for proper, safe cleaning and drainage.

Materials are appropriate for their particular application and are maintained in good repair.

Elephants shall not come into close contact with toxic materials, surfaces or fumes, such as paint, preservatives or disinfectants [E3]

Outdoor Enclosures

Perimeter containment of outdoor areas is constructed so as to prevent digging under the barrier by native wildlife, domestic species and the enclosure residents.

Fences and enclosures are inspected daily for signs of digging. Where fencing meets hard surfaces such as rock or concrete, the fencing is securely anchored in place.

There should be no angles less than 90 degrees for any part of the perimeter of the main enclosure, to avoid animals getting trapped.

Fencing

Barbed or razor wire are not used to contain elephants.

High tensile electric fencing may be used in conjunction with standard fencing products but is discouraged for use as a primary barrier.

The supporting posts for fences are firmly fixed into the ground.

Fence material is sufficiently secured to supporting posts in such a way that the weight of the elephants could not detach it from the support nor dislodge the supporting posts.

Gates and doors are at least as strong, and as effective, in containing the elephants as the rest of the enclosure barriers. In particular, gates and doors are designed and maintained so as to prevent animals from lifting them from their hinges or unfastening the securing device.

For open enclosures, a minimum fence height of 6.6 ft. (2 m) is recommended. Where solid or slack cable horizontal railing is used, 10 ft. (3m) is recommended.

Enclosures are adequately secured to allow the animals to have 24-hour access without supervision.

Vertical post construction is recommended, as elephants are adept at climbing solid horizontal fences and solid barriers may limit air exchange.

- Vertical post barriers may be constructed of steel reinforced concrete or steel pipe.

Electric Fencing

Electric fence energizers emit at least 9,000 V with a joule rating appropriate for the length and condition of the fence (25 joules is recommended).

20-gauge high-tensile wire is required. A stronger gauge (*e.g.*, 12-gauge) may be more appropriate.

Energizers are connected to battery or generator backup for continuous power supply during outages.

In dry climates, the earth rod area is watered to ensure adequate grounding.

Safety signs on hot wire are visible to staff and bystanders.

A non-electrified barrier is used to keep bystanders and wildlife from coming in contact with the electric fence.

With the exception of the hot wire, electrical installations shall be inaccessible to the elephants [E4]

Solid Barriers

Solid barriers such as concrete block, poured concrete and artificial rock can be used as the sole method of containment or in conjunction with other types of barrier.

Walls are secured in appropriate footings to ensure wall stability.

Care is taken, especially with artificial rock, to ensure that contours in the rock do not provide escape routes from the enclosure.

Design of areas using solid walls allows for sufficient airflow throughout an enclosure.

- Gunnite and similar artificial rock, which may interfere with normal thermoregulation, are used with caution in elephant enclosures.

Moats

The use of moats, other than HaHa (half) moats is not recommended for elephant enclosures due to risk of injury or escape.

Haha moats, constructed with one steep side and one gently sloping side which is designed for easy access, may be used provided the elephants do not have access to the steep side.

Indoor Enclosures and Shift Yards

Construction materials as described for outdoor enclosures may be used for indoor enclosures and shift yards.

Design of areas using solid walls allows for sufficient airflow throughout the enclosure.

Solid concrete or concrete block walls are sealed to make them impervious to contaminants and pathogens.

Restraint chutes
Each elephant facility shall be equipped with an elephant restraint device subject to routine maintenance, testing and inspection. The restraint device should offer protection from extreme weather conditions. The restraint device should open widely enough to allow an elephant to lie down if necessary. The device should be accessible from multiple elephant living spaces, especially quarantine or isolation/sick enclosures.

H-3 Ground and Plantings

Ground cover indoors and out is healthy for elephants. Plantings are appropriate and safe.

Vegetation

a. Any vegetation capable of harming elephants is kept out of reach.

b. All outdoor enclosures for elephants include living or fresh vegetation, which can provide visual barriers, shade and resting sites.

c. All plant materials in an enclosure are evaluated for potential toxicity before use, including leaves, buds, seeds, fruit, bark and flowers.

Outdoor Enclosures

d. All outdoor enclosures have a natural substrate consistent with the needs of the elephants.

- The substrate can be amended with organic materials, including but not limited to clean soils, sand or grasses.
- The substrate drains well.

e. Elephants are provided with appropriate environments to accommodate an array of locomotory and foraging behaviors, as well as appropriate sleeping and resting areas, including nesting and bedding materials.

f. Varied topography provides visual barriers, increased enclosure complexity and varied elevations, and can be achieved using naturally occurring topography at a selected construction site or through addition of soils, culverts, rocks, logs etc.

g. Where natural topography of an enclosure is not varied, it is created through the addition of natural and placed elements.

h. Trees - Key shade trees within an outdoor enclosure are identified and protected from damage.

- Health of trees close to fence lines is checked regularly and any removed if there is fear of it coming down on fence line.
- Access to very tall trees is limited by electric wires, barriers etc.

Indoor Enclosures

i. Indoor enclosures in as much as possible have a concrete floor and, provided adequate septic service is present, are sloped to a drain.

j. Existing construction ensures that all floors are sealed. For new construction, the indoor area is designed to accommodate a deep litter substrate.

- Deep litter enclosures are designed to allow appropriate litter depth and drainage for proper functioning.
- Litter is properly spot-cleaned and maintained.
- Where earthen floors are used, soiled surfaces are removed and replaced as needed to maintain sanitation.
  - Floors drain well.
- Where deep litter substrate is not used, floor surfaces are smooth enough to prevent foot irritation but are not slippery.
  - Floors are impervious to water and quick drying.

k. Bedding materials are provided in sufficient amount/depth to cushion resting elephants.

- Bedding material suitable for use includes, but is not limited to, clean soils, sand or grasses.

l. All elephants are observed regularly for signs of illness that may be related to ingestion of bedding materials that may pose a health hazard.

Shift Yards

m. All outdoor shift yards have a minimum of 50% of the surface area in natural substrate. The remaining 50% may be concrete as appropriate for drainage, sanitation and structural needs.

n. The substrate can be amended with organic materials including, but not limited to, clean soils, sand and grasses. The substrate drains well.

o. Bedding materials are provided in sufficient amount/depth to cushion falls resting elephants.

H-4 Transfer Doors

Elephant enclosure transfer doors are appropriately designed to ensure both animal and human health and safety.

General

a. Animal transfer doors are a key element of facility design. Doors are designed to allow transport crates to safely attach to them.

- Transport crates should be able to be moved in and out of the enclosure through the transfer doors.

b. Transfer doors are designed to remain functional under all circumstances and are maintained in good working order and free from any encumbrances that may prevent opening and closing.

c. Doors are designed to allow caregiver view of enclosures while operating the doors.

d. Doors are designed to allow for normal posture while travelling though the doorway. A minimum dimension of 8 ft. x 16 ft. (2.4 m x 4.8 m) is recommended.

e. Doors are designed such that people are out of view when elephants are being shifted. If not, no eye contact is made with the elephants going through the doors.

f. Doors and door hardware are properly maintained to ensure proper functioning.

Security

g. Transfer doors and their frames are constructed of materials similar in strength to those used in the primary enclosure.

h. Doors are lockable in both the open and closed positions.

i. For pneumatic or hydraulic doors, pneumatic or hydraulic pressure is sufficient for keeping doors in the open position. A mechanical lock is, however, in place to lock the door in the closed position.

j. Particular attention is given to preventing bedding/shavings from affecting door mechanisms.

Animal Safety

k. Doors operated via remote control are visible from the control area.

l. Guillotine doors are not recommended due to risk of animal injury. If used, a backup system should be in place to prevent doors from free falling due to mechanical failure or operator error.

m. Hydraulic systems use peanut or other food-grade oils to prevent risks to the elephants in the event of leakage.

n. Hydraulic and pneumatic door systems include backup systems to allow for door usage in the event of equipment failure.

User Safety

o. If door handles or locking mechanisms are in close proximity to the enclosure, a solid barrier is present to protect the user.

H-5 Shelter

Elephants have access to man-made shelter that provides each individual with protection from extreme weather (including, but not limited to, prevailing wind, snow, sleet, rain, sun, and temperature extremes).

a. Elephants have space to seek refuge from sun, wind, inclement weather and enclosure mates.

b. Shelter does not create or result in 'dead ends' in which individuals can be trapped by other group members.

c. Shade and shelter are provided in multiple locations within enclosures to ensure that all elephants have access to shade throughout the day.

d. Shade and shelter can be created through natural and artificial means including shade trees, shade fabric or outbuildings.

e. Shelter areas provide dry space during wet weather, as well as protection from wind.

H-6 Enclosure Furnishings

Elephants are provided with an appropriately complex and rich habitat to explore, to ensure the animals' physical, nutritional and stimulation needs are met.

General

a. Enclosures are equipped in accordance with the needs of the elephants with appropriate substrate, vegetation, bedding and other enrichment materials designed to aid and encourage normal behavior patterns and minimize any abnormal behavior.

- Care is taken to prevent direct elephant contact with heat sources. Note: Infrared bulbs or 'heat lamps' are not recommended as heat sources due to risks associated with bulb breakage and tissue damage in the elephants.

c. For indoor enclosures, an average temperature of no less than 60°F (16°C) is maintained. At least one enclosure of the facility can be maintained at 70°F (21°C) to accommodate very young, elderly, sick or debilitated animals.

- Heat can be provided by forced air or hydronic heating systems. Note: Infrared bulbs or heat lamps are not recommended due to risks associated with bulb breakage and tissue damage to the animals.
- Cool air can be provided by refrigerant air conditioning, "swamp coolers", fans, or misters. As appropriate, access to water features or outdoor enclosures may provide for necessary thermoregulation, particularly in the evening when elephants normally release heat accumulated during the day.
- Providing elephants with opportunities to choose temperature ranges within an enclosure is preferred. This can be achieved by access to areas near heat vents, skylights, or hog warmers for example.
- Even when ambient temperatures are 'warm', bare concrete floors, especially damp floors, are too cold for many individuals and are not considered suitable substrate or housing for elephants.
  - Consideration is given to providing heated flooring in at least half of the indoor enclosure in cooler climates.
    - All animals have access to the heated portion of the floor.
    - Flooring temperature is maintained such that over-drying or burning or feet, nails and other potentially vulnerable parts of the elephants' bodies is prevented.
- Any climate control systems include redundancy and back-up power in case of equipment or power failure.

Humidity

d. Optimal indoor humidity is between 40% and 70%. Humidity should not be kept above 80% in controlled environments to prevent fungal and mold growth. High humidity can be mitigated through proper ventilation or dehumidifier systems.

e. Elephants have access to water features or are bathed as needed to prevent skin becoming too dry when humidity is low.

Ventilation

f. Proper ventilation of indoor enclosures is critical.

- In these areas, Heat Recovery Ventilators and Energy Recovery Ventilators can provide fresh outdoor air with minimal heat loss.

g. Indoor enclosures ideally have a negative air pressure, with regular exchange of non-re-circulated air.

- A minimum of one complete air exchange per hour is recommended.

h. To the extent possible, separate air handling systems are maintained between animal areas to prevent disease transmission.

i. Proper window and door placement can ensure sufficient cross-ventilation in warm climates.

Lighting

j. Light, natural and artificial, is appropriate for the species housed in terms of intensity, spectrum and duration.

k. Indoor enclosures - Natural lighting is optimal and can be obtained using skylights, windows, roll-up doors and other means. Glass bricks may be used, taking into account the fact that light intensity will be less than with clear glass.

- Supplemental lighting is provided to ensure adequate light for caregivers to safely observe animals, clean enclosures and perform related animal care tasks.
- Dimmer systems which allow the enclosure to be gradually darkened to a low-level, full spectrum light approximating moonlight are recommended where elephants must be confined indoors overnight.
- When animals are confined indoors overnight, sufficient lighting is used to extend the daylight period to a day/night cycle of 12/12 hours to allow animals time to eat and select sleeping sites.
- In northern climates, where natural light is less intense and of shorter duration during the winter months, full-spectrum bulbs are used to ensure elephant health.

l. Outdoor enclosures and shift yards - While not necessarily required, consideration is given to supplemental lighting or power sources for use in outdoor areas in event of an emergency. Tamper-proof lighting is used in elephant enclosures.

PHYSICAL FACILITIES AND ADMINISTRATION

PF-1 Overall Safety of Facilities

The premises, tools, equipment, animal care records, and hazardous materials are appropriately kept clean and safe.

a. The sanctuary is committed to maintaining a safe and healthy environment for all employees, volunteers, visitors and elephants, and conforms to health and safety practices as outlined under applicable national and state/province laws and regulations (*e.g.*, the Occupational Health and Safety Administration ["OSHA"] in the United States or an equivalent international/national occupational safety organization/agency).

b. Premises (buildings and grounds) are kept clean and in good repair in order to protect employees, volunteers, visitors and elephants from injury and to facilitate appropriate elephant care.

c. Materials and equipment are safely stored when not in use, and there is an effective system in place for regular inspection and maintenance of tools and equipment.

PF-2 Water Drainage and Testing

Water drainage is rapid and complies with all regulations, and soil and water are tested annually.

a. A suitable method is provided to rapidly eliminate excess water.

b. The sanctuary's method of drainage complies with applicable national, state/province, and local laws and regulations relating to pollution control or the protection of the environment.

c. Enclosures are checked annually for potential water contamination and soil contaminants.

PF-3 Life Support and Lighting

There are adequate and reliable utilities, with back up.

a. Adequate and reliable electric power, potable water, water supplies and plumbing are available on the premises.

b. An emergency power system, such as a generator, is in place in the event of a power outage.

c. There is adequate light for employees and volunteers to perform their duties, both day and night as needed.

PF-4 Hazardous Materials Handling

Hazardous materials are appropriately handled according to applicable regulations and laws, protective clothing and other equipment in isolation units are not used elsewhere, and waste is taken care of appropriately.

a. The method for disposal of sewage, toxic/hazardous materials, garbage, and elephant waste follows all guidelines for hazardous materials. All national, state/province and local legal and regulatory requirements are met.

b. All hazardous materials are labeled with the name of the contents, appropriate hazard warnings, and the name and address of the manufacturer as provided on the Material Safety Data Sheets (MSDS Sheets) or equivalent, if used in the country in which the sanctuary is based.

c. If applicable, Material Safety Data Sheets for each hazardous material to which employees may be exposed, are kept in the area where the materials are stored.

Employees are made aware of, have access to and understand how to interpret the MSDS Sheets.

d. All employees, and volunteers where appropriate, utilizing hazardous materials are appropriately trained in the use of, and made aware of the potential hazards of using these materials.

e. Appropriate protective equipment and clothing is utilized when working with hazardous chemicals.

f. Accumulations of trash is placed in designated areas and cleared as necessary to protect the health of the elephants, staff, volunteers, visitors and the surrounding environment.

g. The sanctuary considers the potential risks of releasing parasites, diseases or non-native plants through effluent water and other routes.

h. Provision is made for the safe and legal removal and disposal of elephant and food wastes, bedding, dead animals, trash and debris.

i. Disposal facilities are so provided and operated to minimize rodent and insect infestation, odors, and disease hazards while complying with applicable international, national, state/province, and local laws and regulations relating to pollution control or the protection of the environment.

PF-5 Security: Elephant Enclosures

Proper security measures are in place to safely contain elephants at all times, and there is a 24-hour security system in place.

a. For very large enclosures into which vehicles enter, double gates and/or doors located far enough apart to allow the vehicle to be completely enclosed into the area with both gates secured before entering the enclosure are recommended.

b. See also Standard S-6, "General Staff Safety."

c. The sanctuary has 24-hour systems in place to minimize the risks of theft, malicious damage or release of elephants by intruders entering the grounds.

d. The sanctuary has a key control system designed to ensure that only qualified staff are allowed into certain areas of the sanctuary, such as elephant enclosures. Gates and doors to enclosures are securely locked so as to prevent unauthorized openings.

e. An adequate number of clearly visible safety signs, providing warning by means of a symbol, words or a combination of symbol and words, are displayed at each enclosure as needed.

PF-6 Perimeter Boundary and Inspections, and Maintenance

The perimeter boundary is designed to discourage unauthorized entry, with suitable exits, and any enclosures in need of repairs is immediately repaired or replaced, or elephants are relocated.

a. The perimeter boundary, including access points, is designed, constructed, and maintained to discourage unauthorized entry and as an aid to the safe confinement of all the elephants within the sanctuary.

b. Exits through any perimeter fence are suitably located and adequately designated and secured.

c. Each exit from the sanctuary is kept clear and is capable of being easily opened from the inside to allow the release of staff.

d. All such gates are capable of being closed and secured to prevent the escape of elephants and entry of unauthorized animals and visitors.

e. Safety signs on any electrified section of the perimeter fence or enclosures are easily visible.

f. A regular program of sanctuary maintenance is in place.

g. Any enclosure in need of repair, or any defect likely to cause harm to elephants, is immediately repaired or replaced, or the elephant(s) are relocated to a secure enclosure.

PF-7 Security: General Safety Monitoring

Appropriate fire extinguishers and alarms are in place and in working order, weather is monitored, and all physical features of the sanctuary are designed and maintained to ensure the safety of the elephants.

a. Adequate fire extinguishers and alarms are installed, regularly tested, maintained in good working order and the staff is trained in their use. Fire alarms can automatically be heard from the permanent residence.

b. The sanctuary has a system in place to provide early warning of severe temperature extremes and weather patterns. This is communicated directly to the sanctuary director in case of emergency.

c. Steps have been taken to protect elephants as much as possible from fire, flood, and other natural hazards. This includes not storing more than the daily ration of bedding or hay in the same building in which elephants are housed.

d. All plant and fixed equipment, including electrical and heating apparati, are installed and maintained in such a way that they do not present a hazard to elephants, and their safe operation cannot be disrupted by the elephants.

e. Tools and other portable equipment are not left unattended in places where they could cause elephants harm or serve as projectiles.

PF-8 Insect and Rodent Control

An appropriate, effective, humane and safe rodent control program is in place as needed. Insects are safely controlled as needed.

a. An insect and humane rodent control program is in place, supervised by a veterinarian who determines the degree of toxicity that products in use may pose to elephants, native wildlife and staff.

b. Insect and rodent control is implemented in all appropriate areas of the sanctuary, including storage areas for food items.

c. Any pesticides are used in accordance with government regulations. Whenever possible, less toxic or non-toxic agents such as silica gel, diatomaceous earth, or insect growth regulator products are given preference.

PF-9 Record Keeping

Records are maintained appropriately as required by local, state and national regulations and as necessary for good husbandry, management and veterinary care.

a. Detailed individual and group records are necessary for good husbandry, management and veterinary care. All nationally required records are kept, as well as records required by GFAS to meet other standards in this document (*e.g.*, Standard P-2, "Acquisition Recordkeeping and Monetary Exchange").

b. Records that, if not required by law, are recommended by GFAS include but are not limited to:

- Individual animal records showing origin, age, species, gender, microchip number, tattoo, photo, bio, etc.;
- Individual veterinary record;
- Reproductive history, if known;
- Contraception records;
- Weight, current diet and record of diet changes;
- Food consumption and preferred food items;
- Enrichment dates, items used and elephant's response;
- Where applicable and appropriate, any positive behavioral management records showing completed objectives and those in development;
- Current and historic enclosure mates, social groups and partners, including response to various phases of introduction and response to other individuals;

- Acquisition documents (*see* Standard P-2, "Acquisition Recordkeeping and Monetary Exchange");
- Welfare assessment for the elephants as a whole including measures of: disease prevalence, morbidity and mortality rates, and activity levels;
- Inspection reports, as applicable, from international, national, state/province and local agencies, as well as accrediting organizations;
- Other animal documentation as applicable, such as complaints or police reports pertaining to specific animal and animal escape reports.

PF-10 Animal Transport

Elephants are appropriately transported to maximize safety and minimize stress and in accordance with all local, state/province, national, international requirements and laws.

a. Elephants are transported only when necessary, such as when being transported to the sanctuary, to a medical facility for care or to another accredited sanctuary for reasons as described in acquisition standards.

b. Pre-transport health examinations ideally include a complete physical exam with attention to parasite checks, necessary vaccinations, and completion of any tests required by regulations of the receiving state/province or country.

c. Health certificates and any required transport permits accompany the elephant when being transported interstate or internationally. All transport abides by local, state/province, national and international law. A veterinarian is responsible for preparing and signing the health certificate.

d. Prior to transport, the sanctuary ensures that adequate facilities are available at the receiving end and food items that are familiar to the animal are available.

e. Where possible and appropriate, elephants are acclimated to shipping container/crate prior to transport. Capture, restraint, and transportation methods consider the elephant's temperament and behavior in order to minimize injury, and distress.

f. At a minimum, transport enclosures meet appropriate animal welfare standards (*e.g.*, IATA, US Animal Welfare Act Transportation Standards or similar).

g. Transport crates and vehicles are in good condition and meet national and/or international standards. Equipment suitable for lifting, crating and transportation of animals kept within the sanctuary is readily available.

h. Where transport vehicles are not climate controlled, water is available to cool animals as needed and transport occurs during cooler hours in hot climates. In cooler climates, extra bedding is provided and every effort is made to reduce drafts in the transport vehicle.

i. Transport containers:

- have impervious surfaces, which are cleaned and disinfected after use.
- are designed to permit safe transfer into a secondary enclosure.

- are designed to minimize the risk of the elephant reaching through to make contact with personnel.
- are designed to minimize loss of bedding and waste, reducing the risk of disease transmission.

j. Elephants are provisioned with hay or browse throughout the transport, and water is provided at regular intervals during long transports.

k. Any elephant taken outside the sanctuary, for an approved reason such as medical treatment or transfer to a more appropriate sanctuary, is in the personal possession of the sanctuary director, or of competent persons acting on his/her behalf and adequate provision is made for the safety and well-being of the animal and public safety.

l. All elephants taken outside the sanctuary are kept securely at all times. Elephants are managed outside the sanctuary in such a way that the animal is under control and not likely to suffer distress, cause injury or transmit or contract disease.

m. Complete medical records, diet and husbandry information, and identifying papers (*e.g.*, describing tattoos, or other identification methods) accompany all transported elephants.

NUTRITION REQUIREMENTS

N-1. Water

Fresh clean water is available in sufficient quantity.

Quantity

a. Fresh clean water is available at all times to all individuals.

b. Multiple water sources are available for group-housed elephants to ensure high-ranking individuals do not dominate water sources.

Quality

c. Water quality parameters are maintained at a generally acceptable level for elephants in terms of turbidity, salts, etc.

d. Potable water sources are tested for contaminants annually.

e. All water sources (including water buckets) are cleaned at least daily, and more often if needed.

f. If automatic water devices are not used in hot climates, water sources are shaded or changed multiple times to avoid overly hot water.

Automatic Water Devices

g. Devices are tested daily to ensure water is available.

h. Devices are easily disabled when animals must be fasted for medical purposes.

i. When monitoring of water consumption is required, an alternative means of providing water is devised.

j. In colder climates, steps are taken (such as installation of heat sources) to ensure water consumption does not decrease with lower ambient air temperatures.

N-2. Diet

A properly balanced and healthy diet is provided appropriately based on the needs of each elephant, following veterinary instructions for special needs.

General

a. A veterinarian or qualified nutritionist periodically reviews all aspects of the elephants' diet at the sanctuary.

b. Diets of individual elephants (including vitamin supplementation) are of a quality, quantity and variety to match the physiological and psychological state of the individual as it changes over time, with consideration for the age, life stage, species, condition, and size of the individual.

c. Food is wholesome, palatable, free from contamination and of sufficient quantity and nutritive value to maintain all elephants in good health.

d. The sanctuary utilizes a feeding regimen that ensures each individual receives adequate nutrition regardless of status in social group.

e. Where possible and appropriate, each elephant's daily dietary needs are documented and made available to animal care staff.

f. In open space enclosures, routine observation of feeding activity ensures all animals are able to access sufficient food.

g. Hay, browse, grain and produce are appropriately combined to provide a complete low protein/high fiber diet.

- Hay or browse are available for at least 12-16 hours every day with 24 hour access to these food items recommended.
- Year round access to high quality pasture and browse is preferred.

h. Commercially prepared complete diets are not the sole diet for elephants, as behavioral and dietary needs are not met using these feeds alone.

- Where commercial diets are used, they are formulated for herbivores.
- Simple grains are preferred over compressed, dehydrated grain pellets and cubes which deliver nutrients at a higher concentration than elephants can appropriately utilize.

Leafy Greens, Vegetables and Fruit

i. A variety of leafy greens, vegetables and fruit are offered as a component of the basic diet.

j. Leafy greens, including fresh bamboo may aid in increasing fiber content.

k. Rotation of seasonally available fruits and vegetables contributes to variety in the diet.

l. The fresh produce portion of the diet is not heavily dependent on over ripe and/or sugary fruits.

Browse

m. Fresh browse is offered daily to promote natural feeding behaviors.

n. Materials offered may include bark that is easily stripped and consumed, leaves, seeds, flowers and shoots.

o. All browse items are nontoxic and grown without chemical pesticides. Caregivers are trained to identify safe, non-toxic plant species appropriate for elephants.

Vitamins/Supplements

o. Prior to offering supplemental vitamins, the health and condition of the individual elephant, as well as the diet, is reviewed by a nutritionist experienced in elephant care and/or the attending veterinarian.

Treats/Enrichment items

p. Preferred food items from the basic diet can be reserved for enrichment through the use of hanging hay feeders and other food enrichment devices/techniques.

q. The calories in foods used as enrichment are considered when planning the overall diet.

N-3. Food Presentation and Feeding Techniques

Food is prepared and presented in a safe and appropriate manner to meet elephants' health and social needs.

General

a. Feeding and drinking receptacles are placed in positions that minimize the risks of contamination from soiling by the elephants themselves, wild birds, rodents and other potentially invasive species.

b. Food receptacles, where used, are appropriate for the species housed in terms of number, size and placement, and are cleaned daily.

c. Receptacles for animal food and water are designed to minimize spillage and are not used for any other purpose.

d. Hygiene concerns are balanced with natural grazing needs when determining food presentation for Asian elephants, which are grazing animals.

e. Elephants are offered the grain and produce portion of their diet a minimum of twice daily, early in the morning and late in the day to accommodate natural night foraging behavior.

f. Elephants have access to hay and/or natural plant browse a minimum of 12, and preferably 24 hours a day to accommodate natural foraging behavior.

Feeding Techniques

g. Variations in food presentation are considered part of the enrichment program for elephants. Distributing food throughout an enclosure allows natural foraging behavior.

h. Feeding in multiple locations helps to ensure that low-ranking individuals have adequate access to food and water.

Diet Changes, Increases or Decreases

i. Adjustments made to an already formulated and nutritionally balanced diet are made to the entire diet to ensure continued nutritional balance.

j. Considerations for diet increase include weight and condition of all animals in the group, overall food consumption, activity level of the group, feeding competition and other medical or behavioral considerations.

k. Diet increases or decreases are made in modest increments with animal response to the change assessed for a minimum period before additional changes are made.

l. Underweight individuals experiencing health or behavioral problems may be separated for supplemental feeding as needed to avoid undesirable weight gain in conspecifics.

N-4. Food Storage

Food is stored appropriately.

a. Separate and secure facilities are provided for proper and hygienic storage of food.

b. Dry goods (*grains*) are stored in clean, dry storage areas in sealed containers or on pallets. Products are dated and rotated to use oldest stock first, and expired food as well as bags damaged by pests is discarded.

c. Produce is stored in a clean, dry refrigerator, and is ordered at regular intervals in amounts that can be used prior to spoilage.

d. Items frozen for use are dated and labeled, and no frozen items are thawed and refrozen. Items that are not fed frozen are thawed in a refrigerator to minimize risk of spoilage.

e. Browse, grass hay, alfalfa and other baled products are stored in a sheltered area on pallets, and oldest stock is used first.

N-5. Food Handling

Food is handled and prepared in an appropriate manner to retain nutritional value, freshness, and freedom from spoilage, invasive species or other forms of contamination.

a. Food is protected against dampness, deterioration, mold, and/or contamination by insects, birds, rodents or other animals.

b. No food that is spoiled or otherwise contaminated is served.

c. Foods not fed frozen are thawed in a refrigerator to minimize risk of spoilage. Frozen foods are not thawed and refrozen.

d. Fruits and vegetables fed to insect colonies are changed often to prevent consumption of spoiled food items.

e. Diets are prepared in a safe and hygienic manner to reduce the possibility of contamination or spoilage.

f. Food preparations meet all local, state/province, and national regulations.

g. Separate cutting boards, utensils and food preparation surfaces are used when meats, fish and produce diets are prepared in a common kitchen area.

h. Food preparation surfaces are thoroughly cleaned after use.

i. Staff and volunteers wash hands thoroughly prior to handling food, and wearing gloves during food preparation is recommended.

Veterinary Care

V-1. General Medical Program and Staffing

There is a written veterinary medical program, overseen by a veterinarian, with adequate support staff at the sanctuary, with 24/7 veterinary care available on call.

a. The sanctuary has a written veterinary medical program, including long term preventative medical protocols and disease surveillance and containment procedures, that is developed and carried out under the supervision of a licensed veterinarian – the attending veterinarian - who has training or experience in providing medical care for the elephants and other species housed at the sanctuary, and who is aware of any specific issues with the health of the elephants at the sanctuary.

b. One or more full-time veterinarians specifically concerned with the veterinary medical program is highly recommended for sanctuaries whose budget will support the salaries of such trained personnel. Sanctuaries unable to employ a full-time veterinarian have access to a part-time veterinarian, under a contractual or other similar arrangement, with training and appropriate experience with the elephants housed at the sanctuary.

c. Veterinary care is available 7 days per week and 24 hours per day for the sanctuary on an on-call basis when a veterinarian is not physically on grounds. When the primary veterinarian is unavailable, there are other suitably experienced veterinarians on call.

d. There are support staff to carry out the following roles: (1) Husbandry (elephant caregivers), (2) Technical (medical technologists, or individuals trained at the sanctuary), and (3) Clerical. The sanctuary has available properly trained and qualified professional and supporting personnel as necessary to implement these roles.

e. A staff member is trained to serve as a medical program director, dealing with emergencies until a veterinarian arrives or is reached. He or she is able to direct any

restraint of the elephants, perform basic first aid, be responsible for administration of post-surgical care, and be skilled in maintaining appropriate medical records.

f. Medications are stored appropriately on site, according to label directions. Medications requiring refrigeration are stored separately from food items.

V-2. On-Site and Off-Site Veterinary Facilities

Veterinary facilities are appropriately located, designed and equipped.

a. Any on-site veterinary facility at the sanctuary meets all local and state/province building regulations.

b. Surfaces in the on-site veterinary facility with which elephants can come in contact are non-toxic and can be readily disinfected.

c. The on-site facility is located away from areas of heavy public use to minimize noise levels for hospitalized elephants.

d. The on-site facility has separate areas for examination and treatment for any of the following functions performed on-site: sterile surgery, necropsy, quarantine, laboratory, radiology, pharmaceuticals storage including, when necessary, a safe for narcotics that meets the standards set by applicable regulations (*e.g.*, the Drug Enforcement Administration [DEA] in the United States), radiology equipment (if done on-site), elephant holding areas, capture and restraint equipment, non-absorbent and non-impact resistant surfaces, floors sloping toward drains, air handling systems, ceilings, doors, outside elephant enclosures as appropriate, hospitalized elephant enclosures, furniture, and storage areas.

e. If the sanctuary does not have an on-site veterinary facility, or only a partially outfitted veterinary facility it has a contract or similar arrangement with a nearby veterinary hospital for off-site treatment as needed. The hospital should have a sterile surgical facility with anesthetic equipment to include radiology equipment, a laboratory, and pharmaceutical storage. If necropsies are performed at the hospital, there is a separate area for necropsies and a separate storage refrigerator for storage of carcasses.

f. See also Standard V-4, "Clinical Pathology, Surgical, Treatment and Necropsy Facilities."

V-3. Preventative Medicine Program

The sanctuary has a complete preventative medicine program.

a. Appropriate preventative medicine programs are in place to manage all elephants, with special attention paid to geriatric animals.

b. The preventative medicine program includes quarantine procedures, parasite surveillance and control, immunization, contraception, infectious disease screening,

dental prophylaxis, and periodic reviews of diets, husbandry techniques and invasive species control.

c. When circumstances permit, and as appropriate for the individual animal, an overall examination is performed annually, blood is collected, serum banked as a baseline control and the results are recorded. The attending veterinarian, in consultation with the sanctuary director, determines any schedule for routine physical examinations, including ocular, dental and musculoskeletal assessment, and implements any necessary treatment.

d. A veterinarian, veterinary technician, or other trained personnel performs regular fecal examinations to look for pathogens (random enclosure sampling is adequate for group-housed elephants). Results are recorded. Fecal examinations are repeated following treatment to evaluate efficacy.

e. All elephants are immunized as recommended by the attending veterinarian, using currently recommended procedures and products as appropriate for the country, species and individual. Where possible, killed vaccines are utilized to minimize the potential for adverse reactions. Schedules and products are dictated by the disease status of domestic and wild animals in the area surrounding the sanctuary and relevant local and national laws.

f. When elephants are immunized, the type, serial number, and source of product are recorded in the individual animal's medical record.

V-4. Diagnostic Services, Surgical, Treatment and Necropsy Facilities

Diagnostic services, surgical facilities and services, medical treatment for sanctuary elephants and necropsy are all high quality, humane, professional, legal, and safe.

Diagnostic Services

a. Diagnostic laboratory services are available on- or off-site to assist with the examination of elephants and the diagnosis of disease.

- Where diagnostic services are performed on-site appropriate safety equipment and training is in place, *e.g.* as radiation exposure monitoring, personal protective equipment and hazardous material handling equipment; and there is a maintenance program in place for X-ray machines and other laboratory equipment.

b. Diagnostic capabilities include radiology, cytology, microbiology, parasitology, complete blood count, blood chemistry, urinalysis, serology and other appropriate laboratory procedures.

Surgical

c. The sanctuary has access to surgical facilities (either on-site or at a nearby veterinary hospital) that are clean, free from excessive noise and unnecessary pedestrian traffic, have adequate lighting, ventilation, and temperature controls, and can be easily cleaned

and disinfected. For off-site aseptic surgical facilities, an on-site area that can be adapted for occasional or emergency aseptic surgical use is available.

d. Surgical facilities have access to appropriate anesthetic equipment including injectable anesthetics, reversal agents, oxygen, sterilized surgical packs, surgical preparation solutions, intravenous fluids, fluid administration equipment, pulse oximetry, heart monitoring equipment (*e.g.* electrocardiogram, stethoscope), and emergency drugs. Where gas anesthetic equipment including scavenger units, are used, they are cleaned and calibrated at least annually. Gas cylinders are safely stored and replaced regularly.

e. If on-site, the sanctuary ensures that surgical equipment is maintained in good working order and is on a program of routine preventive maintenance.

f. Only a licensed veterinarian performs surgery, using standard operating procedures. (Note: A veterinary technician appropriately trained by a veterinarian in states or provinces where such action is permitted by veterinary practice acts can perform surgical first aid.)

g. The veterinarian uses aseptic surgical procedures whenever applicable.

h. Veterinarians and support personnel are compassionate and knowledgeable about the humane aspects of elephant treatment, including the proper use of anesthetics, analgesics, and tranquilizers.

i. Surgical incisions are observed daily, or as frequently as possible while minimizing stress to the elephants, for signs of dehiscence or infection. Analgesics are administered post-operatively when appropriate.

Treatment

j. Medications are maintained and used in accordance with local, state/province, and national laws and regulations and are administered in accordance with the state veterinary practice act, or equivalent outside the US.

k. The sanctuary has a pharmacy on-site where routinely used drugs, such as emergency resuscitative medications, antibiotics, anthelmintics, fluids, anesthetics, analgesics, tranquilizers, etc. are maintained.

l. All medications are purchased, prescribed and administered under the guidance of the veterinarian.

m. When distributed to elephant caregivers, medications are properly labeled and packaged, with the contents identified and instructions for the amount, frequency and duration of administration as well as the name and identification of the elephant to receive the medication, the expiration date of the medication, prescribing doctor and number of refills if any.

n. All medical treatments and drug prescriptions are documented in the elephant's medical record.

o. Basic physical capture and restraint equipment to facilitate medical treatment is available at the sanctuary.

Necropsy

p. Whenever possible, there is an isolated area on the grounds for performing necropsies, or appropriate storage facilities until the deceased elephant can be transported to a facility for a postmortem examination as soon as possible, understanding that necropsies performed longer than 24 hours after death may be of limited value due to autolysis of the body. (Note: Any refrigerated area for holding dead elephants is physically separate from

live elephant holding, treatment, and surgery areas and from food supply storage or preparation areas.)

q. Disposition of dead elephants and their parts meet all legal restrictions.

r. Dead specimens not used are incinerated or disposed of as deemed suitable by the veterinarian in accordance with local, state/province and national regulations.

V-5. Quarantine and Isolation of Elephants

Appropriate quarantine and isolation policies and accommodations are in place and utilized.

a. Upon arrival, all elephants undergo quarantine for a minimum of 30 days, according to the protocol established by the attending veterinarian, or for a greater period if required by applicable law. The quarantine period may be longer (at least 60-90 days) for those elephants that have received minimal screening prior to arrival, such as elephants from the wild. Elephants previously housed together may be quarantined together.

b. If the sanctuary does not have an adequate quarantine facility, steps should be taken to have elephants undergo quarantine under these guidelines prior to their arrival.

c. Local, state/province, or national regulations regarding quarantine of newly arrived elephants are followed.

d. All utensils and outer clothing used in quarantine are restricted to that area.

e. Protective clothing, boots and footbaths are used by all staff entering the quarantine area or areas containing quarantined animals. Quarantine clothing is not removed from the quarantine area, except in a sealed container for cleaning.

f. Caregivers wear protective gloves and masks when cleaning or handling anything with which the quarantine elephants come into contact.

g. Where possible, staff working in quarantine areas does not work with other sanctuary animals. If this is not possible, work is done in the quarantine areas last.

h. Quarantine staff cares for newly admitted elephants in their quarantine area before caring for sick animals, which are housed in separate isolation enclosures.

i. The quarantine area allows for daily cleaning and sanitation, either with removable catch trays or a drainage system that allows fecal matter to flush into a septic system; waste is otherwise removed and disposed of properly.

j. In enclosures housing animals carrying infectious or transmissible diseases, to the extent possible, all surfaces of the enclosure are properly sanitized.

k. Quarantine areas have adequate ventilation, heat and air conditioning, which are used to ensure optimum conditions, particularly in the case of young, elderly or sick elephants who may be more sensitive to environmental changes.

l. Quarantine animal waste is handled separately from all other manure or compost at the facility. Because of the risk of disease transmission, quarantine waste is not spread on pastures or composted.

V-6. Medical Records and Controlled Substances

Complete medical records and appropriate statistics are maintained, elephants have permanent identification, and controlled substances are prescribed and stored legally.

Medical Records

a. Complete medical records are maintained on all elephants.

b. Medical records are dated, legible and indicate examination findings, treatments (types of medication, dosage, duration), surgical procedures, anesthetic procedures (type of agent, dosage, effect), results of all laboratory tests (parasitologic, hematologic, bacteriologic, etc.) pathology reports, plus immunization records with all relevant dates, elephant identification and nutrition/diet information, and, where applicable, necropsy reports.

c. Copies of medical records accompany any elephant who is transferred to another sanctuary.

d. Medical records are maintained under the direction of the veterinarian or trained elephant caregiver. Where possible, duplicate record sets are stored at another site, or in a fire proof or theft proof safe on site or an online storage system.

e. Statistics are tabulated regularly on the rates and nature of illness and mortality in the sanctuary.

Controlled Substances

f. Only a licensed veterinarian prescribes controlled substances used at the sanctuary, and all such substances are secured in accordance with any applicable laws.

g. The sanctuary maintains appropriate records and logs for all controlled drugs used. All drug logs are kept up to date and comply with any national or other legal requirements (such as the Drug Enforcement Agency in the U.S.).

h. Expired controlled drugs are marked as such and stored separately.

i. Controlled drugs are discarded in accordance with applicable national, state, and local law and regulations (such as the USDA and DEA in the United States).

V-7. Breeding/Contraception

No intentional propagation of elephants occurs, and sound practices are in place and implemented to prevent propagation and to properly care for infants born at the sanctuary.

a. Although GFAS recognizes the importance of appropriate "conservation breeding" programs, they fall outside the mandate of GFAS Accreditation programs unless they adhere to the following guidelines:

- Animals are not brought into captivity for the purpose of breeding. Animals that are allowed to breed should enter a wildlife facility as a result of normal acquisition protocols such as surrender or government confiscation and be considered an endangered or threatened species with available release sites within the state/province, conducted with specific conservation goals, in accordance with local, state/province, national, and international law and regulations.

- Breeding should not be forced – that is, not the result of artificial insemination or being placed in enclosures of insufficient size or otherwise not in keeping with GFAS standards.

- Breeders – that is, the parent animals – should be released into the wild with their young. If breeding animals are deemed unreleasable, there should be documented evidence from a qualified professional that the animals cannot be released because of a physical condition or other reason that would make them unable to survive in the wild. Offspring of unreleasable parents should not be released until an age of species-specific maturity for survivability.

- Unreleasable breeding animals should receive the care required of all animals under the GFAS standards and should not be maintained for the purpose of breeding if they have incurable or unmanageable pain or suffering and do not have an acceptable quality of life.

- The facility should have an identified release site for the breeding animals and offspring, with any necessary permits or memoranda of understanding in place. While GFAS may consider whether a definite plan (such as ongoing surveys of land for potential release sites and a timeline for releasing animals) is sufficient, it will not be sufficient for a facility to simply say that it hopes or plans to be able to release the animals one day. Thus, a facility may not breed any animals in captivity, even highly endangered animals in order to create a sustainable population, without a definite release plan in place.

b. The sanctuary has species appropriate contraceptive programs in place (which may include physical separation of genders) with the method of contraception based on current best practices and attending veterinarian recommendations.

c. If females arrive at the facility pregnant, the sanctuary provides necessary care and the female is allowed to deliver unless there are valid health reasons for terminating the pregnancy, or unless the attending veterinarian feels the pregnancy is in such an early stage that aborting the fetus is an option, if so desired by the sanctuary. After delivery, reproductive control methods are applied after allowing adequate time for weaning as appropriate for that animal, provided there is no further opportunity for breeding during this period of time.

d. Infants born at the sanctuary remain with the mother as appropriate for natural rearing, provided there is no further opportunity for breeding during this period of time. Infants are only removed from females for hand-rearing if there is a threat to the life of the infant or the mother.

V-8. Zoonotic Disease Program

The staff and sanctuary veterinarian are knowledgeable about zoonotic diseases that may affect elephants at the sanctuary, and implement appropriate policies and procedures as needed to mitigate risk and deal with any exposures that occur.

a. The sanctuary's veterinarian is knowledgeable about zoonotic diseases that may affect elephants at the sanctuary. The sanctuary has emergency procedures and a defined process to avoid transmission of all potential or emerging diseases through bites, scratches, body fluids, direct contact with elephants and other means. (Note: Additional precautions may be necessary for staff classified as increased risk of disease, including those who are immune-compromised.)

b. Staff has tuberculin tests and necessary immunizations prior to employment and annually thereafter, as appropriate for the country, elephant species and individual. All attendants, handlers, and/or trainees who have direct contact with elephants are tested regularly for tuberculosis or have a chest x-ray taken (annual testing or x-ray recommended in areas with a high incidence of tuberculosis) and are continually made aware of the potential threat.

c. A physician with expertise in infectious diseases is consulted whenever an employee contracts an unusual illness or is exposed to an elephant diagnosed with a zoonotic disease.

d. When a reportable disease is identified, all appropriate local, state/province, and national regulatory officials are contacted.

e. All areas in which the staff has direct contact with elephants have hand-washing facilities available in the immediate vicinity (or an equivalent; *e.g.*, bactericidal hand-wipes)

f. Human food consumption by the staff does not occur in the immediate area of elephant contact.

g. Testing and vaccination protocols vary by location. Federal, state or province and local rabies prevention protocols supersede recommendations made in this document.

h. See also Standard S-14," First Aid and Zoonotic Disease Training, and Staff First Aid."

Well-Being and Handling of Elephants

W-1. Physical Well-Being

All elephants are routinely monitored to ensure their physical well-being. All aspects of husbandry, including veterinary care, environmental enrichment and diet are designed to optimize the elephants' physical well-being.

a. The welfare of each individual elephant is the overriding consideration in all sanctuary actions.

b. Elephants are able to enjoy lives that are as close as possible to that of their wild counterparts as regards stimulation and interest through adopting husbandry and management procedures, including appropriate housing and enclosure design, environmental enrichment programs, positive reinforcement programs and a balanced diet to meet nutritional requirements.

c. Elephants are provided with opportunities to explore their environment, forage for food, rest and play by providing species-appropriate places to hide and rest in comfort, and a variety of plants, trees and substrates and other enclosure enhancements where food/enrichment items can be hidden.

d. Regular assessments are performed in an effort to quantify and measure the welfare of individual animals through monitoring of nutritional, physical and social conditions. Qualified personnel conduct daily observations of each elephant to monitor for signs of physical abnormalities. Any unusual activities are recorded in a log at each inspection. Sudden changes in food consumption and other behaviors are immediately brought to the attention of supervisory staff. Note: Where it is not possible to observe each animal on a daily basis, time is spent observing all elephants on at least a weekly basis, an accurate population count is maintained, and health issues monitored.

   - Particular attention is paid to skin care particularly where there is limited access to bathing water and dry and wet wallows.
   - Attention is also paid to foot care where there is a history of chronic problems and/or or a lack of variety of natural substrates to result in normal foot wear.

e. Where possible and appropriate, records of individual elephants are kept to provide both behavioral and veterinary history.

f. Where possible, each elephant is weighed annually, either during a routine physical or through the use of a built-in scale, to monitor for signs of illness and to determine dosages for chemical anesthetics. Body condition scoring provides another option for assessing elephant weight and condition.

g. The use of positive reinforcement may be appropriate for elephants who enjoy interacting with people, to provide additional enrichment, reduce the need for chemical immobilization and reduce stress during medical intervention.

m. Juvenile males may remain with their natal herd until they are rejected by the herd or begin to show signs of sexual maturity. Age of maturity is highly variable thus young males must be closely monitored.

n. Adolescent males may be housed as a group until adulthood at which point they may be integrated into a bachelor herd. Males are housed at facilities with the capability of dealing the aggressive behaviors exhibited during musth.

W-3. Introduction of Unfamiliar Individuals

Introduction of any new elephant to a social group is done according to techniques appropriate for each species, with staff safety ensured.

a. Introduction of unfamiliar elephants is carefully considered. Professionals with experience in social introductions, if not on staff, are consulted whenever possible during these considerations.

b. As needed and possible, information listed below is gathered for the introduction planning process:

- A list of individual animals to be introduced, including all that the sanctuary ultimately hopes to integrate into a group.
- Background of each individual, including but not limited to: age and gender; social experience with other elephants; rearing history (hand-reared, parent reared, time spent with mother and siblings); dominance rank in previous groups and rank relative to other elephants who are also being integrated into the new group; affiliations with other individuals who are also being integrated into the new group; considerations for species-specific behavior and biology.

c. As appropriate or needed, benchmarks or desired outcomes are identified for each step in the process. Examples include:

- physical location of animals during visual contact period;
- behavioral goals of visual contact period;
- physical location of animals during tactile contact period;
- behavioral goals of tactile contact period;
- benchmarks for proceeding to physical introduction;
- space and enclosures to be used for physical introduction;
- reasons location selected: neutral space, ample run around, visual barriers, doors that can be closed to protect animals in trouble etc.;
- enclosure set-up for physical introduction, enrichment etc.;
- emergency equipment that might be needed;
- time frame necessary to acclimate animals to presence of equipment;
- criteria for separating animals if physical introduction does not proceed safely;
- post introduction management and husbandry protocols.

d. The plan is developed with involvement of all staff involved with care of the species and details a series of steps that will be taken to integrate the individual animals involved. Necessary modifications to enclosures are identified and completed prior to beginning the process.

e. The plan establishes behavioral goals for introductions and is not driven by schedules, and is open to modification as introduction/integration develops and evolves.

f. Only normally scheduled caregivers and animal managers are present to directly observe. Individuals who are not routinely present in the animal area, including veterinary and management staff, observe via remote video or receive reports from staff.

g. All caregivers have a clear understanding of the plan including contingencies for problems that might occur, and are empowered to take appropriate action in the event of perceived emergency.

W-4. Behavioral/Psychological Well-Being

The behavioral/psychological well-being of each elephant is evaluated and addressed, appropriate enrichment is provided, and where appropriate a welfare plan and report is part of each elephant's file.

a. There is a formal, written enrichment program that promotes species-appropriate behavioral opportunities and ensures the captive elephants' psychological well-being. A complete environmental enrichment program includes the following:

- Structural enrichment - Enclosure design and furniture that add complexity to the environment and promote species-specific behavior.
- Object enrichment – Objects that encourage inspection and manipulation and promote species-specific behavior.
- Food enrichment - Varying food choices and food presentation, including the use of hanging feeders, that increase food procurement time.
- Social enrichment - Affiliative interactions between caregivers and elephants may be appropriate in some instances. The decision to include social enrichment with caregivers should be made on an individual basis, considering only the social needs of the animal, such as dependent young; elephants in small enclosures; solitary animals, particularly those hand reared by humans with no conspecific contact; neonatal and juvenile animals in situations where appropriate.

b. All elephant care staff are trained to recognize abnormal behavior and clinical signs of illness. Measures of well-being that are assessed include:

- species appropriate behavior and interaction with other animals;
- the animal's ability to respond appropriately to variable environmental conditions, physiological states, developmental stages, and social situations as well as adverse stimuli.

c. Stereotypic behavior, self-injurious behavior, and inappropriate responses to various stimuli not previously documented or witnessed may be evidence of compromised well-being and are investigated. A plan to address the concerns is developed.

d. Where possible and appropriate, a behavioral/psychological profile is maintained for each individual elephant and updated annually. A copy of the welfare report is kept in the elephant's permanent file.

W-5. Elephant-Caregiver Relationships

Positive relationships between elephants and caregivers are maintained. Elephants are not fearful or aggressive in response to human presence or routine care procedures.

a. Elephants arrive at sanctuaries with a variety of previous experience with caregivers, which caregivers take into account in their interactions with these species.

b. A protocol for introducing elephants to new caregiver staff has been developed. Where possible, new caregivers accompany a trusted caregiver until the elephants become comfortable with the new individual.

c. A positive relationship between the elephants and regular caregivers, animal managers and veterinary staff is one in which the elephants are given the freedom to integrate with their conspecific social group with minimal human interference or to interact regularly with caregivers if they choose.

d. Where possible and appropriate, animals become familiar with the veterinary staff, allowing close observation. Individual elephant preference for interaction with caregivers, animal managers and veterinary staff is taken into account.

e. The animals do not become fearful or overly aggressive in response to human presence or routine care procedures.

f. Interactions with elephants do not cause overheating, excessive cooling, physical harm, or unnecessary discomfort, and minimize physical and psychological stress or trauma as much as possible.

g. Negative interactions are avoided. However, when they occur, efforts are made to recover trust and a positive relationship if the elephant enjoys regular interaction with people.

h. Physical abuse, deprivation of food or water, and other forms of negative reinforcement or punishment-based training are never used to train, shift or otherwise handle elephants.

W-6. Handling and Restraint

Any necessary handling and restraint is done safely and appropriately, with minimal distress to elephants, and staff are trained in elephant-specific safe handling techniques/practices.

a. In general, humans do not enter enclosures with elephants. Direct physical interaction is, with few exceptions, limited to protected forms of contact, by experienced personnel, to minimize the risk of injury.

- Protected contact is defined as handling of an elephant where the caregiver and elephant are separated by a barrier or an established safety space.
  - Typically in this system, the elephant is not spatially confined and is free to leave the work area at will. The caregiver has contact through a protective barrier.
  - Protected contact also includes situations where the elephant is handled through a protective barrier but is also spatially confined by an Elephant Restraint Device (ERD).
- Free contact may be appropriate for elephants being hand-reared for release to the wild, provided personnel involved in caring for the calves are appropriately trained in positive reinforcement techniques and safety procedures.

b. A management plan is developed for each elephant that includes caregiver safety, elephant behaviors volunteered upon request, emergency protocols, and staff training.

c. Where possible and appropriate, Positive Reinforcement Training (PRT) is used to minimize the need for chemical immobilization and to reduce stress during procedures. With appropriate training, many procedures can be performed cooperatively, without anesthesia, such as examination of body parts and treatment of superficial injury.

d. Some elephants may be conditioned to enter an elephant restraint device (ERD) using PRT.

e. In general, the following items are not used when working with elephants:

- Chains - In circumstances where the use of chains may significantly improve elephant safety, such as during transport, their use is limited to the shortest time possible. Elephants are never chained simply for convenience.
- Sticks, bats or any other devices used to poke at or strike the elephant; electrical devices designed for use on livestock, such as commercially manufactured electric prods; and shocking collars/belts.
- Any physical abuse, deprivation of food or water and other forms of negative reinforcement or punishment-based training.

f. Handling for veterinary care is done as expeditiously and carefully as possible in a manner that does not cause trauma, overheating, excessive cooling, physical harm, or unnecessary discomfort, and minimizes physical and psychological stress as much as possible.

f. Manual restraint is not recommended for elephants, and is not attempted when multiple animals are present in an enclosure.

g. Chemical immobilization is performed only by a licensed veterinarian or by trained staff under the guidance of a licensed veterinarian, or other qualified individuals authorized by the sanctuary director or veterinarian, following the laws and regulations of country where the animals are housed. Specific anesthetic protocols, including record-keeping, are followed.

h. Chemical restraint is not used when multiple animals are in an enclosure except in an emergency situation. In such cases, all possible precautions are taken to prevent threats to the handlers and the animal being sedated.

i. Multiple staff members are trained to use a dart gun and other restraint equipment, and to employ safe capture techniques. The staff, and volunteers where appropriate, are aware of who is trained and authorized to use restraint equipment.

STAFFING

GENERAL STAFFING

S-1. General Staffing Considerations

The sanctuary has a sufficient number of staff and volunteers, adequately supervised, to provide humane care, with clear job duties and equitable compensation.

a. The sanctuary employs or enlists a sufficient number of qualified employees or volunteers to provide the appropriate level of care for the elephants and to ensure adequate supervision of all employees and volunteers. (Note: Staff-to-animal ratio will vary greatly given the nature of the facility and the type of elephant and other animals at the sanctuary.)

b. As described in Standard G-3, "Succession Planning," there is a written job description for the sanctuary director and other senior management positions at the sanctuary, providing a clear description of their duties and responsibilities.

c. A list is maintained of all staff/volunteers authorized to work with the elephants, indicating lines of responsibility. Staff receives fair compensation commensurate with their skills. At a minimum, each salary complies with generally accepted standards of compensation for employees of the sanctuary.

d. There is a clear management structure within the sanctuary, which is communicated to all employees, and to volunteers as appropriate.

S-2. Security and Emergency Coverage

Staff is available at all times to respond to emergencies.

a. A qualified senior staff member or the sanctuary director should live on the sanctuary grounds. If no one lives on sanctuary grounds, then at least one trained and qualified staff member or trained volunteer is on the sanctuary grounds at all times, and a staff member is immediately reachable via telephone, radio or pager, 24 hours a day, 7 days a week.

b. The director is generally available to the sanctuary on a full-time basis (40 hours per week); when the director is not available due to vacation or another reason, there is a designated back-up from among the senior staff. Staff has various means to contact the director at all times in case of emergency.

c. A qualified veterinarian trained in the care of the elephants housed is available in person or via phone at all times in case of emergency.

S-3. Volunteer and Internship Programs

Volunteers and Interns are appropriately supervised, and those playing an integral role in the sanctuary receive the manuals, training and safety protocols.

a. Any volunteers/interns and community workers have a specific employee/staff member assigned with directing their recruitment, training and supervision.

b. Any volunteers/interns and community service workers allowed to work with or around elephants do so only under the appropriate level of supervision of a fully trained elephant caregiver.

c. Volunteers/interns who play an integral role in the sanctuary are treated as an employee would be treated, regarding the provision of manuals, training, and safety.

S-4. Manuals

The sanctuary has a current employee manual, standard operating procedure manual, and, if applicable, manuals for volunteer and internship programs. Manuals are reviewed and updated regularly.

a. The sanctuary has a written employee manual that includes information pertaining to topics including: personnel practices, employee benefits, leave of absence, sick leave, personal appearance and conduct, environmental concerns, filing complaints, and performance evaluation. The employee manual is given to all new employees.

b. A standard operating procedure (SOP) manual is available on the premises and in a location accessible to the staff at all times. The manual contains a detailed outline of all daily procedures, as well as emergency protocols and other policies relating to the care and safety of the elephants.

c. Care procedures for elephants at the sanctuary, as well as other animals at the sanctuary, are written down (either in the SOP manual or elsewhere) and include detailed information specific to that species or individual.

d. If the sanctuary has a volunteer and/or intern program, it has prepared manuals outlining volunteer and/or intern responsibilities. Copies of the manuals are given to all new volunteers and/or interns.

e. All manuals are reviewed at least annually and updated as necessary, and employees, volunteers and interns are advised of any changes.

S-5. Employee Training and Continuing Education

Training and supervision are carried out in a manner to ensure the highest and safest level of care for the elephants, including during unforeseen changes in personnel.

a. New employees participate in a probationary training period suitable to the species in question and under the strict supervision of a fully trained senior staff member before working directly with elephants at the sanctuary.

b. At least one staff member and backup are trained in all aspects of elephant care for all species housed at the sanctuary to ensure that an experienced caregiver is always available to care for all elephants in case of personnel changes; and that staff member and backup are noted in writing.

c. The sanctuary director ensures that plans for continuing education to improve elephant care and management techniques are in place.

d. Continuous in-house staff training and development (including availability of relevant literature) is offered to employees, and volunteers as appropriate, including such topics as: elephant husbandry, elephant welfare, health and safety, first aid, action in emergencies or escapes or illness, safety procedures, emergency euthanasia, basic sampling for health monitoring and diagnosis, food hygiene, disease prevention.

SAFETY POLICIES, PROTOCOLS AND TRAINING

S-6. General Staff Safety

Elephant caregivers have a thorough understanding of the potential risks of working with elephants and are appropriately trained in safety procedures.

a. All sanctuaries housing elephants have a thorough understanding of the potential risks of working with these animals.

b. Protocols involving potential risk (*e.g.*, unlocking enclosures, shifting elephants to previously unlocked areas) include redundancies to reduce the risk of equipment failure and human error.

c. Personnel are ALWAYS accompanied by at least one other trained individual when working with or near elephants. Caregivers hand-rearing elephant calves

All staff working with or near the elephants maintain verbal contact. Cell phones or radios may be used, where appropriate, for maintaining contact.

d. All slides, doors and gates in elephant areas are kept closed and securely fastened at all times unless needed for elephant access.

   - Ideally a double-gated system is in place with an escape route for staff in the event of an elephant escape into human areas.

e. Designated senior members of staff are responsible for holding keys to elephant areas and supervising staff in those areas.

f. Locks and the security of slides, gates and doors are double-checked after each use and inspected regularly to ensure proper functioning.

g. Any areas where staff and elephants are in close proximity have clear safe zones such as clearly delineated lines over which staff does not cross, or a protective barrier, such as strong mesh fencing.

h. All personnel working with great elephants are trained to recognize and respond appropriately to threat displays and other behaviors that could signal an impending attack.

i. Caregivers have established a predictable protocol for servicing enclosures to minimize stress for the enclosure occupants. In as much as possible the enclosures are serviced from outside or appropriate space barriers are employed.

   - In general, personnel do not enter any enclosure occupied by an elephant except in emergencies AND when other individuals have been shifted to a safe area. Additional exceptions may be made for caregivers working with elephant calves being hand-reared for release back to the wild.

S-7. Communication System

The sanctuary has a reliable communication system in place.

d. A reliable communication system with back ups, which may utilize pagers, 2-way radios, cell phones, intercoms, or other electronic devices, is in place.

S-8. Emergency Response Plans and Protocols

The sanctuary has appropriate written disaster preparedness plans in place, needed information is posted, and appropriate coordination takes place with community emergency services.

a. The sanctuary has a written disaster preparedness plan in place to cover emergency procedures in the event of a natural disaster, fire, injury, etc. The plan has taken into account all necessary elephant handling under situations of extreme stress.

b. The written plan is provided to staff and, where appropriate, volunteers.

c. Emergency information is posted throughout the sanctuary indicating emergency contacts and phone numbers including the local police department, fire department,

attending veterinarian, sanctuary director, supervising staff members, location of nearest hospital and other important information.

d. A detailed outline of communication lines, procedures and locations of all exits and entrances to the sanctuary are clearly defined and known by the entire staff. This information is reviewed for needed updates periodically. Maps are posted throughout the sanctuary indicating the best evacuation route.

e. All emergency plans are coordinated with local community emergency services as appropriate including fire, police, hospitals, and ambulance services. Appropriate community personnel and agencies are aware that elephants are housed at the sanctuary.

f. The location of the sanctuary does not pose any undue hazards and minimizes risk from natural disasters (*e.g.* flood zone, riverbed). If such risks are present, the sanctuary has addressed this in the written disaster plan.

g. The sanctuary is located in an area that is removed from heavily developed areas to the extent possible. If the sanctuary is near heavily developed areas, it has taken steps to address problems this may cause for the surrounding community or the elephants.

h. A secure location is identified where elephant records (*i.e.*, acquisition, transport, medical, welfare assessment reports) are protected from fire, flood, and other hazards. (Note: Backed up offsite storage and web-based storage of electronic records is one method.) Governance documents, financial records, and permits and licenses are also stored securely.

i. Provisions are made for long-term archiving in a secure format. A regularly backed-up copy should be stored in a separate location or online.

S-9. Escaped Elephant Protocol

A detailed and appropriate written escaped elephant protocol is in place and understood by staff and local emergency services; and any escapes are detailed in reports.

a. A detailed written escaped elephant protocol is in place addressing situations in which elephants escape from their enclosures, regardless of whether the animals have escaped sanctuary property, and is reviewed and understood by all staff, and volunteers as appropriate.

b. The protocol is shared with local emergency services such as the fire and police departments.

c. The protocol includes the following:

- A clearly defined chain of command in an emergency situation;
- A notification hierarchy, indicating who to contact first, second, third and so on in case of an escape;
- Possible elephant escapes occurring during off-hours, when staff may not be immediately available;

- A communication system allowing for clear communication with sanctuary staff of all pertinent ape information including the type of elephant escaped by species, age, sex and location.

d. Clear plans and routes for personnel safety are plotted and displayed throughout the sanctuary.

e. All escapes are recorded and detailed reports made.

S-10. Emergency Training

Staff participates in ongoing training for emergency response, and drills are conducted regularly.

a. All staff, and volunteers where appropriate, participates in ongoing training on all emergency, escape, and disaster preparedness procedures consistent with the sanctuary's written protocols, with drills held at a minimum of every 6 months.

b. Records of training are maintained, including a list of those staff and volunteers who participated in training. Drills are evaluated to ensure that procedures are being followed, that the sanctuary's communication system is effective, that staff training is effective, and that improvements to protocols are made where appropriate.

S-11. Firearm Policy

(Note: Not applicable for sanctuaries that do not need or use firearms)

The sanctuary has a written firearm policy, including identified personnel, and covering proper care and storage of firearms.

a. A written firearm policy exists in compliance with all applicable laws; and personnel qualified to use firearms are identified and made known to sanctuary staff.

b. Firearms, ammunition, where provided, are available for immediate use, used by licensed and trained operators only, cleaned and maintained and tested as recommended by the manufacturer, and kept securely under lock and key when not in use or under maintenance.

S-12. Firearm Training

(Note: This standard may be waived when firearms are not needed or used at the sanctuary.)

If the sanctuary has firearms, appropriate staff are identified for weapons training, and receive documented and up-to-date training.

a. All staff qualified and licensed to use firearms undergo training and periodic refresher training and practice, including a review of current sanctuary protocols and policies. Such training is recorded.

S-13. Chemical Restraint

The sanctuary has a written chemical restraint policy, which covers appropriate use, maintenance and storage of chemical restraint equipment and attendant drugs.

a. A written policy for the humane chemical restraint and safe capture of elephants housed at the sanctuary is in place and in compliance with the Drug Enforcement Agency (or comparable agency outside the United States), to include:

   - Training and certification in the equipment, humane chemical restraint, immobilization process, and the use of drugs for veterinarian purposes or emergencies;
   - Procedures listing at a minimum those persons authorized to administer animal drugs, situations in which they are to be utilized, location of animal drugs in a safe and secure place, and those persons with access to them, and an emergency procedure in the event of accidental human exposure.

b. The sanctuary's policy provides for qualified personnel to partake in appropriate training programs on the safe and humane use of chemical restraint and immobilization equipment.

c. All chemical restraint equipment is cleaned after each use, maintained in good working order and tested on a regular basis.

S-14. First Aid and Zoonotic Disease Training, and Staff First Aid

An appropriate written first-aid plan is in place, staff (and volunteers where appropriate) is informed when a zoonotic disease occurs at the sanctuary, and training is provided to staff and, as appropriate, volunteers.

a. The sanctuary has a written first-aid plan that is accessible to all staff on the premises, and to volunteers as appropriate.

b. Staff, and volunteers as appropriate, are trained in basic first aid.

c. Written instructions are provided for staff (and volunteers as appropriate) on the provision of emergency health care and the procedures to be followed in the event of an incident involving any elephant and a visitor, volunteer or staff member, including (when appropriate) handouts with any special information that any attendant health care professional, on site or off, should know to help the victim and/or keep health care

b. The sanctuary's governing body has confirmed that the sanctuary is located on property for which it is allowable (by law or regulation, such as zoning laws) to operate the facility and the activities conducted by the organization.

c. If the sanctuary is on another person's property [*e.g.*, housed in someone's home or on their land, including government land], there needs to be a written lease agreement between the property owner and the sanctuary (or its governing organization).

d. If property is leased, a long-term (ten years or longer) contractual lease is in place, with a termination clause requiring sufficient notice (a minimum of a year) to allow the sanctuary to relocate or transfer its animals to another appropriate facility that has committed to providing their lifetime care.

e. If property is leased, the sanctuary should have a written contingency plan describing the steps to take to relocate or transfer its animals to another appropriate facility at the end of the lease, or upon an unexpected termination of the lease.

G-3. Succession Planning

The sanctuary has a written succession plan for its continuance should the director or other key management be unable to continue in their positions.

a. The sanctuary has a written plan outlining succession scenarios for key positions within the sanctuary, covering at a minimum the sanctuary director. Depending on the structure of the sanctuary management, this may also cover the assistant director, director of operations, director of finance, etc.

b. For the director position as well as other key management, written job descriptions should exist outlining the primary functions and responsibilities of each position.

c. The succession plan should include an emergency plan outlining who will carry out the key responsibilities in the event of a sudden and unexpected absence by the director or other key management in both short- and long-term scenarios.

d. A succession plan should also define the role of the Board of Directors/Trustees in overseeing transition in the event of a planned departure of the sanctuary's director, including functions such as hiring and oversight of an interim director, determining salary ranges, re-assignment of responsibilities, and the appointment of a transition committee.

G-4. Board of Directors/Trustees

The Board of Directors/Trustees organizes itself and carries out its duties in an appropriate, legal and responsible manner, and has appropriate relationships with staff and volunteers.

a. A Board of Directors/Trustees is in place with a minimum of three (3) members, or a greater number if required by law, where at least one board member is not a family member.

b. The Board of Directors/Trustees has organized itself in a manner that allows its duties to be carried out in a timely and responsible manner and in accordance with all relevant non-profit regulations.

c. Bylaws, in accordance with applicable law, have been developed and adopted as the general policies and rules that govern the sanctuary and define the Board's composition and structure.

d. The Board of Directors/Trustees has regularly scheduled meetings, and minutes are kept. The Board has a written position description describing the responsibilities of its members, and members are knowledgeable of their legal obligations and accept responsibility for self-regulation, accountability, ethical practice of the sanctuary, and sound financial management and oversight.

e. The Board is supportive of the sanctuary abiding by GFAS standards.

G-5. Ethics and Grievance Procedures

The sanctuary's policies and actions of the Board and staff reflect adherence to a high code of professionalism and ethics.

a. Business and related activities, including outreach and interactions with other sanctuaries, are conducted in a professional manner, with honesty, integrity, compassion and commitment, realizing that an individual's behavior reflects on the sanctuary and greater humane communities as a whole. A code of ethics/conduct for the sanctuary has been adopted by the Board of Directors/Trustees.

   - The code of ethics/conduct addresses the core values of: integrity, openness, accountability, service and charity, and reinforces standards of professional behavior. (Note: In recognition that some animals are used for food, and sanctuaries are in the business of protecting animals, all sanctuaries should ensure that their sanctuary events are conducted in a manner that is consistent with their mission.)

   - All personnel associated with the sanctuary, including volunteers, have been provided with access to the code of ethics/conduct and have agreed to adhere to it.

b. The sanctuary has a written Conflict of Interest policy prohibiting any Board member, director, or key employee from approving or voting on a transaction in which he or she has a monetary or other interest. Members of the Board of Directors and the director, as well as key employees as appropriate, are asked to sign written acknowledgements of receipt of the policy and have disclosed potential conflicts of interest.

c. The sanctuary has a written anti-discrimination policy, specifically referring to any protected class under law.

d. There is a written grievance process that is clearly communicated to the staff and volunteers to communicate the procedure for reporting a concern regarding workplace-related issues, including ethics complaints; includes an alternate pathway if the normal person to whom one should take concerns is non-responsive or the focus of the concern; and allows for fair, prompt and meaningful resolution.

G-6. Required Licenses and Permits

The Sanctuary has all legally required licenses and permits (or other necessary government approval) to operate as a sanctuary and to house each animal.

a. The sanctuary obtains and maintains all permits and licenses required under city, county, state/province, country and international laws and statutes for each animal housed at the sanctuary.

G-7. Strategic Planning

The sanctuary has at least a three-year strategic plan in writing, to provide a structure upon which to base the fundamental actions that guide and shape operations.

a. The sanctuary has a written strategic plan in place, developed by the Board of Directors and director, with input from other sanctuary management and staff where appropriate, that provides a structure within which fundamental actions of the sanctuary are based to shape and guide sanctuary operation. The strategic plan addresses at a minimum three years.

FINANCIAL RECORDS AND STABILITY

F-1 Budget and Financial Plan

The sanctuary maintains an annual operating budget and a long-term financial plan.

a. An annual operating budget exists and reflects estimated future expenditures. The budget includes expenses related to staffing salaries and benefits, overhead expenses, supplies, capital improvements, ongoing maintenance, etc. The budget is approved by the Board of Directors/Trustees.

b. Periodically during the year, the estimated budget is compared to the actual expenses of the sanctuary and where necessary, appropriate adjustments are reflected in future estimated expenditures.

c. The sanctuary has a long-term (minimum of three years) financial plan that projects future revenue and expenses, consistent with priorities set out in the strategic plan. The plan builds in protection for the care of the animals (*such as* creating a "bare bones" budget; seeking endowments for lifetime care of animals; building up increased operating reserves; entering into written agreements with other facilities to take animals in the event

of closure of the sanctuary; or other such "safety nets") in the event that significant decreases in operating income occur.

F-2 Financial Reports

The sanctuary keeps accurate and complete financial records.

a. Detailed, accurate periodic financial reports are kept on file. The sanctuary produces on a regular basis (at least annually) the following financial statements:
   - A Statement of Financial Position (also known as the Balance Sheet);
   - A Statement of Activities (also known as the Statement of Revenues and Expenses, or Operating Statement, or Income Statement, or Profit and Loss Statement); and
   - A Statement of Cash Flows.

b. Other pertinent information, such as loan amortization schedules and lease commitments, are also maintained and updated at least annually.

c. Copies of IRS Forms 990 (or comparable documents required to be filed to maintain non-profit status outside of the United States) and other tax documents, such as exempt status determination letters, are kept on file with other sanctuary documents and are available for public review, as required by law.

F-3 Financial Stability

The sanctuary has a strategy in place for securing and maintaining at least minimal financial reserves.

a. The sanctuary has a strategy in place, as reflected in strategic and financial plans, to maintain reserves equal to at least three months (or one month to achieve GFAS verification) of those operating costs essential to the proper care and welfare of the sanctuary animals.

b. Consideration may also be given to cash equivalents as well as advance purchases of food, supplies, etc.

c. See also Standard F-1(c), "Budget and Financial Plan."

F-4 Banking Responsibilities and Financial Transactions

The sanctuary maintains a bank account, keeps personal and sanctuary business separate, and properly records all contributions, petty cash transactions, and loans to the sanctuary.

a. There is a checking account registered in the sanctuary's name that is used only for sanctuary financial transactions.

b. Personal business is kept completely separate from the sanctuary's business (*e.g.*, staff and Board members cannot use sanctuary funds to pay for personal expenses or take loans from sanctuary funds).

c. If the sanctuary is being funded through personal loans, loan documents are signed and maintained in the accounting record. Repayment schedules are developed and followed.

d. All contributions from donors are properly documented and promptly deposited. Donors are provided with receipts as required in accordance with applicable laws or regulations.

e. If petty cash is kept on hand, transactions are documented and receipts are kept on file substantiating the related expenditures.

F-5 Fundraising Activities and Disclosures

Fundraising is conducted in a legal, ethical and transparent manner.

a. Fundraising techniques conform to applicable tax regulations for maintaining non-profit status (*e.g.*, sec. 501(c)(3) status in the United States) and conform to the spirit as well as the letter of all applicable laws and regulations.

b. Fundraising activities are conducted with honesty and integrity, and put the charitable mission of the sanctuary above personal gain.

c. All fundraising and soliciting materials are accurate, do not exaggerate financial needs or incorrectly claim sole credit for joint efforts, correctly reflect the sanctuary's mission and use of solicited funds, and do not threaten to betray the mission by making misleading and unprofessional statements (*e.g.*, claiming animals will have to be euthanized if donations are not received immediately).

d. The sanctuary ensures proper stewardship of charitable contributions, including timely reports (*e.g.*, tax filings, annual reports, reports required by funders) on the use and management of funds. Restricted funds are expended in accordance with donor's intentions. Explicit consent by the donor is obtained before altering restrictions or conditions of a gift.

e. Fundraising expenses are reasonable, and total fundraising expense is disclosed on financial reports and any required tax filings.

f. Fundraisers for the sanctuary ensure that all information provided to donors is accurate and complete. Any statements about the taxable nature of donations indicate that all or part of the donation may be tax deductible as a charitable contribution under applicable law.

F-6 Insurance and Waivers

The sanctuary has adequate insurance coverage and secures signed waivers from all who enter the sanctuary property.

a. Insurance policies, where available, are in place that protect the financial resources of the sanctuary and staff, as well as protect the community from harm that the sanctuary might cause. The amount of coverage is commensurate with the size of the sanctuary and the

implied risk associated with the animals housed at the sanctuary. Where available, this includes General Liability insurance and a management liability policy (often called Directors & Officers or "D & O").

b. Visitors, volunteers, and employees sign waivers that acknowledge the potential risks of being on sanctuary property.

EDUCATION AND OUTREACH

E-1. Education Programs

(Note: Not applicable for sanctuaries that do not have an education program)

Education programs are thoughtfully designed and overseen to promote a humane ethic, with careful respect and protection of all aspects of the individual welfare of the elephants involved, and ensuring public safety.

a. Any education program is designed to promote awareness, empathy, and respect for all life through education and advocacy insofar as resources permit, and portray the issues surrounding why individual elephants reside at the sanctuary, the elephants' natural history and conservation status, and how the highest welfare of each individual elephant is ensured.

b. An education program is conducted in accordance with a written Education and Outreach Policy that articulates and evaluates program benefits, under the direction of qualified staff and/or volunteers.

c. The education program is evaluated by the director periodically for effectiveness and content, ideally on an annual basis.

d. Elephants are not taken out of enclosures/habitats or off the grounds of the sanctuary for incorporation into the education program. Elephants may be incorporated into education programs utilizing non-invasive educational methods/tools, such as audio-visual presentations, webcasts, or other forms of multi-media. In such cases, they are treated in a respectful, safe manner that does not misrepresent or degrade them, does not cause them distress, and does not put elephants or humans at risk.

e. See also Standards P-8, "Removal from Sanctuary or Enclosures/Habitats for Non-Medical Reasons," and P-9, "Public Viewing of Human/Elephant Interaction."

E-2. Tours

Any tours are monitored and conducted in a careful manner that minimizes the impact on the elephants and their environment, does not cause them stress, and gives them the ability to seek undisturbed privacy and quiet.

a. Non-guided tours are prohibited, and tour groups are of a size that allows for close monitoring and vary based on the size and staff of the sanctuary.

b. Tours, if allowed, are for an educational purpose consistent with the sanctuary's education policy and not used for entertainment (*see* Standard E-1, "Education Programs").

c. All tours are conducted to minimize the impact on the elephants and their environment.

d. Elephants are confined within a secure environment and provided the opportunity to escape from public view. Elephants are not in enclosures or habitats specifically designed to minimize their privacy and all wild elephants have the ability to seek undisturbed privacy and quiet.

e. Elephants that are easily stressed are excluded from tours.

f. All tours prohibit the public from any physical contact with the elephants residing at the sanctuary.

g. Members of the public cannot feed sanctuary elephants during tours.

E-3. Outreach

Sanctuary staff are appropriate advocates for elephant protection and welfare, and work cooperatively with other sanctuaries and the community.

a. The sanctuary works cooperatively with other sanctuaries as applicable, keeping the elephants' welfare as the first priority. (For instance, best practices are shared, sanctuaries collaborate to arrange best placements for elephants, etc.).

b. Any community outreach is conducted in an ethical and professional manner.

c. The sanctuary does not adopt policies in opposition to the welfare of elephants (*e.g.*, endorsing the use of elephants for entertainment).

POLICIES

POLICIES: ACQUISITION AND DISPOSITION OF ELEPHANTS

P-1. Acquisition Ethics and Commercial Trade Prohibition

Acquisition of elephants by the sanctuary is legal and ethical.

a. The sanctuary has relevant legal documentation (including any required permits and licenses) for, and is in legal possession of, all animals in its care.

b. The sanctuary has a written policy governing its acquisition of elephants, including the following provisions:

- Elephants are only accepted if the sanctuary has the financial resources to provide appropriate professional care.
- Elephants are only accepted if they will not jeopardize the health, quality of care or maintenance of elephants currently housed at the sanctuary.
- All acquisitions of animals by the sanctuary are consistent with its mission and in the best interest of the individual animals (for example, it may be in the best interest of a rescued infant elephant to be placed at another accredited sanctuary if no appropriate surrogates are available).
- Acquisition of elephants occurs through donation or rescue. No commercial trade in sanctuary animals occurs (included, but not limited to, the sale of animals, animal parts, by-products, or offspring), and the sanctuary does not knowingly engage a third party to purchase an elephant on its behalf. (*Note: if animals have been purchased, or if the sanctuary has a policy in place that allows purchase under certain circumstances, the sanctuary must provide GFAS with this information, indicating why such purchases are consistent with the sanctuary's mission and why they do not sustain or promote the commercial exploitation of the species.*)
- No acquisition results from the intentional breeding of animals for or at the sanctuary. An exception may be made for rehabilitation and release centers engaged in a bona fide breeding-for-release-program of endangered species with available release sites within the state/province, conducted with specific conservation goals, in accordance with local, state/province, national, and international law and regulations.

c. Safe and humane transport is used for all acquisitions.

P-2. Acquisition Recordkeeping and Monetary Exchange

Acquisition contracts are clear, with ultimate responsibility for acquisitions clearly defined.

a. An acquisition contract is in place that clearly identifies the sanctuary as the "responsible party" for the elephants and when such responsibility takes effect; whenever possible, the contract includes information on the "surrendering party" as well as any intermediary parties (rescue groups, zoos, etc.). This written contract is kept as part of the permanent record for each elephant entering and housed at the sanctuary.

b. Other acquisition records to be kept as part of the permanent record for each elephant may include:

- Permits as required to satisfy local, state, federal and international law.
- Importation papers or other declaration forms where applicable.
- Titles and other appropriate documents establishing a paper trail of legal acquisition are maintained whenever possible. When such information does not exist (the sanctuary maintains confiscated wildlife), an explanation is provided regarding such animals.
- Health certificates as required by the appropriate national and local government agencies (such as the USDA Interstate and International Certificate of Health Examination in the United States).

c. Financial expenses associated with acquisition of an elephant may be received in order to enable the sanctuary to be able to responsibly take in the elephant, and may include medical testing, behavioral assessment, crate construction costs, quarantine costs, shipping and transport costs. Lifetime care costs may be factored in as appropriate.

P-3. Disposition Ethics and Responsibility

The sanctuary assumes responsibility for the elephants it acquires, with some noted exceptions, with ultimate responsibility for dispositions clearly defined.

a. The sanctuary assumes lifelong responsibility for the elephants acquired and only in very rare circumstances does an elephant permanently or semi-permanently leave the sanctuary, with the exception of releasable wildlife reintroduction.

- A rehabilitation center assumes responsibility (in accordance with national and local law) for the appropriate disposition of animals it acquires, with the goal or reintroducing native wildlife, where possible, to its natural habitat.

b. Acceptable reasons for disposition, when movement of elephants to another sanctuary or other appropriate facility does not compromise the welfare of that individual or the other elephant(s) with which s/he will be housed, include:

- health concerns that cannot be adequately addressed by the sanctuary, where another accredited sanctuary or comparable facility is better equipped to provide care for the elephant.

- another accredited sanctuary or comparable sanctuary can provide a better long-term environment (such as creating a suitable social group of conspecifics).

c. Other reasons for disposition include financial insolvency, closure of the sanctuary, return of confiscated wildlife to its country of origin, or death of the elephant.

d. Detailed records of elephant disposition are logged and maintained, including the details of all body parts.

P-4. Disposition of Live Elephants

Responsible steps are taken to ensure that any disposition of a live elephant is in the life-long best interests of that elephant.

a. The sanctuary has a written disposition policy that adopts substantially the language of this standard.

b. Elephants are not transferred to individuals, nor are they transferred to sanctuaries or other facilities that lack the appropriate expertise and/or resources and/or facilities to care for them appropriately. Before transfers, the sanctuary is convinced that the recipient has the expertise, records management capabilities, financial stability and facilities required to properly care for the elephants. Elephants are not "loaned" to other facilities.

c. Elephants are not disposed of at auctions or to breeders, dealers, brokers, "kill buyers", slaughterhouses or private pet owners.

d. For sanctuaries engaged in rescue, rehabilitation and release of elephants, subject to all pertinent regulations and laws, elephants are released within native ranges, in accordance with local, state, national and international regulations.

e. If an elephant, especially one housed individually (to be avoided whenever possible), shows signs of self-mutilation and/or apathy, is uncontrollable, has a highly aggressive disposition, and/or is suffering physically or psychologically, and if the sanctuary cannot remedy the situation, then, if possible, the elephant is transferred to another accredited sanctuary or other appropriate facility, if it appears that environment will better suit the animal.

f. See also Standard P-5, "Euthanasia."

P-5. Euthanasia

Euthanasia is governed by an ethical humane euthanasia policy, and deceased elephants are handled appropriately.

a. The sanctuary has and maintains a written humane euthanasia policy (as part of the disposition policy) for elephants and other animals at the sanctuary, and in compliance with any national or local law, administered under the strict supervision of a licensed veterinarian.

b. Euthanasia is only be used as a final option. Euthanasia is not used as management tool (such as a means to create space for more animals).

c. Examples of cases where euthanasia may be accepted are:

- Incurable disease/injury that is likely to cause unmanageable pain or suffering;
- Disease/injury where treatment is likely to cause unreasonable pain or suffering;
- Disease/injury where treatment will not be effective in restoring the elephant to an acceptable quality of life;
- Disease/injury where treatment is beyond the normal community standards of monetary expenditure and would cause an excessive burden on the sanctuary resources, and no other sanctuary can step in, after reasonable efforts to locate such a sanctuary;
- The process of aging has resulted in an unacceptable quality of life;
- In the event of presenting an infectious disease risk to some or all of the residents.
- For facilities engaged in the rehabilitation and reintroduction of wildlife, it is determined in accordance with an appropriate protocol or other "decision tree" analysis that an animal cannot be reintroduced to its natural habitat and there is no appropriate (consistent with these standards) long-term care option.

d. A licensed veterinarian, his/her authorized representative, or a trained staff member who is knowledgeable and skilled in performing euthanasia in a compassionate and professional manner and ideally with an established relationship with the sanctuary and the elephant, recommends and performs humane euthanasia. However, in extreme circumstances of elephant suffering when a veterinarian is unable to reach the sanctuary in a timely manner, a method such as the use of a firearm to euthanize an elephant may be required and is performed by a trained and qualified staff member when no other humane option is available.

e. Euthanasia is performed so that it avoids distress to the elephant, and unless impossible, is performed out of view of other elephants.

f. With regard to deceased elephants:

- Personnel conduct themselves in such a manner that is respectful during disposition activities;
- Body parts are never to be sold, traded or donated (*see* exception at Standard P-11, "Ethics in Research");
- Disposition of deceased elephants meets the requirements of all acceptable practices along with applicable local, state, national, and international regulations and laws.

g. The species and ecosystems are carefully considered during disposition activities.

POLICIES: PUBLIC CONTACT AND RESTRICTIONS ON USE AND HANDLING OF ELEPHANTS

P-6. Public Contact

Contact between elephants and the public is not allowed or is restricted appropriately.

a. No unescorted public visitation occurs. This is not to exclude discrete, nonintrusive observation by a carefully evaluated person, such as a wildlife student, as allowed by the appropriate decision-making body of the sanctuary.

b. No direct contact between the public and elephants occurs. In certain rehabilitation/ reintroduction programs, with young orphaned elephants, volunteers who are suitably trained and part of the sanctuary's structured volunteer program may assist staff in carefully structured programs that ensure the safety and well-being of both the elephants and the volunteers.

c. See also Standard E-3, "Tours."

P-7. Removal from Sanctuary or Enclosures/Habitats for Non-Medical Reasons

Elephants at the sanctuary are not removed from the sanctuary or enclosures/habitats for non-medical reasons.

a. Elephants are not taken from the sanctuary or enclosures/habitats for exhibition, education, or research purposes.

P-8. Public Viewing of Human/Elephant Interaction

The sanctuary does not allow unprotected human/elephant contact to occur within public view.

a. Any unprotected contact with elephants (*e.g.*, for purposes of providing medical care) is performed out of public view, except in cases of emergency.

P-9. Non-Portrayal of Elephants as Tractable

With few exceptions, the sanctuary rarely portrays elephants as tractable in text, photos, video, or other media.

a. The sanctuary rarely publishes material that portrays elephants as tractable. This includes but is not limited to: photos in which staff or others are shown petting elephants; and elephants dressed in human clothing. In situations where text, photos, video or other media are published portraying the above, steps should be taken to add text to the publication (website, brochure, etc.) that explains the reason for the contact and discouraging the idea that the animals would make suitable pets.

P-10. Non-Harmful, Non-Exploitive Fundraising

Fundraising activities are not distressing or negatively disruptive to elephants, nor do the activities involve improper use of elephants.

a. Fundraising activities approved by an appropriate decision-making body of the sanctuary are allowed provided the following:

- The activities do not violate any of the other GFAS Standards, including those regarding contact with the public, handling of elephants, and removal from the sanctuary or enclosures/habitats;
- The activities are deemed to not be distressing or in any way negatively disruptive to the elephants and their normal routine, nor are normal routines designed specifically for fundraising needs;
- Elephants are not in enclosures or habitats specifically designed to minimize their privacy, and all elephants have the ability to seek undisturbed privacy and quiet;
- Elephants are not being used as entertainment, which includes the performance of "tricks" for public display;
- Elephants are not raffled or sold.

P-11. Ethics in Research

Any research conducted is devoted to benefiting the health and welfare of the individual elephant involved, and does not cause pain or distress.

a. No resident elephants are made available for participation in research studies unless the studies are strictly observational and do not interfere with the normal daily activities of individual elephants. Interventions that cause pain or distress are not acceptable.

b. An exception may be made, with approval of an appropriate decision-making body of the sanctuary, if:

- It is determined that the health and welfare interests of the individual elephant are best served by participating in a new treatment study;
- There is reason to believe that outcome of the study will be a tangible benefit for the individual elephant involved;
- The study does not prevent normal activities of daily living.

c. An exception may also be made for research involving biological sampling if it will have a demonstrable health, conservation, or genetic benefit to captive elephant management and/or wild elephant population conservation. In such cases, samples are only to be taken during routine examinations of the elephant (which are otherwise needed for the welfare of the individual elephant) or routine cleanings of enclosures, or during a necropsy that does not violate any other GFAS standards. Sanctuaries should ensure that any biological samples are used ethically by the receiving institution or laboratory, and that any applicable CITES regulations are followed.

ELEPHANTS BEING RELEASED TO THE WILD

GFAS strongly supports the efforts of wildlife rehabilitators and sanctuary managers to return wildlife to its natural environment, provided appropriate steps are taken to ensure that the animals released are likely to survive in the wild.

Facilities releasing elephants to the wild must also make every effort to reduce the risk of their having a damaging impact on ecological resources, including other animal species, found naturally in the release area. Examples of risk factors include but are not limited to:

- Displacement of indigenous animals;
- Transmission of novel pathogens;
- Disruption of local human communities, including crop raiding, damage to dwellings and injury or death of local inhabitants;
- Alterations to the environment that disrupt the ecological niche of other species.

For a more detailed discussion of the potential risks, as well as time and financial commitment involved in creating a quality re-introduction project, *see* the International Union for the Conservation of Nature Species Survival Commission (IUCN/SSC) Reintroduction Specialist Group's "Guidelines for Re-Introductions".

R-1. General Considerations

The sanctuary has policies, agreements and plans in place to optimize the chances for successful re-introduction of elephants into the natural environment.

a. The facility has a written policy regarding the handling of any potential problems involving released animals. The policy should include but is not limited to:
   - a plan to minimize the risk to human life and property in the area of release;
   - a plan for compensation for or mitigation of damages or injury incurred by the released animals;
   - a deterrent plan to discourage inappropriate activities, *i.e.*, spending time around human habitation or crop raiding.
   - a plan for management or removal of animals who fail to integrate appropriately or who become habitual 'problem animals.'

b. In as much as possible, using the latest available information on potential health concerns regarding other species found in the area of release, animals are tested and treated for pathogens that might pose a threat to other wildlife.

c. The facility has agreements in place with any and all appropriate authorities to allow the release process to proceed as smoothly as possible.

d. Ideally, permissions, any necessary documentation, site determination, etc. begin as soon as it is determined that there are animals in care that are likely to be suitable for release.

- In particular, facilities obtain any permits or other forms of authorization needed to proceed with the release.
- Potential release sites are identified and evaluated as early in this process as possible.

e. Cooperative agreements are in place prior to animals being released which may include, but are not limited to:

- veterinary and scientific involvement in post-release monitoring;
- community acceptance of the project and involvement in habitat protection and awareness raising;
- landowner agreements enabling release, including the addressing of specific permissions and permits;
- involvement of NGOs with similar or conflicting interests that may impact (positively or negatively) the project.

R-2. Rescue Of Elephants

The sanctuary has developed guidelines for rescue work, taking into account staff and animal safety, contingencies for caring for the animal once rescued, and any local, state or national regulations or agency cooperation required.

a. Facilities accepting elephants from the illegal trade have policies and procedures (ideally in writing) in place with the appropriate authorities that allow for rapid transfer of the animals to the sanctuary or rescue center. These policies and procedures are designed to reduce the risk of:

- disease transmission;
- habituation;
- Inappropriate or inhumane treatment, due to lack of knowledge, by personnel involved in seizure of wildlife from the illegal trade.

b. In as much as possible, while respecting local or national cultural/religious tenets, a euthanasia policy is in place to address situations where the animal's prognosis for survival is too low to warrant attempting treatment.

- In situations where field euthanasia is being considered, where possible and appropriate (*e.g.*, the animal is reasonably safe from further human interference and the stress of capture would outweigh the benefit of humane euthanasia), the option of leaving the animal *in situ* may be considered.
- See also Standard V-5, "Euthanasia."

R-3. Evaluation Of Suitability For Release

Elephants admitted into sanctuary are evaluated for their potential suitability for release.

a. The sanctuary has a protocol in place (ideally in writing) to evaluate potential release candidates and to determine which elephants are given priority for potential release.

- Animals who have spent little time in captivity and/or who have had little human contact are given priority for potential release.
- Animals found to be free of diseases and/or parasites of potential concern to the health of the population, particularly in the intended release area, are given priority for potential release.

b. All juvenile elephants are treated as potential release candidates, particularly those who have not been kept long term as pets. If elephants admitted into sanctuary are determined to be potential release candidates, every effort is made to protect them from exposure to human disease and to keep them as wild as possible.

R-4. Quarantine And Prerelease Housing

(See also Standards H-1 to H-9, "Elephant Housing," and V-5, "Quarantine and Isolation of Elephants")

The sanctuary has appropriate quarantine facilities and prerelease housing for elephants, with consideration given to sick and injured elephants.

General

a. Non-quarantine housing for elephants being considered for release provides as close to natural a setting as possible. The space allows for foraging, bathing and other actions naturally performed in the wild.

b. Quarantine facilities and prerelease housing for elephants intended for release are preferably situated a minimum of 66 ft. (20m), giving consideration to factors such as wind direction, from resident elephant populations to protect them from exposure to pathogens present in the sanctuary population that could compromise their return to the wild. A wall surrounding the quarantine area reduces pathogen transfer risk and aids in restricting access to authorized personnel.

- Where this is not possible, sanctuary residents are screened for potential pathogens of concern, and pathogen-free animals are housed closest to the animals intended for release to the wild.

c. Where possible and appropriate, sanctuaries follow International Wildlife Rehabilitation Council guidelines (http://www.nwrawildlife.org/content/minimum-standards) in dividing housing into three types:

- Restricted activity/mobility – for the initial stages of rehabilitation where the illness or injury requires the animal be treated and/or prevented from activities that would slow the rehabilitation process. At a minimum, the animal is able to maintain normal upright/alert posture and to stretch the body.
- Limited activity/mobility – for the recovery stage of rehabilitation where the animal is regaining mobility and building strength, and staff does not need access to the animal on a daily basis. The animal is able to move short distances and perform some climbing and perching activities.
- Unlimited/Prerelease – the final stages of rehabilitation where the main concern is ensuring that the animal is fit for release. In general, this phase involves walking juvenile elephants in a natural environment, where caregivers monitor their skills and safety.

Quarantine Housing

d. Sick or injured wildlife is quarantined in such a way that the rehabilitation process is begun during the quarantine phase.

e. Quarantine facilities have appropriate housing for the treatment of injured or ill elephants.

f. Quarantine facilities are designed to allow for monitoring and, as needed, modification of behavior of elephants intended for release.

g. Healthy elephants admitted to quarantine have as large an enclosure as possible to help maintain natural locomotion and foraging behaviors.

h. Upon arrival, elephants are quarantined for an adequate number of days, ideally for a minimum of 30 days, in accordance with IUCN guidelines. In some situations a longer quarantine may be advisable.

i. The attending veterinarian works closely with regional, national and international experts and authorities to determine appropriate quarantine timing based on health risks to which the newly admitted elephants may have been exposed.

j. Orphaned elephants, particularly those who have been potentially exposed to human pathogens, are isolated until any potential health risks are evaluated.

Initial Housing for Orphaned, Ill or Injured Elephants

k. Animals admitted requiring treatment for illness or injury are housed in enclosures that allow for ease of care. These initial care enclosures can be smaller than that which is acceptable for long-term care.

- Dependent on illness or injury, either Restricted or Limited activity/mobility housing may be utilized.

l. Enclosures provide visual and acoustic barriers to minimize stress.

m. Orphaned elephants are housed in nursery units, preferably with conspecifics, with human caregivers acting as surrogates to provide necessary nurturing.

Intermediate Housing for Orphaned Elephants

n. As the orphaned elephants gain strength caregivers walk them in the wild during the day, allowing them to explore their natural habitat, returning to night enclosures, which now may be outdoor units.

Intermediate and Prerelease Housing for Sick or Injured Subadult Elephants

Note: *Independent subadult animals, dependent on their admitting condition, may not require intermediate housing.*

o. Animals suffering from injuries that may affect their suitability for release are moved to intermediate housing while regaining strength. Animals are regularly evaluated to determine whether they are likely to be releasable. Where possible they are integrated into social groups with other juveniles being reared for release.

R-5. Diet, Nutrition And Foraging Skills

Elephants are fed an appropriate diet that approximates that which will be found in the habitat to which they are released, and foraging behavior is encouraged.

a. As early in the rehabilitation process as possible, elephants are taken out into the wild on a daily basis and assessed for their ability to find appropriate foods and avoid inedible or poisonous foods. Supplemental feeding continues as needed.

b. Release candidates are fed in such a way as to encourage natural foraging behaviors.

R-6. Husbandry And Health

All aspects of care, including caregiver-elephant relationships, introduction to social groups and overall health evaluation, are focused on preparing elephants for return to the wild.

a. Once an elephant has been evaluated as a potential release candidate, all aspects of care are focused on preparing the animal for the wild.

- Animals are integrated into an appropriate social group, ideally comprised of other conspecifics intended for release, as quickly as possible.

c. Opportunities to explore and learn skills in the natural environment are provided.

d. Caregiver-elephant relationships for animals intended for release to the wild, while ensuring the animals' psychological well-being is met, focus on:

- avoiding any types of interaction that may compromise the elephants' chances for release;
- encouraging the elephants to develop appropriate relationships with conspecifics for their social needs.

e. Veterinary staff evaluate overall health including:

- recovery from the initial cause for admission to the facility;

- pathogen surveillance to ensure the animal does not present a risk to the wild population as a result of exposure during the rehabilitation process.
  - In as much as possible, using the latest available information from the OIE-World Organization for Animal Health ((www.oie.int) and the IUCN's Conservation Breeding Specialist Group (http://www.cbsg.org), animals are monitored for human pathogens not found in the wild population.

R-7. Health And Safety Of Caregivers Working With Releasable Elephants

(See also Standard V-8, "Zoonotic Disease Program")

No caregiver begins work with releasable elephants until routine testing has indicated he or she poses no risk to the elephants' release to the wild.

a. Caregivers working with elephants intended for release to the wild are routinely monitored for potential anthroponoses (diseases that have potential to be transmitted to the animals).

b. TB testing, vaccinations and fecal cultures for pathogens may be utilized, as appropriate for the region, to ensure the health of both the elephants and their caregivers. New caregivers should not have contact with the elephants for the first two weeks of employment.

c. Provision of adequate nutrition for staff is considered as a possible contribution to the continued well-being of both staff and elephants.

R-8. Assessment of Health and Skills

Elephants are fully assessed for health and appropriate skills prior to release.

a. Elephants who have completed the rehabilitation process and have been successfully integrated into a social group, are further evaluated for release, with attention to health and the skills attained.

b. Each animal's skills (*e.g.* foraging, appropriate interaction or avoidance behaviors in the presence of conspecfics, avoidance of dangers including poisonous foods or predators) are evaluated.

c. A complete health assessment is performed including:

- Overall fitness as relates to being able to survive in the wild, keep up with a conspecific group, avoid predators, etc.

- Injuries and limitations that originally caused the animal to be brought into care are resolved, either completely, or to the extent that the elephant has a reasonable chance for long-term survival.

c. Elephants have been tested, and found free of pathogens that have potential to harm the wild population in the planned release area, based on the latest current knowledge.

d. Genetic assessment has been done to ensure that the elephants being released are of an appropriate subspecies/population/subpopulation for the release site, if their site of origin is unknown.

e. Elephants are exposed to post-release monitoring equipment prior to release to allow them to acclimate to its presence.

R-9. Determining Appropriate Release Sites

Release sites are evaluated for health and other threats and for appropriateness for the species.

a. The potential release site is evaluated for the presence of appropriate and adequate food sources.

b. The area is evaluated for potential health concerns.

c. The area is evaluated to establish carrying capacity of elephants. Animals are released habitat where carrying capacity for the species has not been reached.

d. The area is evaluated for instances of potential human-wildlife conflict.

e. IUCN guidelines are, in as much as possible, followed when determining release sites for rehabilitated elephants.

f. Animals are, in general, released away from areas where there is potential for or has been a history of human-animal conflict.

R-10. The Release Process And Post Release Monitoring

Elephants are supported as needed to adapt in their new environment and are monitored post release.

a. Once it is determined that the elephants have the basic skills for foraging in their new environment, supplemental care is discontinued.

b. A post-release monitoring program is in place to ensure the rehabilitation program is providing the animals with the skills necessary to survive, that the habitat is adequate and that the elephants have integrated into the wild.

c. Ideally, elephants are returned to the wild using a soft release process wherein they spend time with caregivers in the release area where supplemental food may be provided as needed and observation of their acclimatization may be observed.

d. Post release monitoring, in conjunction with outside veterinary and scientific personnel, continues for a minimum of one year.

   - Level of monitoring may decrease over time as elephants are determined to be acclimating to the environment.
   - Longer term monitoring of the animals and their impact on the habitat is preferred.

e. Practices used and results obtained, both positive and negative, are shared both within the facility and with others involved in elephant reintroduction to aid in the continued improvement of the process.

Appendix 1

General

Intelligent and long-lived, elephants in the wild are highly migratory animals who live within a complex social structure, making it very difficult to provide an appropriate captive environment. The extreme size of elephants (often weighing in excess of 12,000 lb. (5440 Kg.) and standing over 15 ft. tall (3.1 m.) at the shoulder) also contributes to the substantial human, financial, and ethical commitments needed to appropriately maintain these potentially dangerous species.

Diet

Elephants naturally spend 20 hours per day selecting, collecting and eating various foods. Decreases in stereotypy have been noted in elephants confined indoors at night when they have constant access to browse or hay.

A full-grown African elephant requires 75-100 lbs. (34-45.5 kg) of fresh browse daily for optimum health.

Rotation of food items, including seasonally available fruits and vegetables, provides variety and enrichment.

At present (2013), Vitamin E and mineral deficiencies in captive elephants, particularly in non-range states, is being examined as a contributing factor in some health problems.

AFFIDAVIT OF JAMES J. BREHENY, RESPONDENT, IN OPPOSITION TO ORDER TO SHOW CAUSE, SWORN TO OCTOBER 9, 2018 [A-319 - A-322]

SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF ORLEANS

In the Matter of a Proceeding under Article 70 of the CPLR for a Writ of Habeas Corpus and Order to Show Cause,

THE NONHUMAN RIGHTS PROJECT, INC., on behalf of HAPPY,

Petitioner,

v.

JAMES J. BREHENY, in his official capacity as Executive Vice President and General Director of Zoos and Aquariums of the Wildlife Conservation Society and Director of the Bronx Zoo, and WILDLIFE CONSERVATION SOCIETY,

Respondents.

AFFIDAVIT OF JAMES J. BREHENY IN OPPOSITION TO ORDER TO SHOW CAUSE

Index No.:

STATE OF NEW YORK)
) SS.:
COUNTY OF BRONX)

James J. Breheny, being duly sworn, deposes and says:

1. I was appointed Director of the Bronx Zoo in 2005, and Executive Vice President and General Director, Zoos and Aquarium, and Jonathan Little Cohen Director, Bronx Zoo in 2011. I earned a B.S. in Biology from Manhattan College and an M.S. in Biology from Fordham University. I have been a staff member of Respondent Wildlife Conservation Society for 37 years, and taught as an adjunct professor of Biology at Manhattan College for 17 years. As such, I am fully familiar with the facts and circumstances of this matter.

2. Respondents submit this affidavit in opposition to Petitioner the Nonhuman Rights Project, Inc.'s ("NRP") petition for a writ of habeas corpus by order to show cause (attached as **Exhibit A**).

A. The Wildlife Conservation Society and Bronx Zoo

3. Respondent the Wildlife Conservation Society is a not-for-profit corporation whose mission statement is to save wildlife and wild places worldwide through science, conservation action, education, and inspiring people to value nature.

4. Opened in 1899, the Bronx Zoo, a Wildlife Conservation Society park, cares for thousands of endangered or threatened animals, and provides experiences to visitors that may spark a lifelong passion to protect animals and their natural habitats.

B. The Nonhuman Rights Project, Inc. ("NRP")

5. NRP "is a not-for-profit corporation organized pursuant to the laws of the State of Massachusetts" and presents itself as

> the only civil rights organization in the United States dedicated to changing 'the common law status of at least some nonhuman animals from mere 'things,' which lack the capacity to possess any legal rights, to 'persons,' who possess such fundamental rights as bodily integrity and bodily liberty.

Ex. A ¶ 37.

6. Some of NRP's stated goals are "[t]o develop . . . issue-oriented grassroots and legislative campaigns to promote recognition of nonhuman animals as beings . . . with their own inherent interests in freedom from captivity . . . ." and "to build a broad-based coalition of organizations and individuals to secure legally recognized fundamental rights for nonhuman animals." *See* https://www.nonhumanrights.org/who-we-are/.

7. NRP vows on its website to lead "the fight to secure actual legal rights for nonhuman animals through a state-by-state, country-by-country, long-term litigation campaign." *See* https://www.nonhumanrights.org/litigation/.

C. Petitioner openly admits to forum shopping

8. On October 2, 2018, NRP announced via its blog that it had filed a petition in Orleans County Supreme Court on behalf of Happy, a 47-year old Asian elephant at the Bronx Zoo. *See* https://www.nonhumanrights.org/blog/lawsuit-happy-bronx-zoo/.

9. NRP states that although it "can file suit in any county [it] chose to file in Orleans County (part of the Fourth Department) because the First Department, which oversees the county where the Bronx Zoo is located, 'has demonstrated that it is willing to ignore powerful legal arguments and deprive an autonomous being such as Happy of any and all of her rights, just because she is not a human.'" *Id.*

10. NRP's decision to commence this matter in Orleans County is, by their own admission, based upon a notion that the courts in the Fourth Department would be more likely to grant the relief sought by NRP than those in the First Department.

D. NRP's order to show cause and petition should be denied

11. As provided in the accompanying memorandum of law, there is no basis in New York law for the relief NRP seeks.

12. NRP also does not and cannot allege that Happy's current living conditions are in any way unlawful or below accepted standards of care.

13. NRP's petition for writ of habeas corpus therefore should be denied.

14. Moreover, the events addressed in NRP's petition, namely the current living conditions of Happy, occurred in Bronx County.

15. Respondents have no operations located in Orleans County.

16. Happy also is currently located in Bronx County, and it would be exceedingly difficult, expensive and potentially dangerous to transport Happy to Orleans County, should the Court require Happy's attendance at a hearing.

17. Happy is 47 years old and an older elephant. The trip from Bronx Zoo to Orleans County, which spans approximately 385 miles, would be highly stressful and detrimental to Happy's well-being.

18. The trip from Happy's current location to the suggested Performing Animal Welfare Society's sanctuary near Sacramento, California could be even more harmful to Happy, as experience has shown us that she doesn't transport well.

19. In light of the foregoing, and because NRP seems to have chosen Orleans County purely for perceived litigation advantage, Respondents respectfully request that the Court transfer venue to Bronx County if NRP's order to show cause is granted.

James J. Breheny

Sworn to before me this
9th day of October, 2018.

Notary Public

Doc #01-3153589

SCOTT F. WIGHT
Notary Public, State of New York
No. 01WI6242543
Qualified in Bronx County
Certificate Filed in New York County
Commission Expires 6 JUNE 2019

A-323

SO-ORDERED ORDER TO SHOW CAUSE OF THE HONORABLE TRACEY A. BANNISTER, DATED NOVEMBER 16, 2019 [A-323 - A-325]

At I.A.S Part ___ of the Supreme Court of the State of New York, held in and for the County of Orleans, at the Courthouse thereof, 1 South Main Street, Suite 3, Albion, NY on the 16th day of ~~October,~~ November 2018

PRESENT: HON. Tracey A. Bannister
Justice of the Supreme Court

19

SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF ORLEANS

In the Matter of a Proceeding under Article 70 of the CPLR for a Writ of Habeas Corpus,

THE NONHUMAN RIGHTS PROJECT, INC., on behalf of HAPPY,

Petitioner,

-against-

JAMES J. BREHENY, in his official capacity as the Executive Vice President and General Director of Zoos and Aquariums of the Wildlife Conservation Society and Director of the Bronx Zoo, and WILDLIFE CONSERVATION SOCIETY,

Respondents.

TJB

~~[PROPOSED]~~ ORDER TO SHOW CAUSE

Index No.: 18-457164

TO THE ABOVE-NAMED RESPONDENTS:

PLEASE TAKE NOTICE, That upon the annexed Verified Petition for a Common Law Writ of Habeas Corpus and Order to Show Cause of Elizabeth Stein, Esq. and Steven M. Wise, Esq. (subject to *pro hac vice* admission), filed the second day of October, 2018, the exhibits and

affidavits attached thereto, the Memorandum of Law in support thereof, and upon all pleadings and proceedings herein, the Respondents JAMES J. BREHENY, in his official capacity as the Executive Vice President and General Director of Zoos and Aquariums of the Wildlife Conservation Society and Director of the Bronx Zoo, and WILDLIFE CONSERVATION SOCIETY, or their attorneys, are hereby ORDERED to SHOW CAUSE at I.A.S. Part ____, Room ____, of this Court to be held at the Courthouse located at Courthouse Square, 1 South Main Street Suite 3, Albion, New York 14411-1497, on the 14th day of December, 2018 at 11:30 o'clock in the fore of that day, or as soon thereafter as counsel can be heard, why an Order should not be entered granting the Nonhuman Rights Project, Inc. ("Petitioner"), the following relief:

A. Upon a determination that Happy is being unlawfully imprisoned order her immediate release from Respondents' custody to an appropriate sanctuary, preferably the Performing Animal Welfare Society;

B. Awarding Petitioner the costs and disbursements of this action; and

C. Such other and further relief as this Court deems just and proper.

It is THEREFORE:

ORDERED THAT, Sufficient cause appearing therefore, let service of a copy of this Order and all other papers upon which it is granted upon JAMES J. BREHENY, in his official capacity as the Executive Vice President and General Director of Zoos and Aquariums of the Wildlife Conservation Society and Director of the Bronx Zoo, and WILDLIFE CONSERVATION SOCIETY, by personal delivery, on or before the 26th day of November, 2018, be deemed good and sufficient. An affidavit or other proof of service shall be presented to this Court on the return date fixed above.

A-325

IT IS FURTHER ORDERED, that answering affidavits, if any, must be received by the 3rd day of December, 2018. Reply papers, if any, must be served on or before the 10th day of December 2018.

Dated: 11/16, 2018
Albion, New York

Honorable Tracey A Bannister

ENTER:

GRANTED
November 19, 2018
KRISTIN E. NICHOLSON
Chief Clerk

Rec'd and Entered
ORLEANS CO CLERK NY
2018 NOV 19 PM3:39

NOTICE OF MOTION, BY RESPONDENTS, TO TRANSFER VENUE OR DISMISS THE VERIFIED PETITION, DATED DECEMBER 3, 2018 [A-326 - A-328]

SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF ORLEANS

In the Matter of a Proceeding under Article 70 of the CPLR for a Writ of Habeas Corpus and Order to Show Cause,

THE NONHUMAN RIGHTS PROJECT, INC., on behalf of HAPPY,

Petitioner,

v.

JAMES J. BREHENY, in his official capacity as Executive Vice President and General Director of Zoos and Aquariums of the Wildlife Conservation Society and Director of the Bronx Zoo, and WILDLIFE CONSERVATION SOCIETY,

Respondents.

NOTICE OF MOTION

Index No. 18-45164

PLEASE TAKE NOTICE that, upon the attached affidavit of Kenneth A. Manning, Esq., sworn to December 3, 2018, with exhibits; the affidavit of James J. Breheny, sworn to December 3, 2018, the affidavit of Paul Calle, VMD, sworn to December 3, 2018, the affidavit of Patrick Thomas, PhD, with exhibit, sworn to December 3, 2018, and all papers and proceedings herein, Respondents James J. Breheny and Wildlife Conservation Society, by and through their attorneys, Phillips Lytle LLP, will move this Court at the Supreme Court, Orleans County, located at 1 South Main Street, Suite 3, Albion, New York 14411, on December 14, 2018 at 11:30 a.m., or as soon thereafter as counsel may be heard, for an order:

1. Pursuant to CPLR 511 and 7004(c), transferring this proceeding to the New York State Supreme Court in Bronx County; or in the alternative,

2. Pursuant to CPLR 3211(a),

   a. dismissing the Verified Petition of Nonhuman Rights Project Inc., made on behalf of Happy the elephant, for a writ of habeas corpus, with prejudice, for failure to state a cause of action on which relief can be granted, for lack of standing, and pursuant to the doctrine of collateral estoppel; or

   b. in the event the Court does not dismiss the Verified Petition, allowing Respondents five days to answer to the Verified Petition pursuant to CPLR 404(a); and

3. Awarding Respondents' such other and further relief as the Court deems just and proper, including costs and attorneys' fees.

Answering papers and notices of cross-motion, if any, must be served upon attorneys for Respondents in accordance with the Order of this Court dated November 16, 2018, and otherwise in accordance with CPLR. Respondents agree to accept service of the same via electronic transmission to the e-mail addresses stated below.

Dated: Buffalo, New York
December 3, 2018

PHILLIPS LYTLE LLP

By: _____

Kenneth A. Manning
Joanna J. Chen
William V. Rossi
Attorneys for Respondents
James J. Breheny and
Wildlife Conservation Society
One Canalside
125 Main Street
Buffalo, New York 14203-2887
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kmanning@phillipslytle.com
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TO: Elizabeth Stein, Esq.
5 Dunhill Road
New Hyde Park, New York 11040
lizsteinlaw@gmail.com

Doc #01-3068745.1

AFFIDAVIT OF PAUL P. CALLE, FOR RESPONDENTS, IN SUPPORT OF MOTION, SWORN TO DECEMBER 3, 2018 [A-329 - A-332]

SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF ORLEANS

In the Matter of a Proceeding under Article 70 of the CPLR for a Writ of Habeas Corpus and Order to Show Cause,

THE NONHUMAN RIGHTS PROJECT, INC., on behalf of HAPPY,

Petitioner,

v.

JAMES J. BREHENY, in his official capacity as Executive Vice President and General Director of Zoos and Aquariums of the Wildlife Conservation Society and Director of the Bronx Zoo, and WILDLIFE CONSERVATION SOCIETY,

Respondents.

AFFIDAVIT OF PAUL P. CALLE

Index No. 18-45164

STATE OF NEW YORK)
) SS.:
COUNTY OF BRONX)

Paul P. Calle, being duly sworn, deposes and says:

1. I joined Respondent Wildlife Conservation Society ("WCS") in 1989, and currently serve as WCS Vice President for Health Programs, Chief Veterinarian, and Director of the Zoological Health Program based at the Bronx Zoo. My responsibilities include managing the Clinical, Pathology, and Aquatic Health Departments for WCS's Bronx, Central Park, Queens, and Prospect Park Zoos and the New York Aquarium; shared oversight of the WCS Wildlife Health Program; and chair of the WCS Institutional Animal Care and Use Committee.

2. In addition to administrative responsibilities and medical and surgical care of the animals in WCS's custody, I have participated in local and international field

projects in support of WCS's global conservation mission. I am a member of both the American Association of Zoo Veterinarians and the European Association of Zoo and Wildlife Veterinarians; a Diplomate in the American College of Zoological Medicine and a Diplomate in the European College of Zoological Medicine (Zoo Health Management); a Professional Fellow of the Association of Zoos and Aquariums ("AZA"); member of the AZA Field Conservation Committee; and previous president of the American Association of Zoo Veterinarians. I participated in the Management and Research Priorities of Tuberculosis for Elephants in Human Care – Stakeholders Task Force meetings in 2011 and 2012. I currently serve as a member of the AZA Ethics Committee. During my entire 34-year career as a zoo veterinarian, at three different U.S. zoos, I have worked with both African and Asian elephants.

3. I received a Bachelor of Arts degree from the University of Pennsylvania School of Arts and Sciences and a Veterinary Medical Degree from the University of Pennsylvania School of Veterinary Medicine, completed internships in small animal medicine and surgery at Manhattan's Animal Medical Center and in zoological medicine and surgery at the San Diego Zoo, and have served as adjunct Assistant Professor of Wildlife and Conservation Medicine at Cornell University.

4. Based upon the foregoing, I am fully familiar with the facts and circumstances of this matter.

5. I submit this affidavit in opposition to Petitioner the Nonhuman Rights Project, Inc.'s ("NRP") petition for a writ of habeas corpus on behalf of Happy, an Asian elephant currently at the Bronx Zoo.

6. As explained below, the Bronx Zoo undertakes a multitude of efforts to ensure Happy's continued physical and psychological well-being and health.

7. Like all animals at the Bronx Zoo, Happy is given visual checks by the care staff several times each day and, on occasions when an issue is identified, the veterinary staff responds appropriately to any concern that is noted.

8. On a regular basis, but less than daily, the Bronx Zoo conducts analysis of Happy's blood samples through performance and analysis of complete blood count, biochemical profile, and elephant inflammatory profile. An elephant tuberculosis antibody screening test and trunk wash for tuberculosis culture and PCR are conducted on a quarterly basis.

9. The Bronx Zoo's veterinary staff conducts regular health assessments of Happy through body condition evaluations, oral and dental examinations, and foot examinations. Baseline toe x-rays of Happy's feet were completed, and are repeated for comparative analysis, on an as-needed basis to address particular areas of concern as they arise.

10. Veterinary staff are consulted by keepers regarding nail and pad conditions, with veterinary participation in trims, evaluations, or treatments as necessary.

11. Veterinary staff participate in development and maintenance of medical behaviors (trunk wash, oral/dental evaluation, blood sampling, foot work, presentation for injections or x-rays) in conjunction with Happy's animal keeper staff.

12. Happy's health care is recorded and documented in her individual medical record, and documented in the Bronx Zoo's annual AZA Elephant Program Annual Report.

13. Based upon my responsibilities in providing veterinary care for almost thirty years to the animals at the Bronx Zoo, including Happy, and to the best of my knowledge, Happy is currently healthy and well-adapted to her present surroundings.

14. During my experience with Happy, she has become very distressed during short moves from one area of the Bronx Zoo to another.

15. Given her age and longstanding familiarity and attachment to her surroundings, a long-distance move, such as that proposed by NRP to California, would cause substantial stress to Happy. Imposing this move on Happy would create a serious risk to her long-term health that I do not believe is justified.

16. In my professional opinion, Happy's health and well-being would not be best served by moving her to an animal sanctuary such as the facility operated by the Performing Animal Welfare Society.

Paul P. Calle

Sworn to before me this
3rd day of December 2018.

Notary Public

Doc #01-3165008

SCOTT F. WIGHT
Notary Public, State of New York
No. 01WI6242543
Qualified in Bronx County
Certificate Filed in New York County
Commission Expires 6 JUNE 2019

AFFIDAVIT OF PATRICK THOMAS, PHD, FOR RESPONDENTS, IN SUPPORT OF MOTION, SWORN TO DECEMBER 3, 2018 [A-333 - A-338]

SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF ORLEANS

In the Matter of a Proceeding under Article 70 of the CPLR for a Writ of Habeas Corpus and Order to Show Cause,

THE NONHUMAN RIGHTS PROJECT, INC., on behalf of HAPPY,

Petitioner,

v.

JAMES J. BREHENY, in his official capacity as Executive Vice President and General Director of Zoos and Aquariums of the Wildlife Conservation Society and Director of the Bronx Zoo, and WILDLIFE CONSERVATION SOCIETY,

Respondents.

AFFIDAVIT OF PATRICK THOMAS

Index No. 18-45164

STATE OF NEW YORK)
) SS.:
COUNTY OF BRONX)

Patrick Thomas, PhD, being duly sworn, deposes and says:

1. I currently serve as Vice President and General Curator of Respondent Wildlife Conservation Society ("WCS") and Associate Director of the Bronx Zoo. My responsibilities in these roles include overseeing the management of the animals in WCS's zoos, and ensuring the Bronx Zoo's compliance with the Animal Welfare Act and the Association of Zoos and Aquarium's ("AZA") accreditation standards.

2. In addition to my responsibilities with WCS, I currently serve as a member of the AZA Safety Committee, member of the AZA Wildlife Conservation and Management Committee, and am WCS's institutional representative for the AZA's Elephant Taxon Advisory Group and Species Survival Plan. I also serve as a Board

Committee member of the International Union for Conservation of Nature's Conservation Planning Specialist Group's Global Conservation Network.

3. I received a Bachelor of Science degree in Ecology from Ramapo College, a Master of Arts degree in Animal Behavior from Goddard College, and a Ph.D. in Biology from Fordham University. I currently hold or have had adjunct professor positions with Ramapo College, Fordham University, Columbia University, and Manhattan College. Based upon the foregoing, I am fully familiar with the facts and circumstances of this matter.

4. I submit this affidavit in opposition to Petitioner the Nonhuman Rights Project, Inc.'s ("NRP") petition for a writ of habeas corpus on behalf of Happy, an Asian elephant currently at the Bronx Zoo.

5. Contrary to NRP's allegations, Happy is not "unlawfully imprisoned" at the Bronx Zoo.

6. The AZA Standards for Elephant Management and Care and the Animal Welfare Act are the two primary sets of standards for the care and management of elephants in AZA-accredited institutions in the United States. As explained below, the Bronx Zoo's compliance with these standards helps to ensure that Happy is provided with excellent care focused on her well-being.

A. The AZA Standards for Elephant Management and Care

7. Attached as **Exhibit A** are the 2019 AZA accreditation standards and related policies, which include the AZA Standards for Elephant Management and Care ("AZA Standards").

8. The AZA regularly updates its AZA Standards to incorporate best practices, and develops the Standards in conjunction with animal welfare advocates, field researchers, and elephant experts.

9. Among other things, the AZA Standards require that "[o]utdoor habitats must provide sufficient space and environmental complexity to both allow for and stimulate natural behavioral activities and social interactions resulting in healthy and well-adapted elephants." Ex. A at 40.

10. The AZA Standards include requirements for variation in an elephant's environment including varied terrain to allow for exercise as well as "foraging, wallowing, bathing, digging, and resting." *Id.* at 41-42. "While outdoors and weather permitting, elephants must have regular access to water sources, such as a [sic] pools, waterfalls, misters/sprinklers, or wallows that provide enrichment and allow the elephants to cool and/or bathe themselves." *Id.* at 45.

11. Additional standards are included for subjects such as elephant diet, exercise, medical management, foot care, and skin care. *Id.* at 50, 51, 53

12. Daily behavioral assessments of elephants must be conducted and recorded in a daily log. *Id.* at 57.

13. Elephant care professionals, managers, and directors who work for the Bronx Zoo are also required to complete AZA's Principles of Elephant Management courses.

14. To remain an AZA-accredited zoo, the Bronx Zoo submits annual reports to the AZA regarding its elephant program and is regularly inspected by AZA representatives and individuals from peer institutions. An elephant specialist is included in every AZA accreditation inspection of the Bronx Zoo.

15. On April 27, 2018, in response to the Bronx Zoo's most recent report, the AZA confirmed that the Bronx Zoo is in compliance with the AZA Standards for elephants.

B. The Animal Welfare Act

16. In addition to the foregoing, the Bronx Zoo is regulated under the Animal Welfare Act and Animal Welfare Regulations.

17. Although the Animal Welfare Act does not contain any elephant-specific requirements, the Animal Welfare Act's standards and regulations ensure that animals receive humane care and treatment at regulated facilities.

18. Among the many requirements under the Animal Welfare Act, the Bronx Zoo is required to (i) be licensed by the Secretary of Agriculture of the United States or his or her representative (7 U.S.C. § 2133); (ii) employ "an attending veterinarian who shall provide adequate veterinary care in compliance with this section" (9 C.F.R. § 2.40); and (iii) maintain compliance with standards for "the humane handling, care, treatment, housing, and transportation of animals" (9 C.F.R. § 2.101), which are laid out in 9 Code of Federal Regulations Chapter I, Subchapter A, Part 3, Subpart F.

19. Compliance with the Animal Welfare Act is overseen by U.S. Department of Agriculture ("USDA") Animal Care, a unit within the Animal and Plant Health Inspection Service ("APHIS").

20. USDA inspectors make routine, unannounced inspections of facilities like the Bronx Zoo. The inspections are carried out at least once a year, with follow-up inspections conducted as needed. Each of the USDA inspectors are either trained in veterinary medicine or are educated in biological sciences.

21. Based upon my responsibilities as Vice President and General Curator for WCS and Associate Director of the Bronx Zoo, I can attest that to the best of my knowledge, the Bronx Zoo is in compliance with the standards and regulations set forth under the Animal Welfare Act.

22. Happy's living conditions therefore are not "unlawful" according to applicable standards.

C. Happy's routine care program

23. Happy's routine care program incorporates the AZA Standards and requirements under the Animal Welfare Act.

24. On a daily basis, Happy's appetite, food intake, stool appearance and quantity, overall activity, and responsiveness to keepers are monitored. Happy also receives baths on a daily basis.

25. Every day Happy's keepers assess her body condition, provide her with various forms of enrichment that encourage mental and physical stimulation, and engage in positive reinforcement training sessions that help to maintain behaviors used to facilitate Happy's care. For example, her keepers familiarize Happy with voluntary behaviors that facilitate physical examinations of parts of her body, collect blood samples, engage in trunk washes, and allow foot care.

26. On a regular, but not daily, basis the Bronx Zoo conducts voluntary blood draws and trunk washes to monitor Happy's health. The Bronx Zoo also regularly weighs Happy.

27. Weather permitting, Happy has regular, year-round access to a large, naturalistic outdoor exhibit in which she may go swimming and engage in other species-typical behavior, and also has regular overnight access to a large outdoor space.

28. Happy has developed a familiarity and comfort with her keepers, and the care they provide her, over these many years. She also recognizes her surroundings as her familiar, longstanding environment. Suddenly taking her away from this environment and introducing entirely new surroundings without the support of her keepers could inflict long-term damage on Happy's welfare.

29. Happy has also shown in past experiences that she does not respond well to even temporary, short moves within the Bronx Zoo. I believe that transporting Happy the long distance from the Bronx Zoo across the country to California would cause severe stress and potentially inflict long-term physical harm upon her.

30. Based upon my forty years of experience and responsibilities in supervising the care of animals at the Bronx Zoo, including Happy, and to the best of my knowledge, Happy is currently healthy and well-adapted to her surroundings at the Bronx Zoo.

Patrick Thomas, PhD

Sworn to before me this
3rd day of December, 2018.

Notary Public

Doc #01-3165057
Nuno M. Santos
Notary Public, State of New York
No. 02SA6108087
Qualified in Kings County
Commission Expires April 12, 2020

ASSOCIATION OF ZOOS & AQUARIUMS

the accreditation standards & related policies

2019 edition

A-340

ASSOCIATION OF ZOOS & AQUARIUMS

ACCREDITATION STANDARDS
& Related Policies

SIGNIFICANT ADDITIONS & CHANGES 2015-2019

2019
Animal Welfare & Care: **REVISED:** 1.5.5, 1.5.14
Safety/Security: **REVISED:** 11.7.1
Guest Services: **NEW:** 12.7
Master & Strategic Planning: **REVISED:** 13.1, 13.2 **NEW:** 13.3, 13.4, 13.5

2018
Animal Welfare & Care: **NEW:** 1.5.0, 1.5.6.1, **REVISED:** 1.4.4, 1.4.7
Veterinary Care: **NEW:** 2.0.4, 2.6.3.1, 2.6.3.2 **REVISED:** 2.6.3
Conservation: **REVISED:** General Considerations Box, 3.1.1, 3.2.1, 3.2.2
Safety/Security: **REVISED:** 11.7.2
Guest Services: **NEW:** 12.5, 12.6 **REVISED:** 12.2, 12.4
Standards For Cetacean Care & Welfare
Welfare Consideration Boxes, all sections

2017
Preamble **NEW**
Animal Welfare, Care, & Management: **NEW:** 1.2.2, 1.5.13, 1.5.15, 1.6.3, 1.6.4. **REVISED:** 1.3.1, 1.5.1, 1.5.4, 1.5.7, 1.5.8, 1.5.10, 1.6.1, 1.7.1
Veterinary Care: **NEW:** 2.0.1, 2.0.3, 2.5.2. **REVISED:** 2.1.1, 2.2.2, 2.3.2, 2.5.1, 2.6.2
Conservation: **REVISED:** General Considerations Box, 3.2.1, 3.3.2, 3.3.4
Education and Interpretation: **REVISED:** 4.2.1, 4.3.1, 4.3.3
Scientific Advancement [formerly Research]: **NEW:** Section Title, 5.0. **REVISED:** General Considerations Box, 5.2, 5.3
Governing Authority: **NEW:** General Considerations Box. **REVISED:** 6.3, 6.5, 6.6
Staff: **NEW:** General Considerations Box, 7.8.1, 7.12. **REVISED:** 7.1, 7.3, 7.5, 7.6, 7.8, 7.9, 7.11
Support Organization: **REVISED:** 8.1
Finance: **NEW:** 9.6. **REVISED:** 9.1, 9.4
Physical Facilities: **NEW:** 10.1.0, 10.1.3, 10.2.0. **REVISED:** 10.1.2, 10.2.1, 10.3.1
Safety/Security: **NEW:** 11.1.2.1, 11.2.0, General Considerations Box [Diving subsection], 11.7.5. **REVISED:** 11.1.4, 11.1.5, 11.2.2, 11.2.5, 11.3.6, 11.5.2, 11.5.3, 11.6.3, 11.7.1, 11.7.2,
Guest Services: **REVISED:** 12.3
Strategic Planning [formerly Other Programs/Activities]: **NEW:** Section Title
General Administrative Policies **NEW:** Elephant Management and Care- Substantial Compliance Extension

2016
Veterinary Care **NEW:** 2.9.1
Safety/Security **REVISED:** 11.1.1, 11.2.4
Elephant Standards **REVISED:** 5.1, 5.2
Occupational Safety of Elephant Care Professionals **REVISED:** III.a
AZA Policy on Responsible Population Management: Acquisition, Transfer, Euthanasia, and Reintroduction **REVISED** (*Acquisitions, Transfers, and Transitions Policy replaced by RPM Policy*)
General Administrative Policies **NEW:** Achieving Accreditation, Determining Compliance, Elephant Management and Care- Special Welfare Variance, Enforcement of Standards, Last Minute Inspector Replacement
General Administrative Policies **REVISED:** Accidents Involving Injury or Welfare

2015
Important Notes: **NEW** 1. Documentation
Animal Welfare, Care, & Management **NEW** 1.4.0, 1.5.12 **REVISED** 1.3.1, 1.3.2, 1.4.4, 1.4.7, 1.4.9
Conservation **REVISED** 3.2.1
Physical Facilities **REVISED** 10.2.2
Safety/Security **REVISED** 11.1.2
Related Policies: **NEW** Acquisitions, Transfers, and Transitions Policy; Maximizing Occupational Safety of Elephant Care Professionals At AZA-accredited and AZA-certified Facilities
General Administrative Policies: **NEW** Accidents Resulting In Human Fatality , Mid-Cycle Inspections

Table Of Contents

IMPORTANT NOTES REGARDING THESE STANDARDS:

1. Documentation: Having proper documentation of programs, activities, and other occurrences is essential to meeting these standards. If an institution is taking proper steps to comply with a standard but fails to document such action, it will not be considered in compliance (*for example*, having determined that collectors have the necessary permits, but having no documentation of this).

2. Accreditation and certification standards: These standards are for accreditation applicants and certification applicants alike. In the case of certification, an education program is not required, nor are standards directly related to the presence of the visiting public. However, if the facility has an education program, and/or hosts public groups on a regular basis, all related standards must be met.

3. Authority: The Accreditation Commission, and its agents, shall determine if a facility is meeting standards, and incorporating modern zoological practices and philosophies. The Visiting Committee is an arm of the Accreditation Commission. However, the Accreditation Commission is the final authority in interpreting these standards and assuring they are applied equally to all.

4. Order of Sections: Placement of items in this document has no bearing on importance to accreditation processing as *all* areas are considered pertinent for the operation of a professional institution.

5. Performance standards versus engineering standards: With few exceptions, AZA standards are primarily *performance* standards (i.e., measuring the level of achievement considered acceptable to fulfill a performance characteristic, and choice in method for meeting the goal). This differs from *engineering* standards, where exact and precisely measured steps are required to fulfill an engineering characteristic, with little or no variation in method for meeting the goal.

6. Subjectivity: Due to the large number of variables existing between institutions, some standards necessarily allow for certain levels of subjectivity by both the Visiting Committee and the Accreditation Commission. In addition, the opinion of one team may be slightly different than another team. In such cases, the Accreditation Commission is the final authority in interpreting these standards and assuring they are applied equally to all.

7. Continuous Progress and Rising Standards: As the science of zoology and aquatic studies grows in knowledge, so too do AZA standards rise to accurately reflect current understanding and modern practices, and to drive continuous improvement in institutions accredited by AZA. What was acceptable under AZA standards in the past may not be considered sufficient five years later when an institution's next accreditation inspection takes place. Institutions are expected to continually progress and improve in all areas so as to keep up with rising standards and qualify for AZA accreditation.

DEFINITIONS:

ACCREDITATION: the establishment and maintenance of professional standards and the qualitative evaluation of organizations in the light of those standards. Through this process a profession is judged based on criteria selected by experts in that field, rather than by outside agencies and/or individuals that are not actively employed in that field.

ADJACENT: Next to, close to, adjoining.

AESTHETIC: pertaining to the beautiful.

AQUARIUM: Usually at least one public building which contains aquatic animals. However, the animals are usually split into numerous exhibits. [For full definition see *Basic Definition, 2019 Guide To Accreditation of Zoological Parks and Aquariums.*]

CEO/DIRECTOR: The person with the authority and responsibility for the operation of the institution. Other titles may include president, chief executive officer, superintendent, supervisor, manager, etc.

CERTIFICATION: A process similar to accreditation (see "Accreditation" above). In AZA's case, certification involves review and assessment of facilities that operate in support of zoos and aquariums, but are typically not open to the public on a regular basis.

CONSERVATION: For the purposes of AZA's accreditation program, conservation is understood to be active stewardship of the natural environment, including wildlife, plants, energy and other natural resources.

CURRENTLY ACCREDITED APPLICANTS: Currently accredited applicants are those institutions that are AZA-accredited *at the time the application is submitted and processed.*

ENGINEERING STANDARDS: Standards that require exact and precisely measured steps to fulfill an engineering characteristic, with little or no variation in method for meeting the goal.

ENRICHMENT: A process to ensure that the behavioral and physical needs of an animal are being met by providing opportunities for species-appropriate behaviors and choices.

GOVERNING AUTHORITY: The agency with authority to govern the operations of the institution (such as the city, county/provincial, or federal government body, private corporation, foundation, society, board of directors, or other similar entities).

INSTITUTIONAL COLLECTION PLAN (ICP): An ICP is a document designed to thoughtfully assess the reasons for having each taxon in the collection. The ICP should be updated on a regular basis (minimally every 5 years). The ICP should include a statement of justification for all species and individuals in the institution's planned collection. The ICP should consider such criteria as status in the wild, status in zoos and aquariums, existence and priorities of cooperative management programs, ability to maintain the species in a physically, psychologically and socially healthy environment, exhibit value, exhibit suitability, need for husbandry and other research, recommendations stated in AZA TAG's Regional Collection Plans and any other issues specific to the institution's mission and vision.

INTERNATIONAL INSTITUTIONS: Institutions located outside the United States may apply for accreditation under the same rules as those located within the United States. In some rare cases, processing of applications for international institutions may not be possible within the standard six-month time frame, and may require a year or more before the Commission hearing can be scheduled. In addition, the amount of the Visiting Committee deposit may be higher due to increased travel costs associated with inspecting institutions located outside of the United States. If possible, AZA will assign an individual who is fluent in the applicant's native language to the inspection team for all international institutions, but the questionnaire and all *primary* materials submitted must be in English. If AZA is unable to assign individuals who speak the native language, the institution is responsible for providing an interpreter. Brochures and other pre-printed materials must be accompanied by a translation. If you have any questions about this please contact AZA.

MASTER PLAN: A written long-range plan that provides an organization with direction to develop or improve land, facilities, a building complex, etc.

MENTOR (PEER CONSULTANT): An individual deemed qualified by the Accreditation Commission to assist an institution in preparing for the AZA accreditation process. The individual is assigned by the Commission to help the institution identify areas that need to be addressed, to review and help update policies and procedures, internal documents, record keeping, and all areas involved in the accreditation process. The mentor can advise as to the institution's readiness, and can also provide guidance on assembling the application, if desired.

MODERN ZOOLOGICAL PRACTICES AND PHILOSOPHIES: Understanding, engaging, and committing to the advancement of standards, practices, related policies and philosophies in all areas assessed by AZA through accreditation constitutes "modern zoological practices and philosophies". These accepted best practices and philosophies define excellence in our profession, and are what distinguish AZA-accredited institutions from other institutions that have animals for guests to see and appreciate. The word "practices" represents the tangible while "philosophies" refers to an overall perspective.

NEW APPLICANTS: "New" applicants are those institutions applying for accreditation for the first time, or any institution that is *not currently AZA-accredited*, regardless of whether it has been AZA-accredited in the past.

OCEANARIUM: Usually aquatic animals housed in several public buildings contained in a park setting. The exhibit scale is very large with other attractions/services scattered among the exhibits.

PERFORMANCE STANDARDS: standards that measure the level of achievement considered acceptable to fulfill a performance characteristic, and choice in method for meeting the goal.

PERMANENT (cultural institution): an institution founded by an authority which intends it to continue indefinitely.

PROFESSIONAL STAFF: a paid full-time employee who commands an appropriate body of special knowledge and has the professional training, experience and ability to reach zoological park or aquarium management decisions consonant with the experience of peers, and who has access to and knowledge of the literature of the field.

REGULAR BASIS: regular hours, so that access is reasonably convenient to the public.

RELATED FACILITY: *For the purpose of AZA's accreditation programs, a related facility is defined as:* organizations holding wildlife that are not commercial entities, and are not open to the public on a regularly scheduled, predictable basis. The facility shall be under the direction of a professional staff trained in animal husbandry, and shall be further defined as having conservation and preservation as part of its mission—a mission that shall have a beneficial, tangible, supportive impact on the zoological and aquarium professions. This includes wildlife refuges or rehab centers, non-invasive research facilities, survival centers, breeding farms, and/or similar organizations." The Accreditation Commission, and its agents, shall determine whether a facility meets the definition of a related facility.

STRATEGIC PLAN: A written plan defining an organization's strategy or direction, including making decisions on sources of funding and allocation of resources needed to pursue this strategy.

WELFARE: an animal's (or group of animals) collective physical and mental states over a period of time, and measured on a continuum from good to poor.

WILDLIFE: non-domesticated animal life.

WILDLIFE PARK: Animals maintained in a public park setting, usually in very large exhibits that include animals which are free-ranging within the exhibit.

ZOOLOGICAL PARK: A collection of animals which are housed in many public exhibits, both indoors and outdoors. [For full definition see *Basic Definitions, 2019 Guide To Accreditation of Zoological Parks and Aquariums, page 16.*]

ACRONYMS APPEARING IN THESE STANDARDS:

AAZV-American Association of Zoo Veterinarians
ACM- Animal Care Manual
AED- Automated Emergency Defibrillator
ARKS- Animal Record Keeping System
AVMA- American Veterinary Medical Association
CAP- Conservation Action Plan
CBSG- Conservation Breeding Specialist Group
CEO- Chief Executive Officer
CITES- Convention on International Trade in Endangered Species
FDA- Food and Drug Administration
FEMA- Federal Emergency Management Agency
GFI- Ground Fault Circuit Interrupter
ICP- Institutional Collection Plan
ICS- Incident Command System
ID- Identification
NASPHV- National Association of State Public Health Veterinarians
OSHA- Occupational Safety and Health Administration
PPEQ- Permanent Post Entry Quarantine
RPM- Responsible Population Management
SAG- Scientific Advisory Group
SCUBA- Self-Contained Underwater Breathing Apparatus
SDS- Safety Data Sheets

SSC- Species Survival Commission
SSP- Species Survival Plan
TAG- Taxon Advisory Group
TB- Tuberculin/Tuberculosis
TRACKS® - An electronic animal records-keeping system
UL- Underwriters Laboratories
USDA-United States Department of Agriculture
UV- Ultraviolet
WAZA- World Association of Zoos and Aquariums
ZIMS- Zoological Information Management System

Accreditation Standards

PREAMBLE

AZA Accreditation - PURPOSE

AZA accredited zoos and aquariums are complicated operations with important goals. The highest goals of AZA accreditation include exemplary animal care and welfare, and inspiring guest engagement through effective education and conservation. AZA accreditation standards and requirements represent decades of modernization utilizing science, experience, and an unrelenting resolve to create a positive and lasting impact on guests, and to conserve our world's wild animals and wild places.

The AZA Accreditation Program provides all zoos and aquariums the opportunity to examine, meet, or exceed the highest standards in the profession. The accreditation process combines internal (stakeholder) and external (peer-review) top to bottom assessment, resulting in the most scrutinized, specialized and dynamic organizations in the world dedicated to animal care, welfare and well-being, public engagement, education, and conservation and science. Institutions successfully accredited by AZA must continuously demonstrate excellence in all areas of operations and regularly adapt to new and evolving standards.

AZA Accreditation - PROCESS

To achieve AZA accreditation, an institution requires extraordinary vision and leadership, and a comprehensive team effort to attain excellence in all areas of operations and management. The accreditation process begins when institutional stakeholders study and commit to the gold-level standards available under the accreditation tab at AZA.org. AZA accreditation requires full adherence to all standards on a daily basis. The core areas of self and peer evaluation include:

Animal Care, Welfare, & Well-Being (Excellence in Animal Care and Welfare)
Veterinary Care (Excellence in Animal Health Care)
Education & Interpretation (Innovation in Science and Conservation Education)
Conservation & Scientific Advancement (Measureable Impact in Science)
Vision, Mission & Master Plan (Values, Goals, Plans, and Outcomes)
Governance (Oversight, Ethics, and Community Leadership)
Finance (Business Management and Accountability)
Staff (Professional Team Development and Management)
Guest Services (Quality Visitor Amenities and Attraction Services)
Safety & Security (Public and Animal Safety, Staff Training, and Preparedness)
Physical Facilities (Quality Construction, Maintenance, and Design of all Facilities)
Support Organizations (Internal Support and Partnerships)

(continued next page)

Understanding, engaging, and committing to the advancement of standards, practices, related policies and philosophies in all areas assessed by AZA through accreditation constitutes "modern zoological practices and philosophies". These accepted best practices and philosophies define excellence in our profession, and are what distinguish AZA-accredited institutions from other institutions that have animals for guests to see and appreciate. The word "practices" represents the tangible while "philosophies" refers to an overall perspective.

Because of the many variations among institutions, the majority of AZA standards are carefully designed to be *performance* standards (i.e., assessing the level of achievement considered acceptable to fulfill a performance characteristic, and choice in method for meeting the goal). This differs from *engineering* standards, where exact and precisely prescribed steps are required to fulfill an engineering characteristic, with little or no variation in method for meeting the goal. AZA institutions may achieve performance standards in a variety of ways, but *all* standards ***must*** be met.

AZA Accreditation - PRODUCT

AZA accredited institutions are differentiated as exemplary facilities through the vigorous and voluntary commitment to shared high standards, achieving measurable goals, and continually pursuing outcomes that benefit animals, guests and communities. Distinguishing characteristics of an AZA-accredited institution include:

- Extraordinary focus on animal care, welfare, and well-being*
- Modern facilities and practices for comprehensive veterinary care
- Scientific advancement in animal care and conservation
- Focus and participation to support sustainable animal populations
- Exhibit aesthetics and habitat studies, planning, and design
- Innovative and inspirational educational programs and experiences
- Excellence in guest engagement and effective guest services
- Economic development and community partnerships
- Professional staff development and training
- Comprehensive preparedness in public and animal safety
- Sound business planning and financial management
- Dynamic and mission-driven strategic and master planning
- "Raising the bar" and regularly advancing operational standards

***AZA zoo and aquarium standards support the premise of five opportunities to thrive. These tenets propose that animals: (1) receive nutritionally complete diets that bring out the natural feeding response and behavior; (2) are afforded comfortable living experiences with choice and control to promote mentally and physically healthy behaviors; (3) experience good physical health; (4) are provided quality spaces to live in with appropriate social groupings that promote natural, species-appropriate and motivated behavior; and (5) develop natural coping skills and avoid chronic stress.**

IMPORTANT NOTE: All AZA accredited institutions and certified related facilities must follow all local, state, and federal laws and/or regulations. Some AZA standards may be more stringent than existing laws and/or regulations. In such cases, the AZA standard(s) must be met.

1. *ANIMAL WELFARE, CARE, & MANAGEMENT*

General Considerations:

Animal welfare, care, and sustainable population management are among the most critical and complex tasks performed by AZA zoos and aquariums. Administration and management must be guided by modern professional principles establishing plans and procedures to execute those functions.

Providing excellent animal care and public education about wildlife results in direct and indirect contact between animals and humans, whether staff, volunteers, or visitors. Benefits of such contact are multifold. They include maximizing quality in healthcare, behavior management, and sanitation, along with the educational value of connecting an increasingly urban public to animals and nature. In doing this there are significant risks to consider as well, such as injury to animals and people, psychological stress, and potential transmission of infectious disease. It is important for all zoos and aquariums to strategically assess the benefits and risks of animal contact throughout their institutions, and to implement the best, most productive and safe human-animal interactions possible. (See standard 11.4.1, and pages 80 - 82 of these standards for further information.)

Welfare Considerations:

AZA-accredited zoos and aquariums operate based on three core principles: animal welfare, safety, and visitor engagement. Excellence in animal welfare is the underlying foundation on which all standards and practices are premised and developed. All reasonable concerns regarding the welfare of individual animals or groups must be thoroughly assessed and corrected. Institutions are required to incorporate commonly accepted welfare guidelines and follow a documented process for assessing animal welfare and wellness. Failure to comply with all welfare-based standards present in all sections of this document will result in the loss of AZA accreditation.

1.1. Local, State, Provincial, and Federal Laws

1.1.1. The institution must comply with all relevant local, state/provincial, and federal laws and/or regulations, including those specific to wildlife. It is understood that, in some cases, AZA accreditation standards are more stringent than existing laws and/or regulations. In these cases the AZA standard must be met.

1.2. Animal Care Manuals

1.2.1. As available, the institution must review and provide access for all paid and unpaid animal care staff, to all AZA Animal Care Manuals (ACMs) that have been approved and that apply to species at the institution.

Explanation: A listing of approved ACMs is available on AZA's website at: http://www.aza.org/animal-care-manuals/. Institutions should check regularly for updates.

1.2.2. Guidelines outlined in the Animal Care Manuals (ACMs) should be followed.

Explanation: Institutions should review the guidelines and suggestions within the ACMs as needed, and tailor their animal care programs, protocols, and exhibits accordingly.

1.3. Documents and Policies

1.3.1. The institution must follow an Institutional Collection Plan (ICP). The ICP must be re-evaluated and updated at minimum every five years.

Explanation: The purpose of an ICP is to thoughtfully assess, on a regular basis, the reason for having each taxon in the collection. The ICP must include a statement of justification for all species and number of individuals or groups in the institution's planned collection. The ICP must consider some, but not necessarily all, of the following criteria, in addition to others that may be relevant: •special welfare considerations, •status in the wild, •status in zoos and aquariums, •recommendations stated in AZA TAGs' Regional Collection Plans, •existence and priorities of cooperative management programs, •ability to maintain the species in a physically, psychologically, and socially healthy environment, •exhibit value, •exhibit suitability (may include climatic considerations), •need for husbandry and other behavioral research, and •any other issues specific to the institution's mission and vision.

1.3.2. The institution must follow a written policy on responsible population management that incorporates all requirements contained in AZA's Policy On Responsible Population Management [AZA's "RPM Policy"]. (See pages 99 – 106 of these standards for further information).

Explanation: Policies on animal acquisition, transfer, euthanasia and reintroduction (including breeding loans) should be continually reviewed to keep them current with all applicable laws and/or regulations. Such policies must also incorporate all policies and/or resolutions adopted by AZA regarding hunting ranches, animal auctions, research, pets, participation in SSPs, and TAGs, and other issues involving the acquisition, transfer, euthanasia or reintroduction of wildlife.

Records must be maintained for all transactions involving acquisition, transfer, euthanasia or reintroduction of animals to and from the institution and must include the terms of the transaction. In making the decision to transfer an animal(s) to a non-AZA accredited facility the AZA institution must document that the receiving institution is willing and able to provide proper care and welfare for the animal(s) and that the transfer is done in accordance with AZA's RPM Policy.

Copies of all relevant permits, importation papers, declaration forms, titles, and other appropriate documents establishing a paper trail of legal acquisition must be maintained (as detailed in AZA's RPM Policy). When such information does not exist (the institution's maintenance of confiscated wildlife) an explanation must be provided regarding such animals.

1.4. Records

1.4.0. The institution must show evidence of having a zoological records management system for managing animal records, veterinary records, and other relevant information.

1.4.1. An animal inventory must be compiled at least once a year and include data regarding acquisitions and dispositions at the institution.

1.4.2. All species owned by the institution must be listed on the inventory, including those animals on loan to and from the institution.

1.4.3. Animals must be identifiable, whenever practical, and have corresponding ID numbers. For animals maintained in colonies/groups or other animals not considered readily identifiable, the institution must provide a statement explaining how record keeping is maintained.

1.4.4. Animal records and veterinary records, whether in electronic or paper form, must be duplicated and stored in a separate location. Animal records are defined as data, regardless of physical form or medium, providing information about individual animals, or samples or parts thereof, or groups of animals. Electronic systems are preferable.

Explanation: The institution must prevent animal and veterinary records from being lost or destroyed in a catastrophe. A complete and up-to-date set of these records must be duplicated and stored in separate locations (e.g., not in the same building, if kept on site). Consideration should be given to physical distance and natural hazards when selecting the separate location.

1.4.5. At least one set of the institution's historical animal and veterinary records must be stored and protected. Those records should include permits, titles, declaration forms, and other pertinent information.

1.4.6. A paid staff member must be designated as being responsible for the institution's animal record-keeping system. That person must be charged with establishing and maintaining the institution's animal records, as well as with keeping all paid and unpaid animal care staff members apprised of relevant laws and regulations regarding the institution's animals.

1.4.7. Animal records must be kept current.

Explanation: For keepers and other paid line staff, event, identification, and husbandry information should be recorded in keeper reports or other written forms on the same day whenever possible, but no later than the day following. Acquisition, transfer, euthanasia, and reintroduction data should be entered into the institutional records database within two weeks and retained for at least five years after the animal's death or transfer. The institution should develop a records retention schedule and policy for its animal records in order to assure they are created, managed, and appropriately preserved or otherwise disposed of according to minimum legal, administrative, and historical values. [See 2.0.4 for veterinary records.]

1.4.8. The institution must have a record-keeping system that provides sufficient detail to enhance husbandry, welfare, breeding, conservation, and medical health advancements to move forward the critical knowledge of the species through permanent and retrievable documentation.

1.4.9. At least one member of an institution's paid staff responsible for animal record-keeping should have the proper training.

Explanation: AZA's Institutional Records-Keeping course is one option to obtain appropriate training.

1.5. Animal Welfare, Care, and Well-Being

1.5.0. The institution must have a process for assessing animal welfare and wellness.

Explanation: This process should be both proactive and reactive, transparent to stakeholders, and include staff or consultants knowledgeable in assessing quality of life for animals showing signs of physical or mental distress or decline. The process should also include a mechanism to identify and evaluate the welfare/wellness impacts of significant life events or changes in the animal's environment as identified by the

individual institution. Examples of life events/changes could include construction events, unusual weather events, noise intrusion, change in housing, or changes in animals exhibited with or nearby, etc. Animal welfare/wellness refers to an animal's collective physical and mental states over a period of time, and is measured on a continuum from good to poor.

1.5.1. All animals must be well cared for and presented in a manner reflecting modern zoological practices in exhibit design, balancing animals' welfare requirements with aesthetic and educational considerations.

1.5.2. All animals must be housed in enclosures which are safe for the animals and meet their physical and psychological needs.

1.5.2.1. All animals must be kept in appropriate groupings which meet their social and welfare needs.

1.5.2.2. All animals should be provided the opportunity to choose among a variety of conditions within their environment.

1.5.3. If animal demonstrations are part of the institution's programs, an educational/conservation message must be an integral component.

1.5.4. If ambassador animals are used, a written policy on the use of live animals in programs must be followed and incorporate the elements contained in AZA's "Recommendations For Developing an Institutional Ambassador Animal Policy" (see pages 88 - 93). An education, conservation, and welfare message must be an integral component of all programs. Animals in education programs must be maintained and cared for by paid and/or unpaid trained staff, and housing conditions must meet standards required for the remainder of the animals in the institution. While outside their primary enclosure, although the conditions may be different, animal safety and welfare need to be assured at all times.

Explanation: As stated in the AZA Ambassador Animal Policy, the management of ambassador animals requires special consideration. Although the housing conditions for ambassador animals may look different at times to those provided to exhibit animals, institutions must provide similar social, physical, behavioral and nutritional opportunities to ambassador animals. Regular holding enclosures (this does not include short-term holding for programs or transport) for any given ambassador animal species must provide sufficient space for comfort, exercise, shelter, and have sufficient complexity. Ambassador animals should be housed socially when appropriate for the species. Also, providing ambassador animals with choices and control over their environment (e.g., whether they want to participate in a program on any given day) and incorporating time limitations (including animal rotation and rest periods), where and when appropriate, is essential to ensuring effective care and management. Activities associated with programs may provide some of these needs from time to time.

1.5.5. For animals used in offsite programs and for educational purposes, the institution must have adequate written protocols in place to protect the rest of the animals at the institution from exposure to infectious agents.

Explanation: To protect the health of the animals at the institution, written protocols required above, and their implementation, must include a veterinary risk assessment and veterinary approval.

1.5.6. Institutions that include elephants in their collection must follow the AZA Standards For Elephant Management & Care.

1.5.6.1. Institutions that include cetaceans in their collection must follow the AZA Standards For Cetacean Care & Welfare.

1.5.7. The animals must be protected or provided accommodation from weather or other conditions clearly known to be detrimental to their health or welfare.

Explanation: Animals must be provided with an environment in which they can acclimate sufficiently to remain healthy and support their well-being. For example, animals not normally exposed to cold weather in their natural habitats should be provided heated enclosures. Likewise, protection from excessive heat should be provided to animals normally living in cold climates. Protection from predation by wild or feral animals should also be considered as well as other non-environmental factors.

1.5.8. The institution must develop and implement a clear and transparent process for identifying, communicating, and addressing animal welfare concerns from paid or unpaid staff within the institution in a timely manner, and without retribution.

Explanation: A committee or some other process must be identified and communicated to all paid and unpaid staff to address any concerns for animal welfare within the institution. This committee or process is intended to supplement the normal chain-of-command to assure that any personal conflicts do not have undue influence over the process or its outcomes, or if the complainant believes that the welfare concern has not been adequately addressed through normal channels.

The committee or process should include the following elements:

- Clear communication of the process to paid and unpaid staff.
- Ready access to the committee or process by all paid and unpaid staff.
- Paid staff with the experience and authority necessary to evaluate submitted observations and implement any necessary changes.
- Timely feedback to the person submitting the observation.

Examples of Institutional Animal Welfare Processes can be obtained at https://www.aza.org/accred-resource-center (you will be requested to log in using your individual membership user name and password).

1.5.9. The institution must have a regular program of monitoring water quality for fish, marine mammals, and other aquatic animals. A written record must be maintained to document long-term water quality results and chemical additions.

Explanation: Monitoring of selected water quality parameters will provide confirmation of the correct operation of filtration and disinfection of the water supply available for the animals. Additionally, high quality water enhances animal health programs instituted for aquatic animals.

1.5.10. Temporary, seasonal and traveling live animal exhibits, programs, or presentations (regardless of ownership or contractual arrangements) must be presented and maintained at the same level of care as the institution's permanent resident animals, with foremost attention to animal welfare considerations, both onsite and at the location where the animals are permanently housed.

Explanation: Institutions must perform due diligence demonstrating that the contracted vendor has the expertise, resources, and facilities to provide for the animals' physical, psychological, and social needs. Contracted vendors should be monitored periodically to assure that proper care of the animals is being maintained.

1.5.11. Animal transportation must be conducted in a manner that is safe, well-planned and coordinated, and minimizes risk to the animal(s), employees, and general public. All applicable laws and/or regulations must be adhered to.

Explanation: Planning and coordination for animal transport requires good communication among all involved parties, plans for a variety of emergencies and contingencies that may arise, and timely execution of the transport. Safe animal transport requires the use of appropriate conveyance and equipment that is in good working order. The equipment must provide for the adequate containment, life support, comfort, temperature control, food/water, and safety of the animal(s). Safe transport also requires the assignment of an adequate number of appropriately trained personnel (by institution or contractor) who are equipped and prepared to handle contingencies and/or emergencies that may occur in the course of transport. At no time should the animal(s) or people be subjected to unnecessary risk or danger.

1.5.12. Paid and/or unpaid staff assigned to handle animals during demonstrations or educational programs must be trained in accordance with the institution's written animal handling protocols. Such training must take place before handling may occur.

1.5.13. When in operation, animal contact areas (petting zoos, touch tanks, etc.) must be supervised by trained, paid and/or unpaid staff.

1.5.14. If animals are housed either long-term or permanently in indoor facilities, the appropriate UV spectrum for the species (based on the knowledge available to date) should be provided in these enclosures. [Formerly 10.3.1]

Explanation: Published scientific studies demonstrate that animals housed indoors without directly contacting sunlight, including certain invertebrates, fishes, amphibians, reptiles, birds and mammals, benefit from access to very specific ultraviolet wavelengths of light to promote mineral and vitamin metabolism, reproduction, natural behaviors and healthy immune systems. Animal care staff and exhibit designers should regularly review published scientific studies and AZA Animal Care Manuals as well as consult with AZA Scientific Advisory Groups when determining light quality needs of animals housed indoors.

1.5.15. All animal exhibit and holding area air and water inflows and outflows must be securely protected to prevent animal injury or egress.

1.5.16. When sunlight is likely to cause overheating of or discomfort to the animals, sufficient shade (in addition to shelter structures) must be provided by natural or artificial means to allow all animals kept outdoors to protect themselves from direct sunlight. [Formerly 10.3.4]

1.6. Enrichment and Husbandry Training

1.6.1. The institution must follow a formal written enrichment program that promotes species-appropriate behavioral opportunities.

Explanation: An enrichment program should be based on current information in biology, and should include the following elements: goal-setting, planning and approval process, implementation, documentation/record-keeping (see standard 1.6.3), evaluation, and reassessment. The enrichment program should also apply to animals in quarantine, as appropriate and possible. In some cases, the features and complexity of the exhibit may provide sufficient enrichment. Further information on the establishment of an enrichment program is available from AZA, and online at https://www.aza.org/accred-resource-center (you will be requested to log in using your individual membership user name and password).

1.6.2. The institution must have a specific paid staff member(s) or committee assigned for enrichment program oversight, implementation, assessment, and interdepartmental coordination of enrichment efforts.

1.6.3. Enrichment activities must be documented and evaluated, and program refinements should be made based on the results, if appropriate. Records must be kept current.

1.6.4. The institution should follow a formal written animal training program that facilitates husbandry, science, and veterinary procedures and enhances the overall health and well-being of the animals.

Explanation: An animal training program should be based on current animal training best practices in the zoological field and should include the following elements: •goal-setting (what behaviors to be trained, what species/individuals of priority), •planning (process for developing and approving training plans), and •documentation (record of success).

1.7. Commercial Collectors

1.7.1. Institutions that acquire aquatic animals from the wild must make a good faith effort to determine that collecting procedures are done in a sustainable manner.

1.7.2. Institutions dealing with commercial collectors must determine that the collectors are properly permitted to conduct legal collections of animals (including aquatic animals) from the wild.

Explanation: The institution must be proactive in ensuring that any commercial collectors utilized are properly permitted to conduct legal collections of animals from the wild.

2. VETERINARY CARE

Welfare Considerations:

AZA-accredited zoos and aquariums must assure the health of all animals in their care. In addition to a strong foundation of professional animal care staff, the utilization of a highly qualified veterinarian and veterinary staff, and the access to modern veterinary facilities is required. All concerns regarding the health of animals must be assessed, treated, and corrected as a priority utilizing the expertise and resources of the veterinary team and as also available through AZA and AAZV.

2.0. Veterinary Care Program

2.0.1. The institution should adopt the *Guidelines for Zoo and Aquarium Veterinary Medical Programs and Veterinary Hospitals,* and the policies developed or supported by the American Association of Zoo Veterinarians (AAZV). The most recent edition of the medical programs and hospitals booklet is available at the AAZV website, under "Publications", at http://www.aazv.org/displaycommon.cfm?an=1&subarticlenbr=839, and can also be obtained in PDF format by contacting AZA staff.

2.0.2. The veterinary care program must emphasize disease prevention. [Formerly 2.4.1]

Explanation: Preventative medicine programs (vaccinations, TB testing, parasite exams, etc.) must be in force for all of the institution's animals and must be under the direction of a qualified veterinarian.

2.0.3. Institutions should be aware of, and prepared for periodic disease outbreaks in wild or other domestic or exotic animal populations that might affect the institution's animals (ex – Avian Influenza, Eastern Equine Encephalitis Virus, etc.). Plans should be developed that outline steps to be taken to protect the institution's animals in these situations.

2.0.4. Complete medical records must be maintained on all animals in the collection that have received veterinary attention. [See 1.4.7 for animal records.]

2.1. Staff

2.1.1. A full-time staff veterinarian is recommended. In cases where such is not necessary because of the number and/or nature of the animals residing there, a consulting/part-time veterinarian must be under written contract to make at least twice monthly inspections of the animals and to respond as soon as possible to any emergencies.

Explanation: Because of their size or nature, exceptions may be made to the twice monthly inspection requirement for certain institutions (e.g., insects only, etc.).

2.1.2. So that indications of disease, injury, or stress may be dealt with promptly, veterinary coverage must be available to the animals 24 hours a day, 7 days a week.

2.2. Pharmaceutical

2.2.1. Written, formal procedures must be available to paid and unpaid animal care staff for the use of animal drugs for veterinary purposes, and appropriate security of the drugs must be provided.

Explanation: Such procedures should include at minimum the following: those persons authorized to administer animal drugs, situations in which they are to be utilized, location of animal drugs and those persons with access to them, and emergency procedures in the event of accidental human exposure. Outdated drugs must be marked as such and stored separately from all other drugs. All controlled substances must be stored in a securely locked container of substantial construction appropriate for the types of drugs in the inventory. Carfentinel, Etorphine hydrochloride (M99), and Diprenorphine (M50-50) must be stored in a safe or steel cabinet equivalent to a U.S. Government Class V security container. [NOTE: Underwriters Laboratories (UL) listed burglary-resistant safe (UL-TL 15, TL 30, or TL 45 with a Group 1-R lock). The safe or steel cabinet shall have the following specifications or the equivalent: 30 man-minutes against surreptitious entry, 10 man-minutes against forced entry, 20 man-hours against lock manipulation, and 20 man-hours against radiological techniques].

2.2.2. The use of drugs in zoos and aquariums must comply with the federal Animal Medicinal Drug Use Clarification Act of 1994 (AMDUCA) and associated regulations, as well as all other applicable federal, state, and local laws and/or regulations.

Explanation: AMDUCA provides zoo/aquarium veterinarians with prescribing and dispensing options important for the health and welfare of animals under their care; a critically important resource given the lack of drugs labeled for use in zoo/aquarium animals. Additional information concerning the requirements of extra-label drug use can be found at: https://www.avma.org/KB/Resources/Reference/Pages/AMDUCA.aspx

For the purposes of this standard, the Food and Drug Administration (FDA) definition of a drug is applicable:

- A substance recognized by an official pharmacopoeia or formulary.
- A substance intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease.
- A substance (other than food) intended to affect the structure or any function of the body.
- A substance intended for use as a component of a medicine but not a device or a component, part or accessory of a device.
- Biological products are included within this definition and are generally covered by the same laws and regulations, but differences exist regarding their manufacturing processes (chemical process versus biological process.)

2.3. Equipment

2.3.1. Capture equipment must be in good working order and available to authorized, trained personnel at all times.

2.3.2. Institution facilities must have radiographic equipment or have access to radiographic services.

Explanation: Because of their size and/or nature, exceptions may be made for certain institutions (e.g., insects only, etc.).

2.4. Preventative Medicine

2.4.1. [See 2.0.2.]

2.4.2. Paid and unpaid animal care staff should be trained to assess welfare and recognize abnormal behavior and clinical signs of illness and have knowledge of the diets, husbandry (including enrichment items and strategies), and restraint procedures required for the animals under their care. However, animal care staff (paid and unpaid) must not diagnose illnesses nor prescribe treatment.

2.5. Necropsy

2.5.1. Deceased animals should be necropsied to determine the cause of death for tracking morbidity and mortality trends to strengthen the program of veterinary care and meet SSP-related requests.

Explanation: Necropsies provide information as to the cause of death as well as underlying pathology that may be related to nutritional status, other aspects of husbandry, or preventive medicine. Necropsy data, should be reviewed on a regular basis to identify any group health implications or necessary changes in animal management. Trained staff under the direction of a veterinarian may perform necropsies. All deceased animals (or a sampling from a mass mortality) should be evaluated by gross necropsy supported by histopathology under veterinary discretion. SSP necropsy protocols should be followed.

While a good faith effort should be made to perform a gross necropsy on all deceased animals (or an appropriate sampling from a mass mortality), there are cases, such as advanced decomposition of fish or invertebrates, in which post mortem examination is neither possible nor practical. Resources, either internal or external for histopathology and other ancillary diagnostic testing should be available and utilized at the discretion of the veterinarian.

2.5.2. The institution should have an area dedicated to performing necropsies.

Explanation: To minimize transmission of potential contagion, necropsies should be performed in a dedicated room. Alternatives to a necropsy room (such as a lab bench, cart, biosafety cabinet, or outdoor area) should be assessed for health risk posed to other animals, staff, and guests.

2.5.3. Cadavers must be kept in a dedicated storage area before and after necropsy. Remains must be disposed of in accordance with local/federal laws.

2.6. Nutrition

2.6.1. Animal food preparation and storage must meet all applicable laws and/or regulations.

2.6.2. The institution must follow a written nutrition program that meets the behavioral and nutritional needs of all species, individuals, and colonies/groups in the institution. Animal diets must be of a quality and quantity suitable for each animal's nutritional and psychological needs.

Explanation: Nutrition programs should be developed using the recommendations of appropriate AZA TAGs or SAGs, and the AZA Nutrition Advisory Group http://nagonline.net/guidelines-aza-institutions/feeding-guidelines/. Diet formulation criteria should include each animal's individual history and natural history, feeding ecology and behavioral needs. Meat processed on site must be processed following all USDA (or federal) standards.

2.6.3. If the institution uses browse plants as part of the diet or as enrichment items for its animals, the items must be identified and reviewed for safety prior to use.

Explanation: At minimum, the program should identify what plants are safe to feed and to which species, which parts of the plant are safe, whether the browse plants have been treated with any chemicals or if they are near any point sources of pollution.

2.6.3.1. The institution must assign at least one qualified paid or unpaid staff member to oversee appropriate browse material for the animals (including aquatic animals).

2.6.3.2. The institution's animal care program must address the potential risks of animals (including aquatic animals) being exposed to toxic plants growing in or near their exhibit space. Exhibits should be checked regularly during the growing season.

2.6.4. If not in separate buildings, animal food preparation areas must be physically separated from other functions such as the animal hospital (including animal treatment, isolation, holding, deceased animal storage) and employee lounges and offices. Animal food must not be stored in the same area as animal drugs. Animal food and human food must not be stored in the same location (refrigerators, freezers, etc.).

2.7. Quarantine

2.7.1. The institution must have holding facilities or procedures for the quarantine of newly arrived animals and isolation facilities or procedures for the treatment of sick/injured animals.

2.7.2. Written, formal procedures for quarantine must be available and familiar to all paid and unpaid staff working with quarantined animals.

2.7.3. Quarantine, hospital, and isolation areas should be in compliance with standards/guidelines contained within the *Guidelines for Zoo and Aquarium Veterinary Medical Programs and Veterinary Hospitals* developed by the American Association of Zoo Veterinarians (AAZV), which can be obtained at:
http://www.aazv.org/displaycommon.cfm?an=1&subarticlenbr=839

2.8. Pest Control

2.8.1. Pest control management programs must be administered in such a manner that the animals, paid and unpaid staff, the public, and wildlife are not threatened by the pests, contamination from pests, or the control methods used.

2.9. General Policy and Practice

2.9.1. The institution must follow a written euthanasia policy which adheres to the current AVMA Guidelines for the Euthanasia of Animals, or the AAZV Guidelines for the Euthanasia of Nondomestic Animals.

Explanation: *The AZA Policy on Responsible Population Management: Acquisition, Transfer, Euthanasia and Reintroduction by Zoos & Aquariums,* references an institutional euthanasia policy. This policy should be tailored to the needs of the institution, outlining appropriate procedures and responsibilities for all taxa within the institution's collection. All paid and unpaid animal care staff should be familiar with this policy.

3. CONSERVATION

General Considerations:

Impactful and sustainable conservation initiatives are a priority for AZA-accredited zoos and aquariums. These include contributing to and promoting the long-term survival of species in natural ecosystems, and full support of AZA ex situ programs such as Species Survival Plans (SSPs) and Saving Animals From Extinction (SAFE). Green practices and education programs emphasizing the institution's and community's role in ecosystem conservation and stewardship of natural resources should inspire conservation action with measurable outcomes both at the institution and in the community/society-at-large to address the causes of species endangerment.

Welfare Considerations:

Conservation ethics, practices, messaging, and funding helps improve the welfare of animals in the wild and their counterparts in human care. Animal welfare should be considered as a component of field conservation projects supported by AZA-accredited zoos and aquariums.

3.1. Mission

3.1.1. Conservation must be a key component of the institution's mission and messaging.

Explanation: For the purposes of AZA accreditation, conservation is understood to be active stewardship of the natural environment, including animals, plants, and other natural resources.

3.2. Conservation Program

3.2.1. The institution must follow a written conservation action plan/strategy with defined outcomes in proportion to the size and scope of the organization with the goal of demonstrating continuous improvement in each area. The plan must include components outlining the institution's commitments to its conservation practices, including each of the following:

- In-Situ conservation efforts (supporting both local and global priorities including paid staff or volunteer involvement of in situ programs, or financial support of impactful in situ programs). Such programs are those that have a direct and measurable impact on animals and habitats in the wild.
- Natural resource conservation and sustainability/green practices such as water conservation initiatives; energy use reduction and alternative sources; waste management for recyclables, compostables, combustibles, and toxic and hazardous materials; sustainable purchasing; green construction, and other green practices.
- Connecting the animal collection with saving species in the wild (e.g., conservation messaging, advocacy, supporting reintroduction programs, donating to and/or engaging in applied research, etc.)
- Conservation education and advocacy programs measured against the written conservation goals of the institution.

Explanation: Each institution must participate in practices that implement its conservation action plan/strategy, which itself should include a variety of measurable and impactful outcomes. Being the lead agency or partnering with other agencies/organizations on in-situ conservation programs is one of the most significant

ways AZA institutions can demonstrate their role in ecosystem conservation and wildlife preservation. AZA institutions have the responsibility to demonstrate responsible resource management, acting as leaders in their communities. Helping guests and paid and unpaid staff engage in the conservation commitments of the institution is core to our missions. Lists of programs and projects submitted to AZA's Annual Report on Conservation and Science (ARCS)-related surveys serves as evidence that the institution is following its conservation action plan/strategy.

3.2.2. Each institution must evaluate/measure the impact of its written conservation action plan/strategy.

Explanation: Some form of regular evaluation of conservation efforts should occur. Measurement of impact can include assessment of achievement of programmatic goals, actual measure of impact on species and habitat conservation, and/or some other quantitative measure of success.

3.3. Participation/Support

3.3.1. The institution must participate in every SSP that pertains to an animal belonging to the institution. The institution may indicate at what level it desires to participate in each SSP.

3.3.2. The institution must actively support and participate in AZA animal programs, and cooperate in providing requested information regarding its animals in a timely fashion to AZA Program Leaders, including Studbook Keepers, SSP Coordinators and Chairs, and follow agreed upon recommendations (e.g., breeding and transfer plans; acquisitions, transfers, and transitions, etc.).

3.3.3. [See 3.3.2]

3.3.4. The institution must be involved in local, regional, or international wildlife conservation programs through paid and/or unpaid staff or resources.

Explanation: Such programs are those that have a direct impact on animals and habitats in the wild.

4. EDUCATION AND INTERPRETATION

General Considerations:

This section includes all questions related to education and interpretation. Collectively, education and interpretation refer to: programming on-site and off-site for targeted audiences such as school groups, teachers and families, as well as all types of interpretive methods for guests, for example, graphics, exhibits, ambassador animal use, and keeper talks. Institutions may differ organizationally in how they accomplish these tasks (e.g., some institutions may have an Exhibits Department, or graphics may be coordinated by the Art Department). What is key is the role of the paid and unpaid education staff in the accomplishment of these tasks. Institutions are encouraged to share educational and interpretive programming, materials, and evaluation techniques with other AZA institutions.

Welfare Considerations:

AZA-accredited zoos and aquariums must be innovative and dynamic conveyors of their science-based mission and goals. Knowledge creates awareness that leads to change, and impacts animal welfare in both AZA-accredited institutions and in the wild. Educated populations are overwhelmingly more supportive of actions and practices that promote the care, welfare, and conservation of wildlife.

4.1. Mission

4.1.1. Education must be a key component of the institution's mission.

Explanation: Education is an important component in the conservation mission of each institution. Effective educational programming is a proven method of increasing awareness and participation in stewardship of the natural world.

4.2. Education Program

4.2.1. The institution must follow a written education plan that includes goals and objectives.

Explanation: The institution's education plan must include a copy of its education vision/mission, as well as strategic goals and objectives. The plan may include a copy of the organizational chart, and description of how the education department interacts with other departments on issues such as exhibit and graphics' development, keeper presentations, *in situ* conservation programs, etc. The plan should include the institution's conservation messages.

4.2.2. The education department must be under the direction of a paid staff person who is trained or has experience in educational programming. Education personnel should be involved in the development of exhibits, graphics, and interpretation, as well as all structured programs for the visiting public.

4.2.3. Institutions should participate in active, ongoing collaborative partnerships with organizations and individuals that can contribute to the expansion of their educational dimension. Such partnerships may include community groups, other informal education institutions (museums, science centers, nature centers, etc.), school districts, institutes of higher learning, other conservation organizations and government agencies.

4.2.4. Institutions should provide paid and unpaid staff access to informational resources with the goal of supporting excellence in programs, animal management, and exhibits. These resources may include a facility library, access to an offsite library or electronic access to internet resources.

4.3. Evaluation/Interpretation

4.3.1. Classes, programs, animal talks, interpretive programs and other education programs should be evaluated on a regular basis for effectiveness and content. Programs should be updated with current scientific information, with an educational/conservation message as an integral component. These evaluations should assess more than participant satisfaction, looking also at program impact (ideally including impact on conservation-related knowledge, attitudes/affect, and behavior). Results from evaluations should be used to improve the existing programs and to create new programs.

4.3.2. The institution should have a thorough understanding of the needs of its audiences and as such provide programs to meet these needs.

Explanation: Zoo and aquarium education can be accomplished by programs offered to a wide variety of audiences and paid/unpaid staff through an assortment of programmatic methods: publications, exhibit interpretation, on-site presentations, tours, summer camps, speaker's bureau, outreach programs, teacher training, etc. The institution need not reach ALL audiences equally, but a thoughtful approach to audience selection should be evident – e.g., a clear understanding of their audience's needs, including the needs of under-represented groups and groups with special abilities. Similarly, not all types of programming must be used equally, but a thoughtful approach to program development must be evident. Programming should include local/global conservation issues and topics, the role of zoos and aquariums in conservation, information on AZA and other conservation-oriented organizations; as well as ways that the institution acts as a resource in its community for wildlife conservation education and related issues. Programming should clearly address cognitive, affective, and behavior outcomes (i.e., options for individual action that encourages stewardship in conserving the environment).

4.3.3. The exhibit graphics and other interpretive devices must be in good condition and functioning, and be based upon relevant scientific knowledge and reflect relevant interpretive methods.

Explanation: The interpretive program must be based on the thoughtful development of conservation messages for the institution. Exhibit interpretation may include information regarding the animal's natural history, conservation, care and welfare, ecology, relation to humans, correct taxonomic identification and current status (i.e., endangered or threatened), as well as botanical collections, and specific environmentally responsible behaviors visitors are being encouraged to take. In particular, inclusion of interpretation on AZA's cooperative management programs (e.g., SSPs and TAGs) is encouraged.

5. SCIENTIFIC ADVANCEMENT

General Considerations:

Contemporary animal management, welfare, husbandry, veterinary care, and conservation practices should be based in science. A commitment to scientific advancement through research studies, both basic and applied, is a trademark of the modern zoological park and aquarium. Scientific studies should be justified in terms of the contribution to the understanding of biological principles, or to outcomes that are expected to benefit humans, animals, or the ecosystem.

Welfare Considerations:

Studies performed or supported by AZA-accredited zoos and aquariums advance knowledge and understanding of animals and the individual needs of each species. Through knowledge gained, AZA-accredited institutions help to improve the welfare of animals both in human care and their counterparts in the wild.

5.0. The institution must have a demonstrated commitment to scientific study that is in proportion to the size and scope of its facilities, staff (paid and unpaid), and animals.

5.1. Scientific studies must be under the direction of a paid or unpaid staff member or committee qualified to make informed decisions.

5.2. The institution must follow a formal written policy that includes a process for the evaluation and approval of scientific project proposals, and outlines the type of studies it conducts, methods, staff (paid and unpaid) involvement, evaluations, animals that may be involved, and guidelines for publication of findings.

5.3. The institution should maximize the generation and dissemination of scientific knowledge gained. This might be achieved by participating in AZA TAG/SSP sponsored studies when applicable, conducting and publishing original research projects, affiliating with local universities, and/or employing staff with scientific credentials.

6. GOVERNING AUTHORITY

General Considerations:

The governing authority should be fully informed of and willing to support (in theory and finance) the continued advancement of the institution's mission, goals, and objectives (including, but not limited to, animal welfare, conservation projects, education, scientific studies, advancement in exhibit design, and quality visitor experience.)

Welfare Considerations:

It is critical that an AZA-accredited zoo or aquarium's governing authority provide the institution with attentive and consistent support to assure the institution's ability to continuously provide good animal welfare. Consistent and strong leadership and support by a governing authority may help avoid or mitigate shortfalls and other conditions that could potentially affect the quality of animal welfare within the institution.

6.1. The governing authority must be supportive of the institution abiding by the AZA Accreditation Standards, Code of Professional Ethics, and Bylaws.

Explanation: The Commission must be assured that the institution's governing authority understands and is supportive of the institution abiding by the AZA Accreditation Standards, Code of Professional Ethics, and Bylaws.

6.2. The governing authority must recognize and support the institution's goals and objectives.

6.3. The governing authority has the responsibility for policy matters and oversight of the institution. The CEO/Director must be responsible for the day-to-day management of the institution, including animal acquisition, transfer, welfare, euthanasia, and reintroduction, paid and unpaid staff, and programs.

6.4. While the governing authority may have input, the decisions regarding the institution's animals must be made by the professionals who are specifically trained to handle the institution's animals, staff (paid and unpaid), and programs.

6.5. The lines of communication between the CEO/Director, the governing authority, and the support organization must be clearly defined. Additionally, the governing authority and support organization

must be structured so that their relationship to the professional staff (paid and unpaid) is clearly understood and followed.

Explanation: If clear lines of communication do not exist, a breakdown in the operation of the institution and care of the animals could occur. It is essential to have a good working relationship between the governing authority, support organization, CEO/Director, and the paid and unpaid staff.

6.6. The CEO/Director must have the opportunity to attend meetings that would affect operations of the institution.

7. STAFF

General Considerations:

In applying for accreditation, AZA-accredited institutions, along with their paid and unpaid staff and their governing authority, agree to abide by AZA's: •accreditation standards and policies, •Code of Professional Ethics, •Bylaws, •Acquisition, Transfer, Euthanasia and Reintroduction Policy, •all duly adopted resolutions and position statements, and •agree to support AZA's objectives. To fulfill this commitment it is expected that an institution's professional staff and, at minimum, its senior executive (i.e., zoo or aquarium CEO/Director) should participate in AZA at the Professional Fellow level.

Welfare Considerations:

AZA-accredited zoos and aquariums must have a sufficient number of properly trained staff to care for the animals and assure good animal welfare, maintain high quality operations, and work to continually evolve (modernize) the institution. Continuing professional development of staff is required to ascertain that staff is up-to-date with the latest information and best practices.

7.1. The institution must be under the direction of a compensated CEO/Director. The CEO/Director or a designee must be available to the institution on a full-time basis.

7.2. In the event a CEO/Director has several "jobs" (i.e., also directs other areas of a park system), clear priorities must be established, with each job having separate and distinct descriptions.

7.3. There must be an adequate number of trained paid and unpaid staff to care for the animals and to manage the institution's diverse programs.

Explanation: Although there is no set formula for prescribing the size of the staff (paid and unpaid), some of the criteria that may be used to define what is considered "adequate" include the number and type of species within the institution, the general condition of the animals and exhibits, and past staffing practices.

7.4. Compensation for paid staff should be competitive with other similar positions in the local/regional/national market, as appropriate.

Explanation: Institutions must be able to recruit and retain qualified paid staff. Competitive compensation is a key component in recruitment and retention of paid staff.

Some positions can be successfully recruited for locally, while others are competitive on a more regional or national basis (e.g., animal care specialists).

7.5. Paid full-time staff members should receive opportunities for training and development.

Explanation: All paid full-time staff institution-wide should be provided opportunities for training and professional development. Funding should be provided for travel, meeting/conference participation, tuition, on-line training, and other professional opportunities when possible. Training and development opportunities may also be offered by qualified staff within the institution.

7.6. To support the operations of the institution, all paid and unpaid staff must maintain a professional attitude and behavior in all working relationships.

7.7. The institution should encourage paid and unpaid staff to actively participate in AZA committees and programs, as well as programs developed by other conservation-oriented organizations, including through virtual means such as email, teleconference, etc.

7.8. Paid and unpaid staff must be provided access to the latest edition of the AZA accreditation standards and related policies (available at http://www.aza.org/accred-materials/).

Explanation: It is important that paid and unpaid staff understand the significance of accreditation and what to expect during the accreditation process and Visiting Committee inspection.

7.8.1. The standards and related policies should be reviewed by institutional leadership annually to maintain continued compliance between accreditation visits.

7.9. The institution must have a staff diversity and inclusion statement and should follow a diversity and inclusion program.

Explanation: Programs should reflect recognition of the important connection between mission and diversity, and imply an on-going effort to enhance diversity and inclusion, including audience, paid and unpaid staff, and supplier diversity.

7.10. Programs utilizing volunteers (unpaid staff) should also include provisions for recruitment, interviewing, retention, and training, and periodic evaluation. This process must be under the supervision of a paid staff member(s) charged with overseeing volunteer programs.

7.11. The institution's CEO/Director must hold individual membership in AZA at the Professional Fellow level.

Explanation: The CEO/Director of an institution that is not AZA-accredited at the time application is made must obtain individual membership as a Professional Fellow at such time as accreditation of the institution is granted.

7.12. Institutions should encourage paid staff to assume leadership roles in AZA animal programs. Institutions with paid staff in leadership roles in these programs must provide continuing support to the staff member assigned and take steps to assure that the staff member assigned manages the program efficiently, and communicates with participants in a timely manner.

8. *SUPPORT ORGANIZATION*

Welfare Considerations:

It is important for an AZA-accredited zoo or aquarium's support organization to recognize and understand the components of good animal welfare and to support the institution in areas that will enhance its ability to continuously provide good welfare to the animals in its care (for example, funding staff training and development, etc.). Support organizations that are primarily focused on individual institution memberships should support animal welfare through communications with the membership about the care provided daily by the institution to assure good welfare for the animals in its care.

8.1. The support organization must recognize the overall authority of the institution's CEO/Director, and the role of the governing authority, for the management of the institution and its programs.

Explanation: The institution's CEO/Director must have final authority over the support organization regarding the animals, exhibits, paid and unpaid staff, programs, long-range plan, and any matters affecting the institution.

8.2. A support organization must share the institution's goals and objectives and provide resources/support for same.

Explanation: A support organization must have a good working relationship with the institution and share its objectives.

8.3. A formal agreement must be in place that delineates the roles and responsibilities of the support organization. This agreement must be kept up to date, reflecting the most current relationship, and be adhered to in practice.

9. *FINANCE*

Welfare Considerations:

A healthy, stable financial condition is critical to assuring the institution's ability to continuously provide good animal welfare. An inadequate financial position and/or contingency plan have a direct and negative affect on the quality of animal welfare and continued modernization of the institution.

9.1. The institution, regardless of whether operating on a profit or nonprofit basis, must provide sufficient evidence of its financial stability by submitting adequate financial reports, including an operating budget indicating that the financial support from the governing authority and/or support organization meets the needs of the institution.

Explanation: Proof of financial support includes the submission of an operating budget reflecting sources of income, as well as expenses. In the case of financial reports other than audited statements, the Primary Reviewer or the Commission shall determine what constitutes *sufficient evidence.*

9.2. The financial information must include a breakdown of salaries or salary ranges for all paid full-time staff.

9.3. Insurance coverage, via independent carrier or internal means, must be provided for visitors, paid and unpaid staff, and physical facilities.

9.4. The institution must indicate sources of funding for capital improvements and major maintenance, repairs, and replacements.

Explanation: Capital improvements, maintenance, and major repairs include renovations, maintenance of buildings/grounds/exhibits, new construction, and demolition of outdated structures.

9.5. The institution, regardless of whether operating on a profit or nonprofit basis, must have a written contingency plan in the event that significant decreases in operating income should occur.

9.6. For institutions owned by individuals, a written contingency and/or financial succession plan must be in place in the event of the death or incapacitation of the owner(s).

10. PHYSICAL FACILITIES

General Considerations:

While the Commission is interested in the institution's future plans, accreditation will be based upon operations and facilities existing at the time of the Visiting Committee inspection.

All United States institutions must comply with the Americans with Disabilities Act.

Welfare Considerations:

The condition, size, appropriateness, and functionality of animal areas have a direct impact on animal welfare. AZA-accredited zoos and aquariums must consider these factors when assessing welfare for each individual animal or group of animals in their care. Institutions are required to incorporate commonly accepted welfare guidelines and follow a documented process for assessing animal welfare and wellness, especially the spaces in which they live. All facilities within an institution reflect the organization's commitment to quality and modernization.

10.1. Housekeeping, Improvements, and Maintenance

10.1.0. The institution should be in good repair (buildings, exhibits, walkways, railings, structures, signage, etc.).

10.1.1. Good housekeeping must be regularly practiced.

Explanation: Pest control, proper drainage, clutter in work areas, excessive use of extension cords, "permanent" extension cords, and other housekeeping activities require continuous attention.

10.1.2. The institution should follow a written capital improvements, major repair and replacement program.

Explanation: The capital improvements, major repairs and replacement program should include a description of how facilities are assessed along with a written schedule of current and anticipated renovations, new construction, improvements to existing buildings, grounds, exhibits, and demolition of outdated structures.

10.1.3. The institution should follow a written maintenance plan that outlines the institution's strategy for identifying and addressing maintenance and major repairs in a timely manner. The plan should include a schedule of improvements, anticipated cost and timetable for completion, and a plan for funding maintenance needs.

10.2. Equipment

10.2.0. All mechanical equipment must be kept in working order.

10.2.1. Critical life-support systems for the animals, including but not limited to plumbing, heating, cooling, aeration, and filtration, must be equipped with a warning mechanism, and emergency backup systems must be available. Warning mechanisms and emergency backup systems must be tested periodically.

Explanation: Facilities such as aquariums, tropical rainforest buildings, or other exhibits which rely on climate control for life-sustaining conditions must have emergency backup systems and a mechanism for warning if those systems are malfunctioning. The life-support assessment and warning mechanisms may be automated systems or may be monitored by qualified paid or unpaid staff.

10.2.2. Systems and methods for fire protection and security must be in place and functional to provide a reasonable level of safety on a 24-hour basis. Routine maintenance records that detail safety checks of the equipment should be kept current.

Explanation: Any appropriate combination of night security, patrols, fire and smoke detection systems and alarms, monitors, or building design features can be used. Compliance with local building codes is required, including fire extinguishers, sprinkler systems, etc.

10.3. Animal Enclosures

10.3.1. Lighting must be sufficient in all indoor facilities, including night houses, so that maintenance can be accomplished and animals can be observed. A means for emergency lighting must be available.

10.3.2. Ventilation must be sufficient in all indoor facilities, including animal holding.

10.3.3. All animal enclosures (exhibits, holding areas, hospital, and quarantine/isolation) must be of a size and complexity sufficient to provide for the animal's physical, social, and psychological well-being. AZA housing guidelines outlined in the Animal Care Manuals should be followed.

10.3.4. [See 1.5.16]

10.4. Public Areas

10.4.1. Lighting in public areas must be sufficient for the safe maneuvering of the visiting public.

10.4.2. All walkways must be kept in good repair.

11. SAFETY/SECURITY

Welfare Considerations:

One of the three core principles upon which AZA-accredited zoos and aquariums operate is safety. Facilities must be properly maintained, infrastructure sound, proper practices in place, staff aware and trained, and a culture of safety inherent throughout the institution. All reasonable concerns regarding the welfare of individual animals or groups, visitors, and staff must be thoroughly assessed and corrected.

11.1. General

11.1.1. The institution must be in compliance with all applicable laws and/or regulations regarding employee and volunteer training for safety in the workplace.

11.1.2. Training and procedures must be in place regarding zoonotic diseases.

Explanation: Diseases that can be transmitted between animals and humans (Zoonotic disease, zoonoses) present a potential risk for paid and unpaid staff and the visiting public. The institution should design facilities, develop animal care protocols and present animals for public contact in ways that minimize this risk (e.g., hand-washing or hand sanitizing stations and signage, where applicable, etc.). Institutions must train appropriate paid and unpaid staff in methods to prevent zoonotic disease. The National Association of State Public Health Veterinarians (NASPHV) has prepared a Compendium of Measures to Prevent Disease Associated with Animals in Public Settings which should be followed by institutions presenting animals for public contact (http://www.nasphv.org/documentsCompendiumAnimals.html).

11.1.2.1. The institution must have an occupational health and safety program.

Explanation: An effective occupational health and safety program is based on hazard identification and risk assessment. The nature of the program will depend upon animal species, potential hazards, facility design, and workplace activities. The extent and level of participation (e.g. vaccinations, TB testing, parasite exams, immunizations, personal protective equipment, etc.) will vary depending upon potential hazard exposure and risk management.

11.1.3. A tuberculin (TB) testing/surveillance program must be established for appropriate paid and unpaid staff in order to assure the health of both the paid and unpaid staff and the animals.

11.1.4. Paid and unpaid staff working with toxic/hazardous materials must be trained in the proper handling, labeling, and storage of those materials. The institution must follow a written policy on those procedures and it must be available to handlers.

11.1.5. Whether paper or electronic, Safety Data Sheets (SDS) must be located in areas for easy access by paid and unpaid staff.

11.2. Emergency Procedures

11.2.0. A paid staff member or a committee must be designated as responsible for ensuring that all required emergency drills are conducted, recorded, and evaluated in accordance with AZA accreditation standards (*see 11.2.5, 11.5.2, and 11.7.4 for required drills*).

11.2.1. The institution should have an automated emergency defibrillator (AED) and must provide training to appropriate paid and unpaid staff.

11.2.2. The institution must have appropriate alarms and fire extinguishers readily available and provide training to appropriate paid and unpaid staff.

11.2.3. The institution must have a written plan available for first-aid and other various health emergencies and provide training to appropriate paid and unpaid staff.

11.2.4. All emergency procedures must be written and provided to appropriate paid and unpaid staff. Appropriate emergency procedures must be readily available for reference in the event of an actual emergency.

Explanation: An integrated emergency management and response system should combine zoo/aquarium personnel and appropriate local agencies in any incident management planning and response. An example is the US-based "Incident Command System" (ICS). ICS is a standardized, on-scene, all-hazards incident management system. ICS enables a coordinated response among various jurisdictions and agencies, and provides a clear chain of command and structure; this allows local zoo/aquarium paid and unpaid staff to fully participate with other agencies through a unified command structure. It establishes a shared understanding through common language and processes, and collaborative objectives for planning and managing resources that allow for the integration of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure. Interactive web-based training for ICS-100 is free, and can be found at the US FEMA webpage (http://training.fema.gov/IS/NIMS.aspx).

11.2.5. Live-action emergency drills (functional exercises) must be conducted at least once annually for each of the four basic types of emergency (fire; weather or other environmental emergency appropriate to the region; injury to visitor or paid/unpaid staff; and animal escape). Four separate drills are required. These drills must be recorded and results evaluated for compliance with emergency procedures, efficacy of paid/unpaid staff training, aspects of the emergency response that are deemed adequate are reinforced, and those requiring improvement are identified and modified. *(See 11.5.2 and 11.7.4 for other required drills).*

Drills Required: 4 annually (see 11.5.2 & 11.7.4 for other required drills)

Explanation: Emergency drills determine if institution paid and unpaid staff are aware of emergency procedures, and understand their respective duties and responsibilities. Emergency drills enable the institution to identify potential areas that could cause problems in the case of an actual emergency. The institution must have in place appropriate emergency procedures to handle the four basic types of emergencies identified above, and procedures for additional types of emergencies to which the institution may be particularly vulnerable. Paid and unpaid staff must be trained in these procedures, and records of such training must be maintained.

For the purposes of AZA accreditation standards, a "drill" is a pre-planned, simulated interactive exercise that tests the capability of an organization to respond to an emergency event. It should be designed to physically re-create an emergency situation and subsequent response outside of an actual emergency or warning, such as a storm warning. Results stemming from an actual emergency are of interest, and must be appropriately analyzed, but cannot be counted as a drill for accreditation purposes. These live-action drills may be supplemented (not replaced) with table-top drills or other emergency preparedness scenarios.

11.2.6. The institution must have a communication system that can be quickly accessed in case of an emergency.

Explanation: There should be immediate access to designated persons in case of an emergency via walkie/talkie, pager, mobile telephone, intercom, telephone, alarm, or other electronic devices.

11.2.7. A written protocol should be developed involving local police or other emergency agencies and include response times to emergencies.

11.3. Facilities/Animal Exhibits

11.3.1. All animal exhibits and holding areas must be secured to prevent unintentional animal egress.

Explanation: Particular attention must be given to shift doors, gates, and keeper access doors (as well as double-door safe entry systems), and exhibit barrier dimensions and construction, to provide for staff (paid and unpaid) and public safety. Locking or latching mechanisms are necessary to meet this standard for dangerous animals.

11.3.2. All exhibit service areas must be safely lighted, free of debris and other hazards, and provide space to allow for safe servicing. Also, service exit doors must be clearly marked and in good working order. All locks and shift doors must be in good working order.

11.3.3. Special attention must be given to free-ranging animals so that no undue threat is posed to either the institution's animals, the free-ranging animals, or the visiting public. Animals maintained where they will be in contact with the visiting public must be carefully monitored, and treated humanely at all times.

11.3.4. Electrical service in all wet environments, aquatic exhibits, and associated service areas must be equipped with ground fault circuit interrupters (GFI).

11.3.5. All public access areas must be equipped with exit signs. Doors must be unobstructed, open outward, and be equipped with emergency hardware.

11.3.6. There must be barriers in place (for example, guardrails, fences, walls, etc.) of sufficient strength and/or design to deter public entry into animal exhibits or holding areas, and to deter public contact with animals in all areas where such contact is not intended.

11.4. Risk Management

11.4.1. A written risk management plan must be developed and implemented.

Explanation: Risk management is defined as identification and assessment of potential risk for injury/harm to the visiting public and employees, and mitigating or preventing injury or harm via best-practice methods. Examples of risk to employees include potential contact with any of the institution's animals, wet floors and poor lighting and ventilation in work areas, poorly constructed/planned exhibit service areas, cluttered work space, inadequate training, animal shift mechanisms not in proper repair, and potential contact with narcotic drugs and used hypodermic needles.

Examples of risk to the visiting public include human-animal contact, wet floors, poor lighting, insufficient barrier fencing, cracks and/or holes in visitor walkways, condition of handrails, steps and walkways, rotted wood, etc. Such potential hazards must be minimized whenever possible.

While recognizing potential benefits of human-animal contact, the institution's risk management plan should follow best practices to protect humans (paid and unpaid staff, visitors, etc.) from potential injury or disease resulting from physical contact with

animals. The plan should include an assessment, and determination of those species and individual animals with which staff (paid and unpaid) and visitors may, or must not, have direct or indirect contact.

11.5. Dangerous Animals

11.5.1. Institutions maintaining venomous animals must have appropriate antivenin readily available, and its location must be known by all paid and unpaid staff working in those areas. An individual must be responsible for inventory, disposal/replacement, and storage of antivenin.

Explanation: It is the responsibility of the institution to verify that appropriate antivenins are available locally for all venomous species maintained at their institution, and for which antivenin is produced. Institutions may rely on the antivenin supply of local hospitals and treatment facilities, but it is also the institution's responsibility to guarantee that these inventories are maintained adequately. Such arrangements must be documented.

Antivenin intended for use in humans should be managed and stored in accordance with local, regional and federal regulations. Suitable procedures should be developed and implemented in collaboration with appropriate human health professionals.

11.5.2. All areas housing venomous animals must be equipped with appropriate alarm systems, and/or have protocols and procedures in place which will notify paid and unpaid staff in the event of a bite injury, attack, or escape from the enclosure. These systems and/or protocols and procedures must be routinely checked to insure proper functionality, and annual drills must be conducted to insure that appropriate paid and unpaid staff members are notified *(see 11.2.5 and 11.7.4 for other required drills).*

Drill Required: 1 annually (see 11.2.5 & 11.7.4 for other required drills.

11.5.3. Institutions maintaining potentially dangerous animals must have appropriate safety procedures in place to prevent attacks and injuries by these animals. Appropriate response procedures must also be in place to deal with an attack resulting in an injury. These procedures must be practiced routinely per the emergency drill requirements contained in standards 11.2.5, 11.5.2, and 11.7.4. Whenever injuries result from these incidents, a written account outlining the cause of the incident, how the injury was handled, and a description of any resulting changes to either the safety procedures or the physical facility must be provided to AZA staff, and maintained on file at the institution for five years from the date of the incident.

11.6. Security/Firearms

11.6.1. Adequate security systems must be provided on a 24-hour, year-round basis.

Explanation: The Commission recognizes that all institutions may not be able to provide security personnel on a 24-hour basis; however, every attempt should be made to provide security when the institution is closed to the visiting public. Security responsibilities should include regular rounds of the entire institution to detect problems. If it is impractical to provide security personnel, the Commission may approve the use of electronic systems or other security measures.

11.6.2. Security personnel, whether employed by the institution, or a provided and/or contracted service, must be trained to handle all emergencies in full accordance with the policies and procedures of the institution. In some cases, it is recognized that Security personnel may be in charge of the respective emergency (i.e. shooting teams).

11.6.3. Stored firearms must be in a locked cabinet of sufficient construction and design to impede unauthorized entry, and located in a secure area and accessible only to authorized personnel trained in their use. Personnel authorized to utilize firearms must have training and regular practice.

11.7. Diving

General Considerations:

For the purposes of accreditation, the term "underwater diving" includes the diving mode in which the diver uses self-contained (SCUBA) or surface supplied compressed air and/or "breath-hold diving" in which the diver uses no self-contained or surface-supplied compressed air (ie, snorkeling or skin diving).

11.7.1. Institutions which utilize underwater diving as a part of regular operations and/or maintenance shall meet minimal operational safety standards for such diving. Such institutions must comply with applicable laws and regulations for their location and follow standards mandated by the Federal Occupational Safety and Health Administration (OSHA) if located in the U.S. If the institution is located outside of the U.S. it must comply with that country's equivalent body.

Explanation: Underwater diving programs range in complexity from intermittent exhibit maintenance to bona fide in situ scientific diving. Additionally, recreational diving in the form of "pay to dive with..." programs may be offered to zoo and aquarium visitors. Institutions located in the U.S. must make an assessment of their individual underwater diving components in order to determine which OSHA standard (commercial diving, scientific diving, recreational diving) is most appropriate for that aspect of the institution's underwater diving program. Since federal OSHA regulations do not specifically address breath-hold diving, attention should be given to how the activity conforms to the OSHA general duty clause (employers are required to provide their employees with a place of employment that "is free from recognizable hazards that are causing or likely to cause death or serious harm to employees.") A risk assessment should be done that includes consideration of shallow water blackout (http://www.shallowwaterblackoutprevention.org/). A protocol that is designed to minimize these risks, provide training, and outlines an emergency plan should be in place, implemented, and documented. If the institution is located outside of the U.S., it must comply with that country's equivalent, and should also do a risk assessment that includes consideration of shallow water blackout (http://www.shallowwaterblackoutprevention.org/). A protocol that is designed to minimize these risks, provide training, and outlines an emergency plan should be in place, documented, and implemented.

11.7.2. Institutions which utilize underwater diving as a part of regular operations and/or maintenance must appoint a dive safety officer with the credentials, responsibilities, and authority to fulfill that role. At minimum, a dive safety officer should be a certified recreational dive instructor, or an equivalent, to meet the credentialing requirement.

Explanation: Underwater diving programs vary in their complexity, work load, size, and function from institution to institution. While the qualifications of the dive safety officer must be commensurate with the nature of the institution's dive program, the individual in this role must be trained to evaluate and remediate dive skills in an underwater setting. The dive safety officer's responsibilities must be structured such that she/he is familiar with and capable of assessing dive safety.

11.7.3. Institutions which utilize underwater diving as a part of regular operations and/or maintenance must follow a dive manual which has, as one of its components, a section on diving safety.

11.7.4. Institutions which utilize underwater diving as a part of regular operations and/or maintenance must conduct at least one live-action emergency dive safety drill annually. These drills must be recorded and evaluated to assure that procedures are being followed, that training for paid and unpaid staff is effective, and that what is learned is used to correct and/or improve the emergency procedures. Records of these drills must be maintained and improvements in the procedures duly noted whenever such are identified. *(See 11.2.5 and 11.5.2 for other required drills.)*

Drill required: 1 annually (see 11.2.5 & 11.5.2 for other required drills.

Explanation: at least one live-action drill is required annually. Additional practice exercises may consist of a variety of activities, including discussions, tabletop simulations, or actual drills. A drill is defined as a training exercise that physically re-creates an emergency situation and response outside the circumstances of an actual emergency. Results stemming from an actual emergency are of interest, but may not be counted as a drill for accreditation purposes.

11.7.5. Institutions which utilize underwater diving as a part of regular operations and/or maintenance must develop and implement a dive emergency plan for each tank into which divers enter. All divers must be trained in the procedures associated with emergency plans associated with tanks in which they dive.

11.8. Perimeter Fence

11.8.1. Perimeter fencing must be separate from all exhibit fencing or other enclosures, and be of good quality and construction. All facilities must be enclosed by a perimeter fence which is at least 8' in height or by a viable barrier. The fence must be constructed so that it protects the animals in the facility by restricting animals outside the facility and unauthorized persons from going through it or under it and having contact with the animals in the facility, and so that it can function as a secondary containment system for the animals in the facility.

Explanation: There are rare instances where the terrain surrounding the facility provides a viable barrier. The Accreditation Commission will determine what constitutes a "viable barrier" and must approve a waiver. However, most facilities must be enclosed by a perimeter fence. Facilities located in rural areas and which are PPEQ-approved must meet special USDA standards for fencing. Institutions which are entirely enclosed within a building may be exempt from this requirement.

12. GUEST SERVICES

General Considerations:

All United States institutions must comply with the Americans with Disabilities Act.

Welfare Considerations:

Visitor perception drives success. AZA-accredited zoos and aquariums must continually strive to provide diverse, high quality experiences for all guests. Leadership in animal care and welfare requires building and maintaining living environments that present well to the visitor and support healthy animals engaged in natural behaviors. This is among the top things guests cite as leading to a positive impression of the institution and an overall inspiring experience.

12.1. The institution must provide accessibility and public amenities for all visitors, and should address the needs of both children and adults.

Explanation: Each institution must consider accessibility for all visitors as improvements are made.

12.2. The institution must have certain basic facilities to accommodate guests, including restrooms, food and beverage services, and rest areas.

12.3. The institution should have common conveniences for guests, including gift facilities, institution trail maps (paper or electronic), unobstructed and visible directional signage, etc.

12.4. The institution must present to the visiting public a positive, professional, clean, and aesthetically pleasing environment.

12.5. The institution should have a guest services training program, especially for front-line paid and unpaid staff that have a potential for regular engagement with guests. A guest services training program should, among other options, include training in staff courtesy, how to handle guest complaints, knowledge about wayfinding and daily activities, the importance of communicating to guests about the meaning of AZA accreditation, and mission-based messaging.

12.6. The institution should have a process for acquiring and evaluating guest feedback regarding their experiences. This information provides the institution with a better perspective on areas of strengths, and opportunities for improvement. Common methods for acquiring guest feedback include in-person and/or self-guided kiosk surveys, comment cards, online feedback (e-mails), and "secret shopper" programs.

12.7. The institution's website should be professional in appearance and content and should provide up-to-date information such as hours of operation, admission information, location, programs, and AZA affiliation.

13. MASTER & STRATEGIC PLANNING

Welfare Considerations:

As a science-based institution focused on animal care and welfare, conservation, and the continued advancement of visitor and community engagement, a strong commitment to master and strategic planning for continuous change and evaluation is the foundation of adhering to "modern zoological practices and philosophies". Strategically assessing all aspects of operations and routinely renovating and/or replacing old exhibits with new modern habitats that are designed with animal welfare in mind, is something that is expected of all AZA-accredited institutions. In addition, continuous and careful planning for new and innovative education programs and guest experiences reflects commitment to professionally recognized best practices and modern philosophies.

13.1. The institution should follow a written master plan and strategic plan to engage and align stakeholders (staff, governance, donors, members and/or visitors) regarding facility innovation, planning, growth and community development. *(See pages 5 – 6 for definitions of master plan and strategic plan.)*

13.2. Maintaining and advancing "modern zoological practices and philosophies" should be incorporated into the institution's master plan and strategic plan. *(See page 5 for definition of modern zoological practices and philosophies", and see the Preamble for further clarification.)*

13.3. The institution's master plan and strategic plan should incorporate its mission, and the organizational values, goals, and objectives used in the design and development of animal exhibits and visitor experiences.

13.4. Animal welfare (including requirements under standard 1.5.0) must be applied or considered during the design and development of all new and/or renovated animal facilities (including exhibit space *and* holding areas).

13.5. The institution must review or update its master plan and strategic plan every five years.

Rev: 10/18

AZA Standards For Elephant Management & Care

Approved March 2011, Revised April 2012

This revision of the Standards includes new information from AZA's policy on Maximizing Occupational Safety of Elephant Care Professionals at AZA-accredited and AZA-certified Facilities which was distributed on August 15, 2011. At the time of this revision, there are several pending objectives on which the AZA Elephant TAG/SSP Steering Committee and the AZA Professional Development Committee are currently working. Over the next four years as these objectives are completed, the Standards will be reviewed annually and, if necessary, revised to include new information and new standardized protocols and forms.

The Standards below are written to focus on a results-based assessment. They will serve as a guide for institutions to measure their success in managing and caring for their elephants and for AZA accreditation inspectors to measure the success of the programs. Thus, in addition to each Standard, there is a Measurement and an Explanation to assist with understanding and meeting each Standard.

The ultimate goals of these Standards are to provide the safest work environment for elephant care professionals and to provide the highest quality of elephant management and care which will result in excellent overall elephant well-being in our institutions. Ultimately, the success of AZA's elephant care programs will allow AZA institutions to contribute to elephant conservation and ensure that elephants are in our future for generations to come.

1. Abiotic Environmental Variables (address both exhibit and off-exhibit holding)

1.1 Temperature

Standard – Outdoor – Daytime: All elephants must have access to shade when they are exposed to direct sunlight. Water suitable for drinking or bathing must be available daily or at greater frequency as needed to meet the elephant's cooling needs in the ambient environment.

Measurement: No instances of frostbite, heatstroke, sunburn, illnesses or elephant deaths related to environmental temperature/weather exposure.

Explanation: Water, mud, dust, soil or sand must be available for elephants to dust themselves to assist with thermoregulation. Sufficient sheltered areas must be provided to protect elephants from adverse weather. When sunlight is likely to cause overheating or discomfort of elephants, sufficient shade by natural or artificial means shall be provided to allow all elephants protection from direct sunlight. Shade areas must be provided to assure that all individuals can have access to shade when desired and that subordinate elephants are not excluded from the shade. Elephants exposed to temperatures below 40°F (5°C) for longer than 60 minutes, must be monitored hourly to assess the potential for hypothermia. If needed to prevent hypothermia, supplemental heat, an area of direct sunlight protected from wind/precipitation, access to indoor barn stalls or other options for thermal management must be provided for the elephants.

Standard – Outdoor – Nighttime: Elephants kept outdoors when temperatures are under 40°F (5°C) overnight, must be provided with supplementary heat and adequate shelter from adverse weather.

Measurement: No instances of frostbite, illnesses or elephant deaths related to environmental temperature/weather exposure.

Explanation: Institutions should consider designing exhibits that allow elephants outdoor access as much as possible – weather, health, and safety permitting. Elephants kept outdoors can tolerate moderate temperature extremes if they have been acclimatized to the ambient conditions. Multiple

sheltered areas must be provided to ensure that all elephants have sufficient access to shelter and protection from the elements. Facilities may install outdoor heat sources to extend the amount of time the elephants are able to remain outside. Radiant or forced air heating are examples of acceptable heat. There may be a need to provide supplemental heat for young or compromised elephants at temperatures above 40°F (5°C).

Standard – Indoor: Indoor holding areas must be able to be heated to a minimum temperature of at least 55°F (13°C) at all times of the year. One room must be capable of maintaining a temperature of at least 70°F (21°C) and be free of drafts for accommodating sick or debilitated elephants. Care should be taken to control excessive heat indoors. At elevated indoor temperatures, the use of fans, cross-ventilation, access to water, cool substrate, allowing elephants access to an outside area or other cooling measures must be employed as needed.

Measurement: No instances of illnesses or elephant deaths related to environmental temperature/weather exposure.

Explanation: Elephants should be provided with the opportunity to thermoregulate themselves as much as possible.

1.2 Humidity and Ventilation

Standard: There are no standards for humidity or ventilation at this time.

Measurement: Not applicable

Explanation: There are no standards for humidity or ventilation at this time.

1.3 Illumination - Light intensity, spectral, and duration requirements

Standard: Ample lighting must be provided for staff to work safely around the elephants day or night.

Measurement: When staff are working around or interacting with the elephants, the elephants should be able to be clearly seen and their movements/behavior observed at all times within their indoor enclosures. Adequate light must be provided to monitor the safe use of all equipment (ERD) and the movement of all doors and gates.

Explanation: Natural daylight cycles are adequate for elephants, even in temperate regions. When kept indoors for extended periods, fluorescent, or incandescent lights provide a sufficient spectrum of illumination. Skylights, in addition to interior lighting, are effective and recommended.

1.4 Facilities

1.4.1. Space requirements, behavioral repertoire, and complexity

1.4.1.1. Indoor space

Standard: Indoor facilities must provide adequate room for elephants to move about and lie down without restriction. Appropriate space should be available to allow elephants to be separated either through individual stalling or through the use of restraints (See 3.3.2.7). Indoor housing for both males and females must be designed to accommodate an elephant that can reach up to 24 ft (7.3 m) vertically. All ceilings, wire, pipes, etc. must be out of reach or adequately protected.

Measurement: If there are elephant behavioral, social, or medical issues shown to be caused by insufficient space, there must be a program in place (from a programmatic and/or facility perspective) to address the issue.

Explanation: For facilities in climates that require elephants to be indoors for significant amounts of time, it is highly recommended that larger interior common spaces be developed to enhance social interactions and allow for greater movement and diversity of space during inclement weather conditions as well as overnight. Minimum recommended stall space (i.e. temporary holding, overnight, etc) is not less than 600 sq ft (56 sq m) for males or females with calves, and not less than 400 sq ft (37 sq m) for females.

1.4.1.2. Outdoor space

Standard: Outdoor habitats must provide sufficient space and environmental complexity to both allow for and stimulate natural behavioral activities and social interactions resulting in healthy and well-adapted elephants.

Measurement: If there are elephant behavioral, social, or medical issues shown to be caused by insufficient space, there must be a program in place (from a programmatic and/or facility perspective) to address the issue.

Explanation: Space is one of the most difficult measures to standardize. There is no scientific data which clearly indicates the amount of space needed for an elephant to be healthy and well adjusted. It is the quality of the overall programmatic approach to good elephant management and the quality of the space from an elephant perspective that determines adequacy of the facility, not simply the square footage of the environment. Thus, if the elephants are healthy and socially adapted, then whatever is being provided meets the standard. It is inaccurate to say that because a facility has a certain amount of space, then it has good elephant management. Recommended minimum size for outdoor habitats is not less than 5400 sq ft (500 sq m) per elephant using the habitat.

1.4.1.3. Behavior

Standard: The facility and program provides a complex physical and social environment which stimulates natural behaviors, social interactions and activity levels resulting in healthy, well-adapted elephants.

Measurement: The elephants are physically healthy and socially well-adapted without aberrant behavior or excessive aggression within the social group.

Explanation: There is no current data to indicate what amount of activity, or what daily walking distance is most appropriate for optimal elephant welfare. The basic needs may be different for each elephant. Since the goal is healthy, socially well-adapted elephants, how it is achieved is less important than that it is achieved.

1.4.1.4 . New exhibits and renovations

Standard: All institutions planning new construction for elephants or modifying existing elephant facilities must include holding space for adult males in their construction/renovation plans. All new construction and major renovations must be designed in a manner that minimizes the regular need for tethering.

Measurement: Review the facilities submitted commitment to be either a holding, holding/breeding or breeding facility and review their plans to ensure compliance with the AZA Elephant Vision and Commitment statements.

Explanation: AZA's commitment to elephants will only be successful if all facilities live up to their commitment in the ability to hold males and comply with TAG breeding recommendations.

1.4.2. Minimum inter-individual distances that will influence size of space

Standard: There are no standards for minimum inter-individual distances that will influence size of space at this time.

Measurement: Not applicable.

Explanation: See 2.2.2.2. Facility must have sufficient structures for all elephants to participate in all ranges of natural behaviors. Elephants are a social species and herds often perform activities together, such as feeding, drinking, walking, resting, and wallowing.

1.4.3. Furnishings to accommodate an array of locomotive and foraging behaviors as well as resting and sleeping

Standard: See 1.4.1

Measurement: See 1.4.1

Explanation: A key consideration in the design of elephant habitats is the promotion of species-appropriate behaviors. Enrichment opportunities should be integral parts of both indoor and outdoor enclosures. Outdoor areas should encourage locomotion for exercise and natural footwear. Rocks, tree stumps, or large sturdy objects must be provided in the exhibit so that the elephants may use them for rubbing and scratching. The use of both wet and dry wallows is encouraged to assist with skin care and protection against the sun and biting insects. The AZA Elephant Exhibit Design Resource has extensive information on facility design and enrichment activities.

1.4.4. Visual, acoustic, and olfactory barriers within the space

Standard: The design of indoor and outdoor enclosures must contain areas where elephants can exercise and socialize together, and avoid socializing if/when desired.

Measurement: Determine the level of choice the elephants have to join or separate themselves from other elephants.

Explanation: Barriers within and between exhibits should allow some degree of auditory, olfactory, and tactile contact between separated herd members as appropriate at their choice.

1.4.5. Substrates and nesting/bedding materials

1.4.5.1. Outdoor

Standard: Outdoor habitat surfaces must consist primarily of natural substrates (e.g., soil, sand, grass) that provide good drainage. Enclosures must be made up of a variety of substrates.

Measurement: Elephant feet are in good condition and need only periodic pad and nail trimming. Excessive buildup of dead skin is not apparent and dusting materials are available for the elephants.

Explanation: Providing a variety of soft substrates will promote behaviors, such as foraging, wallowing, bathing, digging, and resting. The use of both wet and dry wallows is encouraged to assist with skin care and protection against the sun and biting insects. Elephants can lie on mounds of earth. Providing a combination of hard substrates to promote normal wear of footpads and soft substrates, such as earth and sand, to promote dust bathing is preferred.

1.4.5.2 Indoor

Standard: Substrate must be able to be cleaned daily and must be quick to dry. Hard floor surfaces must be relatively smooth to prevent excessive pad wear, but not so smooth that they become slippery when wet.

Measurement: Interior floors are cleaned daily and dry within two hours of cleaning. No excessive pad wear due to floor roughness and no elephant injuries due to slipping on the floors.

Explanation: Many institutions are experimenting with the use of sand in place of some cement stall floor surfaces. Some institutions use barn stall mats, straw, or shavings for insulation and/or to provide a softer surface for elephants to stand or lie on. In new construction and renovations, consideration should be made for incorporation of natural, changeable substrates indoors.

1.4.6. Provision of change and variation in the environment

Standard: All holding institutions must have a written environmental enrichment plan for their elephants and show evidence of implementation (See 4.3). An effective enrichment program includes the rotation of exhibit furniture and enrichment initiatives on a regular schedule, and based on the elephants' behavior, maximizes the stimulation offered by these exhibit features (See 1.4.5.1).

Measurement: Enrichment plan and records of daily enrichment activities should be reviewed (See 1.4.5.1 and 4.3).

Explanation: A varied terrain provides more complexity in the environment as well as exercise opportunities, such as walking, turning, reaching, stretching, climbing, bending, digging, pushing, pulling, and lifting. Providing a variety of soft substrates will promote behaviors such as foraging, wallowing, bathing, digging, and resting.

1.4.7. Cleaning related to issues like scent-marking, that may influence how and how often space is cleaned.

Standard: There are currently no scent-marking issues identified for elephants that influence cleaning.

Measurement: Not applicable.

Explanation: Enclosures, both indoor and outdoor, must be cleaned of excrement daily. Frequent daily manure removal is recommended and may be necessary for both sanitary and aesthetic reasons.

1.4.8. Air or water changes/hour required

Standard: See 1.2 and 1.5.2

Measurement: See 1.2 and 1.5.2

Explanation: Indoor ventilation systems for elephants should provide enough fresh air to meet the respiration needs of the elephants, control moisture build-up within the structure, and move enough air to dilute airborne disease organisms. The recommended ventilation for indoor housing for elephants is 4-6 air changes per hour.

1.4.9. Identify necessary measures for safety and containment

1.4.9.1 Containment

Standard: Elephant containment barriers must be sufficient to prevent elephant escapes.

Measurement: There should be no failure of barriers.

Explanation: A recommended minimum height of walls, cables and horizontal railings for adult elephants is 8 ft (2.4 m). The use of electric fences is not sufficient as a primary containment barrier. A wide variety of building materials can be used for elephant containment barriers. The barriers must be safe for the elephants, must be able to withstand an elephant's strength, must contain the elephant in a specific space, and must prohibit direct contact between elephants and the visitors. Recommended materials for barriers include solid concrete, rock walls or horizontal steel rails, pipe or cable.

1.4.9.2 Barriers

Standard: All institutions must have in place and be implementing adequate infrastructure to manage and care for elephants with barriers and/or restraints in place to increase employee safety. If a facility cannot meet this standard, it must apply for a variance after describing its plan to meet the standard to the Accreditation Commission. No variances shall be granted after June 1, 2017.

Measurement: Adequate infrastructure exists and is used by elephant care providers to care for their elephants without sharing the same unrestricted space with the elephants, except in certain, well-defined circumstances.

Explanation: AZA is committed to maximizing the safety of elephant care staff.

1.4.9.3 Dry moats

Standard: The use of dry moats with steep sides and hard bottoms as primary containment should be limited.

Measurement: A written elephant extraction protocol must be in place for facilities employing moats out of which an elephant cannot easily climb.

Explanation: Dry moats can pose a substantial threat to elephants, especially those out of which an elephant cannot easily climb. Where present, moats should be wide enough for an elephant to turn around, have a soft, dry bottom, and should include a gradually sloped ramp so that the elephant can easily climb out of the moat or ditch.

1.4.9.4 Doors and gates

Standard: Doors and gates must be in good condition and must be engineered to withstand an elephant's strength.

Measurement: All doors and gates must operate properly and contain elephants. No elephant injuries or keeper injuries because of hydraulic or electrically-powered door operation.

Explanation: Door and gate design is extremely important to ensure the safety of both elephants and keeper staff. If hydraulic or electrically powered drives are used to operate doors or gates, there must be a manual back-up system or a back-up generator in place in case of failure. Door operation must be continually monitored with a direct line of sight or with video the entire time the door is in motion in order to prevent elephant or keeper injury.

1.4.9.5 General exhibit considerations

Standard: Ceiling and fixture heights (e.g., lights, heating units, plumbing, etc.) must be built so that elephants do not harm themselves or damage the facility.

Measurement: There should be no elephant injuries due to poor design or insufficient heights of ceilings and fixtures.

Explanation: Mature elephants can reach a vertical height of 24 ft (7.3 m).

1.4.9.6 Safety assessment program

Standard: Each elephant-holding institution must have an established method of regularly evaluating its elephant facility and program safety. The institution must document and be able to demonstrate how this established program assesses safety on a regular and consistent basis and how safety issues are resolved. Facilities shall conduct safety evaluations at least semi-annually.

Measurement: Program and facility safety evaluations and safety issue resolutions are documented. All identified safety issues are resolved or are in the process of resolution.

Explanation: Each facility should establish and maintain a Safety Assessment Program based on its own needs and resources. A Safety Assessment Program may include a safety assessment team, including elephant staff, management staff, animal health care staff and experts in the area of risk management and safety.

1.4.10. Transport (in accordance with IATA)

Standard: All applicable Federal regulations and/or IATA requirements must be met.

Measurement: Elephant transports have been accomplished safely and in an appropriate manner.

Explanation: The method of transport, as well as preshipment health screening protocols, should follow TAG/SSP guidelines. Other resources for the transport of elephants include the Elephant Husbandry Resource Guide and Fowler (1995).

1.4.10.1. Type of transport container

Standard: See 1.4.10

Measurement: See 1.4.10

Explanation: Elephants are typically transported in custom semi trailers, specifically designed for moving elephants. On occasion, elephants are moved in crates, most commonly for overseas shipments.

1.4.10.2. Appropriate size of transport container

Standard: See 1.4.10

Measurement: See 1.4.10

Explanation: The crate or trailer compartment used for shipping should be sized so that the elephant can stand up comfortably, but not turn around. The elephant should not be compressed by the containment front or back. The crate should be equipped with tethering options as needed.

1.4.10.3. Provision of food and water during transport

Standard: See 1.4.10

Measurement: See 1.4.10

Explanation: Elephants should be provided with food (e.g., hay) and water at regular intervals during the transport.

1.4.10.4. Provision of bedding or substrate in transport container

See 1.4.10

1.4.10.5. Mechanism(s) for separating animal from urine and feces during transport

See 1.4.10

1.4.10.6. Temperature range during transport

See 1.4.10

1.4.10.7. Light levels and how to minimize noise during transport

See 1.4.10

1.4.10.8 Group size or need for separation of individuals during transport

See 1.4.10

1.4.10.9 Handler/veterinarian access to animal during transport

See 1.4.10

1.4.10.10 Duration of transport allowable before temporary transfer to "normal housing" is required

See 1.4.10

1.4.10.11 Timing of release, size and type of enclosure at transport destination

See 1.4.10

1.5 Water

1.5.1 Acceptable water quality parameters

Standard: Water suitable for drinking must be made available daily. Frequent drinking opportunities throughout the day may be necessary to meet the elephant's needs in the ambient environment.

Measurement: Water sources for exhibit and barn are identified and method of delivery determined to meet the standard.

Explanation: Most facilities provide either continually running or automatic watering devices in outdoor enclosures and barns. If these are not present, the method of providing water must be identified and written protocols in place to ensure appropriate water availability to the elephants.

1.5.2 Presentation of water, and water sources

Standard: While outdoors and weather permitting, elephants must have regular access to water sources, such as a pools, waterfalls, misters/sprinklers, or wallows that provide enrichment and allow the elephants to cool and/or bathe themselves.

Measurement: Outdoor water sources are present in sufficient quantity to accommodate all elephants at one time.

Explanation: It is recommended that pools be constructed with rounded edges, and without corners. Artificial pools should have either multiple or lengthy gently sloping exit and entrance areas, with non-slip surfaces, and at an angle no greater than 30°. Vertical sides on pools should be avoided in areas where elephants have direct access to the pool side. Steps should be wide enough for elephants to place more than one foot on at a time and small enough for baby elephants to step up or down. There should be more than one entry/exit point to the pool in order to prevent one elephant from inhibiting the exit or entrance of other elephants into or out of the pool.

1.5.3 Pool depth and need for variation in depth

Standard: There are no standards for pool depth and variation in depth at this time.

Measurement: Not applicable

Explanation: It is recommended that one body of water or pool be deep enough to allow for buoyancy, as this can allow for non weight-bearing exercise and that it be deep enough to allow an adult to be fully immersed when laying on its side, or at least six feet deep. However, shallow wading and splashing pools are also excellent activity areas for elephants and are to be encouraged. Recycled water over a waterfall or spraying out over the pool is an excellent activity stimulant.

2. Biotic Variables

2.1 Food and Water.

2.1.1. Containers and protocols for the provision of food and water

2.1.1.1 Water

Standard: See 1.5.1. When water containers are used, drinking water must be cleaned and refreshed daily. Containers must also be cleaned daily.

Measurement: Water sources are clean and water is fresh.

Explanation: The ability to monitor water consumption by the elephants may be important in sick or compromised elephants.

2.1.1.2 Food

See 3.1. Other resources include the Elephant Husbandry and Resource Guide, Appendix 1, Nutrition Advisory Group Handbook, "Elephants: Nutrition and Dietary Husbandry" (Ullrey et al. 1997).

2.1.1.3 Food items - Variability in food type

Standard: Elephants must be offered a balanced diet composed of an appropriate variety of food items provided in quantities that are sufficient for each elephant to maintain appropriate body condition. Diets must be developed under the direction of the institution's nutritionist or veterinary staff. Consideration must be given to recommendations provided by the Elephant TAG/SSP Nutrition Advisor, as they become available.

Measurement: Diet sheets and written feeding protocols must be maintained and meet the Elephant TAG/SSP Nutrition Advisor recommendations. For the purpose of this section, elephant weights and/or body condition scores should be recorded three times a year.

Explanation: Nutritional content is a critical tool for assessing overall nutritional well-being. Daily intake records may also be valuable to maintain. Elephants have evolved to be generalist feeders. Recommended food items include hay (e.g., meadow or timothy), supplemented with fruits, vegetables, a pelleted supplement or grain. Fresh browse should be made available daily, if possible. Overall energy content of the diet must be assessed in relation to the body condition scores for each elephant and diet composition adapted as needed.

2.1.1.4 Feeding schedules - Variability food presentation (e.g. spatial and temporal dispersal of food resources)

Standard: Varied feeding schedules dispersed both spatially and temporally throughout the day and night are required.

Measurement: Written feeding protocols and schedules must be maintained.

Explanation: Mechanisms to deliver food to elephants during the day and night should be implemented (e.g., changing animal care staff schedules, automated feeders, hanging feeder nets, etc.). Feeders should be located in multiple locations to discourage undue competition or aggression over feed items.

2.1.1.5 Provision of opportunities for elephants to process food in ways similar to their wild counterparts and mechanisms that enable animals to work for food

Standard: Opportunities must be provided for elephants to acquire food using multiple foraging behaviors. Food must be provided in areas where it is less likely to be soiled. Excess or waste food must be removed daily.

Measurement: Written feeding and enrichment protocols must be maintained.

Explanation: Opportunities for searching, browsing, grazing, reaching, opening, etc. can be provided by scatter-feeding, hiding foods in crevices and substrates around the exhibit, or by using elevated feeders such as hanging hay nets that encourage an elephant to reach for and manipulate its trunk to gain access to the food. Mechanisms that promote physically active feeding behaviors can be incorporated into a comprehensive enrichment plan for the elephants.

2.2 Social Considerations

2.2.1 Group Composition

2.2.1.1 Suggested age and sex structure of social group

Standard: Each zoo holding elephants must hold a minimum of three females (or the space to hold three females), two males or three elephants of mixed gender. If a zoo cannot meet this standard, they must apply for a variance. Before the variance can be issued by the Accreditation Commission the zoo (a) must describe their plan to obtain additional elephants or describe their plan for transferring their elephants and (b) must describe what will occur if they experience the loss of one elephant. In most cases where an institution has one remaining elephant, the remaining elephant will receive a recommendation for relocation at another AZA institution from the Elephant TAG/SSP.

By 1 September 2016, no further variances will be issued.

Adult males (6 years and older) may be housed alone, but not in complete isolation. Opportunities for tactile, olfactory, visual, and/or auditory interaction with other elephants must be provided (Rasmussen et al. 1982).

Measurement: The institutional commitment to elephants must be reviewed if the institution is not in compliance with the Standard. Plans for meeting the Standard and a timeline must be submitted to the Elephant TAG/SSP and to the Accreditation Commission. The Elephant TAG/SSP will determine acceptable animal welfare and plans.

Explanation: Due to multiple species differences and possible disease transmission issues, when forming new herds, Asian and African elephants should not be placed together in the same enclosure.

2.2.1.2 Temporary individual care of parturient females and young or of males, and corresponding adequate and appropriate space for animals when removed

Standard: All facilities must include the ability to flexibly manage the elephant herd, allowing the separation of groups or individuals as required.

Measurement: Each institution must be able to demonstrate and/or describe how they would successfully isolate individuals or groups as needed for elephant management or care.

Explanation: The ability to adapt to changing conditions and situations is critical to the success of any elephant program.

2.2.1.3 Male elephant socialization

Standard: If males are housed, separate facilities for isolation must be available, and a program of social contact in place.

Measurement: Each institution must be able to demonstrate and/or describe how they would successfully isolate and socialize males.

Explanation: Males (six years and older) may be housed alone, but not in complete isolation; opportunities for tactile, olfactory, visual, and/or auditory interaction with other elephants must be provided (Rasmussen et al. 1982). In the wild adult males are primarily solitary. However, they do have regular contact with other elephants.

2.2.1.4 Nursery groups (groups of mothers with most recent young)

Standard: Isolation facilities for birth and postpartum management must be available.

Measurement: Each institution must be able to demonstrate and/or describe how they would successfully isolate mothers and calves during birth and postpartum period. Written protocols must be in place for births and reintroductions of mothers/calves to herd.

Explanation: First time mothers in particular may require significant management. Initial protection of the calf and control of the mother are critical to a successful birth. Introduction of the new calves and mothers to the herd must be accomplished both cautiously and expeditiously. Reintroduction of the calves and mothers to the natal group or herd should be accomplished as quickly as possible.

2.2.1.5. "Emigration" of adolescents

Standard: Offspring should remain with their mothers until they are weaned and mother and calf are acclimated to separation.

Measurement: Offspring must remain with their mothers until they are at least three years old.

Explanation: Some flexibility is necessary in cases of health challenges, maternal rejection and/or when infants cannot be re-established in their social group. In cases of maternal rejection, calves should be introduced to other conspecifics as soon as possible. Males are generally separated from the herd during adolescence due to natural age-related behavioral changes. There is no specific age when this may occur. Indicators that males may need to be separated include aggression, play-fighting or reproductive behavior that causes disruption within the herd or risk of injury to individuals in the herd.

2.2.1.6 Multigenerational groups

Standard: When possible, multigenerational groups should be maintained.

Measurement: Multigenerational groups are maintained when possible.

Explanation: Multigenerational groups are a goal of the TAG/SSP breeding program. Much of the behavioral repertoire of elephants is learned, rather than innate. A multi-generational group allows the transfer of species-appropriate behaviors within a herd through experience and observational learning.

2.2.1.7 Groups deriving from cohorts

See 2.2.1.8

2.2.1.8 All male groups

Standard: There are no standards for all male groups at this time.

Measurement: Not applicable

Explanation: Guidelines for the creation and long-term management of all-male elephant groups will need to be developed as this may become increasingly more important with increased breeding success and the production of more male calves.

2.2.1.9 Daily and life stage variation in patterns of social affiliation

Standard: A behavioral profile must be maintained for each individual elephant and updated annually.

Measurement: Protocols and profiles in place and up-to-date.

Explanation: Staff must be aware of each elephant's social compatibility and the dominance hierarchies of the herd. Institutions must have the ability to manage social compatibility as well as dominance and aggression among an elephant group. Institutions must have the ability to manage introductions and separations of elephants, including; a new female to an existing herd, females to males for breeding, calves to their mothers, and calves and mothers to the herd. Elephant enclosures must be designed to allow for separate and group housing during periods of social incompatibilities, without interfering with the normal movement of elephants in and out of enclosures.

2.2.2. Group Size

2.2.2.1 Minimum and optimum group sizes

See 2.2.1.1

2.2.2.2 Inter-individual distances required

Standard: Facility must be designed, and resources provided, to allow for ample feeding, shade, water, and wallowing locations.

Measurement: Facility must have sufficient structures for all elephants to participate in all ranges of natural behaviors.

Explanation: Elephants are a social species and herds often perform activities together, such as feeding, drinking, walking, resting, and wallowing.

2.2.3. Conspecific groups, the need for/influence of adjacent groups, similar taxa, or territorial species

More research is needed to develop guidelines for this section.

2.2.3.1 Key environmental elements for each species

More research is needed to develop guidelines for this section.

2.2.3.2 Identify inter-specific inter-animal distances require

More research is needed to develop guidelines for this section.

2.2.3.3 Address appropriateness of single-sexed groups

More research is needed to develop guidelines for this section.

2.2.4 Introductions

Standard: Institutions must have the ability to manage elephant introductions and separations.

Measurement: There must be appropriate facilities and protocols in place for all phases of elephant introductions.

Explanation: All institutions must have the staff and the appropriate facilities to be able to manage both elephant introductions and separations, including introductions/separations of a new female to a herd and, if the institution is a breeding facility, females to males for breeding, newborn calf to its mother, and calf and mother to the herd.

3. Health and Nutrition

3.1 Diet - Standards for nutrient requirements for all life stages

See 2.1.1.3, 2.1.1.4 and 2.1.1.5. Other resources include Food, the Elephant Husbandry and Resource Guide, Appendix 1, Nutrition Advisory Group Handbook, "Elephants: Nutrition and Dietary Husbandry" (Ullrey et al. 1997).

Standard: Elephant weights and/or body condition scores should be recorded three times a year. For Asian elephants, the Wemmer body condition index (BCI) can be used (see Appendix 2) and body condition index scores in the 6 to 10 range should be maintained. (See Appendix 2). Diet and/or exercise programs must be in place for elephants.

Measurement: Weight records and/or body condition scores should be reviewed. Diet and exercise programs modified as needed to maintain elephant physical well-being.

Explanation: Elephants may be outside the normal body condition score range and still be healthy. These individuals may not need to have specialized diet or exercise plans in place.

3.2 Influence of the following variables on dietary requirements

3.2.1 Age (infant, juvenile, reproductive adult, senescent adult, etc.)

See Appendix 1

Explanation: Obesity is a health concern for all animals, including elephants, and excessive weight gain should be avoided through proper diet and exercise. For infants, a normal growth rate should be 1 to 2 lbs per day over the first three years. Excess weight early and too rapid growth may cause long-term harm to the elephant's physical well-being. Significant exercise and limiting the high-energy supplements will help control weight gain in calves and elephants of all ages.

3.2.2 Body size

See 3.1

3.2.3 Reproductive status

Standard: Elephants' diets should be carefully monitored during pregnancy, and elephants should engage in a prenatal exercise program to control excessive weight gain during pregnancy.

Measurement: Weight records and/or body condition scores should be reviewed.

Explanation: Elephants should be prevented from significant weight gain during pregnancy.

3.2.4 Seasonal changes in ambient temperature

Not a significant factor for elephants.

3.2.5 Seasonal changes in body condition

Generally, not an issue with our elephant population.

3.2.6 Seasonal changes in nutritional requirements

Standard: Elephants should be fed in accordance to the recommendations of the Elephant TAG/SSP Nutrition Advisor.

Measurement: Diet sheets and nutritional/intake records should be reviewed.

Explanation: If changes are made to diets as a result of seasonal availability of items, then care should be taken to implement changes gradually (over 1-2 weeks) to avoid digestive upsets (Ullrey et al. 1997).

3.2.7 Activity levels

Standard: Activity levels should be sufficient to maintain the physical and psychological well-being of the elephant.

Measurement: Diet sheets, weight records, body condition scores, exercise protocols and nutritional/intake records should be reviewed.

Explanation: In the absence of scientific data to indicate the precise amount of activity needed to maintain good physical and psychological well-being of an elephant, activity levels, weight, BCI and diet composition should be frequently reviewed to maintain appropriate overall health parameters.

3.2.8 Health status

Standard: Diets should be flexible and should be adaptable to a wide range of individual elephant needs and various health issues, while adhering to the recommendations of the Elephant TAG/SSP Nutrition Advisor.

Measurement: Diet sheets, weight records, health records and nutritional/intake records are reviewed.

Explanation: The elephant team must work closely with the veterinary and nutrition teams to balance medical and nutritional requirements with behavioral components and activity levels for each elephant.

3.2.9 Palatability, texture, processing, etc. that will encourage species-appropriate appetitive behaviors

Standard: Every institution must have a browse program/protocol as a part of their elephant management program.

Measurement: Browse protocol and elephant health/dental records should be reviewed.

Explanation: Elephants must be provided with browse material large enough to avoid molar impaction and rotation. Since elephant teeth migrate forward (not vertically), it is important that the right type of food is offered to promote dental health and allow for the natural progression of each molar.

3.3 Medical management

Standard: A veterinarian with experience in large mammal medicine must be on call at all times to deal with routine elephant health evaluation and treatment and medical emergencies.

Measurement: Records of annual medical exams and other treatments must be on file. Copies of AZA Elephant TAG/SSP medical protocols should be on file and utilized at the institution.

Explanation: Guidelines for routine exams, quarantine, preshipment testing and necropsy are available from the AZA Elephant TAG/SSP Veterinary Advisor.

3.3.1 Quarantine and hospitalization

Standard: Quarantine protocols, periods and parameters for elephants must be in place.

Measurement: AZA Elephant TAG/SSP protocols available along with institutional written protocols.

Explanation: Due to the size, strength, and social nature of elephants, it may be logistically difficult to maintain isolation from other animals during arrival and quarantine. The Recommended Preshipment Protocol for Elephants lists a comprehensive battery of tests to detect disease prior to shipment. It is important that the receiving institution work closely with the sending institution to ensure that all (or as many as possible) of the listed tests are conducted and results reviewed. Following the preshipment protocol may help compensate for some of the quarantine compromises that may be required. Regardless of preshipment test results, every attempt should be made to maintain some degree of physical separation from the resident elephants after arrival.

Current quarantine practices recommend a minimum 30-90 day quarantine period for most species found in zoos and aquaria. Social concerns, physical facility design, and availability of trained elephant staff may dictate a modified quarantine protocol. The final decision for specific quarantine protocols at each institution should be made by the veterinary staff in consultation with the elephant management staff. For additional information, refer to the Elephant Husbandry Resource Guide, AZA Quarantine Guidelines, and the AAZV Preventive Medicine Recommendations.

3.3.1.1 Problems arising from isolation of social taxa

Standard: Every institution should have the ability to introduce, manage and maintain social groupings of elephants.

Measurement: Daily records of social groupings should be reviewed. Introduction protocols/records should be reviewed.

Explanation: As a highly social species, female elephants must be returned to their social group as soon as possible. Although interaction between elephant care staff and elephants can be beneficial, they are not a sufficient substitute for species-appropriate elephant-to-elephant interactions.

3.3.2 Preventive medicine (testing, vaccinations, parasite control, etc.)

Standard: Each elephant must be given a thorough annual physical examination (Mikota et al. 1994). Elephant weights and/or body condition scores should be recorded three times a year.

Measurement: Written documentation of the exams and their results, the weights and/or the body condition scores taken at the time of each weight must be reviewed. Written protocols are in place for all preventative elephant medicine and AZA Elephant TAG/SSP guidelines available.

Explanation: Institutions must adhere to USDA Animal and Plant Health Inspection Service (APHIS) requirements for testing and treatment of tuberculosis. A veterinarian or trained veterinary technician must perform fecal examinations to look for parasites and other problems on a regular basis (Samuel et al., 2001). Results must be recorded. Body weights and/or body condition must be assessed and recorded at least three times a year, through actual weighing or through the use of standardized body measurement tables, photographs, or similar, previously validated techniques (e.g., Sreekumar and Nirmalan, 1990). These results must be reviewed after each measurement is taken. Regular vaccinations, as determined by the veterinary staff in concert with the Elephant TAG/SSP Veterinary Advisor, must be given. Annual vaccinations may include rabies and tetanus.

3.3.2.1. Daily care

Standard: All elephants must be visually inspected and behaviorally assessed on a daily basis

Measurement: Daily records and reports must be reviewed.

Explanation: An assessment must be made and any unusual behavior (including instances of aggression), physical characteristics or activities should be immediately reported to the supervisor, and recorded in a daily log. Specifically, reports should include observations such as condition of urine and feces, eating and drinking patterns, administration of medications (if any), and general condition and behavior.

3.3.2.2 Foot care

Standard: The elephants should be free of foot injuries or foot disease. Staff must be trained to provide foot care and the elephants must be trained to accept that care. Each elephant facility must have a written protocol for foot care. If foot injuries or foot disease are present, a current treatment regimen must be in place.

Measurement: Elephant feet are in good condition and need only periodic pad and nail trimming. Records and protocols on file and foot care and/or treatment protocols in place. Implementation of the protocols/treatment is evident in condition of the elephant's feet.

Explanation: An institution's foot care protocol should include daily cleaning and inspection of all elephants' feet. If foot injury or disease is present, evidence should be documented of the institution's review of the potential cause or causes of the foot injury or foot disease. Where causes are identified, changes made to address these causes must be documented. Taking baseline foot radiographs or thermographs of all adult elephants and keeping them on file is suggested. In some cases, it may be appropriate to annually monitor selected elephants (i.e., those that have a history of chronic foot problems).

3.3.2.3 Skin care

Standard: Elephants must be trained to accept regular skin care and staff must be trained to provide that care.

Measurement: Each elephant facility must have a written protocol for routine skin care and show evidence of its implementation. These records and protocols should be reviewed.

Explanation: An elephant's skin must be thoroughly inspected on a daily basis and cared for as needed through bathing, removal of dead skin, and treatment of dry skin or other skin problems. The elephant's skin should be supple, free of dead skin buildup, not cracked or dry and free of folliculitis.

3.3.2.4 Daily exercise

Standard: An exercise program must be in place for the herd as a whole or for each individual elephant.

Measurement: Each elephant facility must have a written protocol for routine exercise and show evidence of its implementation. These records and protocols should be reviewed.

Explanation: Elephant weights and/or body condition scores should be recorded three times a year. For Asian elephants, the Wemmer body condition index (BCI) can be used (see Appendix 2) and body condition index scores in the 6 to 10 range should be maintained. Exercise protocols should be in place for maintaining good body condition and exercise should be increased for elephants over the optimal body condition score. True exercise levels required for elephants, measured in distances walked per day, are not known. Recent data collected from radio collared wild elephants indicates much shorter daily travel distances than previously reported. Current studies are in progress on distances traveled daily by elephants by several research groups and in several AZA institutions. The weight and/or the body condition score, combined with the absence of disease, foot and leg problems are the indicators that the amount of exercise is sufficient for the elephant on their specific diet in their specific situation. As with humans or any other species, overall health is a combination of factors, including exercise, diet and psychological factors.

3.3.2.5 Husbandry training

Standard: All elephants must be trained to reliably present the behaviors listed on the AZA Standard Elephant Program Behavioral Components checklist. All elephants must be trained to permit a complete body exam daily and to allow successful completion of all necessary care and husbandry procedures.

Measurement: The AZA Standard Elephant Program Behavioral Components checklist should be completed by the institution annually, and maintained for review at accreditation.

Explanation: The key to keeping elephants healthy and treating them when they are sick relies on the ability to monitor, test and administer health care and treatment. Proactive training makes monitoring elephant health possible and makes diagnostic testing and therapeutic treatment in times of compromised health less stressful for the elephant and the elephant care team.

Checklist of AZA Standard Elephant Program Behavioral Components
If individual elephants vary, please note the number of elephants that fall into each category.

BEHAVIOR	NOT TRAINED	IN TRAINING	COMPLETE & RELIABLE
Bathe / scrub skin			
Treat skin			
Trim all feet			
Eye exam			
Ear exam			
Mouth exam			
Tooth exam			
Tusk exam			
Tusk trim			
Blood collection (note frequency of collections)			
Urine collection			
Vaginal exam			
Rectal palpation			
Enema			
Transrectal ultrasound			
Accepts injections			
Accepts oral medications			
Enters chute (remains inside with doors closed)			
Allows chute walls to move			
Allows husbandry procedures to be performed by staff			
Allows veterinary procedures to be performed by vet			
Trunk wash for TB testing			
Foot x-ray			
Separation			
Leg restraint			
Reproductive assessment completed			

3.3.2.6 Elephant Restraint Devices (ERD)

Standard: All elephant facilities should have an ERD. If a facility does not have an ERD, staff must demonstrate a method of restraint that allows necessary husbandry, veterinary, and reproductive procedures to occur in a safe and efficient manner for all elephants in their collection. Use of the ERD must not be weather dependent.

Measurement: ERD in place and functional. All elephants trained to use the ERD, or the institution demonstrates its protocols and ability to do ERD functions without the ERD.

Explanation: ERDs must effectively restrict the movement of an elephant while simultaneously allowing elephant care staff access to the elephant for veterinary procedures. ERDs must be able to comfortably contain an elephant for prolonged veterinary or husbandry procedures

3.3.2.7 Restraint

Standard: All elephants must be trained to allow restraint using ERDs, rope, chain, or other materials of sufficient strength. Elephants must not be subjected to unnecessary prolonged restraint. Any planned restraint over two hours must be approved by the institution's administration, elephant management committee, and veterinarian. The institution's safety committee and/or the institutional animal welfare committee should be included in the decision making process. All new construction and major renovations must be designed in a manner that minimizes the regular need for tethering.

Measurement: Protocols in place for tethering guidelines are reviewed.

Explanation: Tethering is an acceptable method of temporary restraint for elephants. Prolonged tethering may be necessary for transport and for veterinary treatment. Elephants can be easily trained to accept tethering.

3.3.2.8 Immobilization

Standard: Veterinary protocols must be established for potential immobilization of an elephant, either for standing or full sedation.

Measurement: Veterinary immobilization protocols are reviewed.

Explanation: The Elephant TAG/SSP Veterinary Advisor can be consulted for the most current and effective sedation and immobilization techniques.

3.3.2.9 Management of neonates and geriatric animals

Standard: Neonatal exam and hand-rearing protocols must be part of the written birth protocols. Management and treatment plans for each geriatric elephant should be developed by the elephant management team and veterinarian and revised regularly as the elephant ages.

Institutions must use the standardized annual reporting process to report all elephant births and mortalities and provide a description of the specific practices and protocols used during each event (See 5.4).

Measurement: Birth protocol is reviewed, including plans for neonatal exam and hand-rearing. Geriatric management and treatment plan is reviewed. Annual reports of births and mortalities are submitted for review as part of the institutional annual elephant report.

Explanation: Specific treatment for geriatric elephants will be developed with coordination of the veterinary and management teams. There are no current specific standards. The Elephant Husbandry Resource Guide includes a chapter on hand-rearing and can be a useful resource in the development of a facilities hand-rearing protocol.

3.3.2.10 Management during pregnancy

Standard: Pregnant elephants must have a written diet and exercise program to prevent excessive weight gain during pregnancy.

Measurement: Birth protocol is reviewed, including plan for exercise and diet management during pregnancy.

Explanation: An elephant that is overweight at time of parturition significantly increases the risk of dystocia and other parturition complications. Elephants in good body condition should gain no more than 5% of their body weight during pregnancy.

Nulliparous females over age 24 years have had limited success delivering calves and have experienced dystocias and retained fetuses. Institutions should take all factors into account and research the potential challenges and options available when considering breeding elephants in this reproductive class.

3.4 Reproduction

3.4.1 Seasonal changes in physiology and behavior associated with reproduction and management implications of such changes.

Standard: Each male and female elephant of potential reproductive age must have an initial reproductive assessment and follow-up assessments on a regular basis by transrectal ultrasound, and all female elephants of potential reproductive age must have their progesterone cycle monitored to verify current reproductive status and assess overall reproductive health.

Measurement: Samples for reproductive assessment for females taken and analyzed at least annually. Semen samples collected from bulls regularly (annually where practical) document current viability. AZA Elephant TAG/SSP recommendations followed.

Explanation: Exceptions for reproductive assessment include elephants with known reproductive problems, actively breeding elephants, or those with documented medical/behavioral conditions that preclude them from breeding.

3.4.2 Facilities for parturition and management of females during parturition and calf introductions

Standard: Breeding facilities must have a birth protocol in place, which provides for care of the mother during pregnancy and parturition and safety of the calf immediately after birth.

Measurement: Birth protocol is reviewed.

Explanation: In order to avoid incidents of calf injury or unsuccessful births due to lack of a plan or lack of preparedness, a detailed birth protocol must be written for all pregnant elephants. For first time mothers, this protocol must include the ability to restrain the mother and retrieve the calf at parturition if necessary. The protocol must include methods of care of the mother in case of birth complications requiring veterinary intervention. There are several excellent birth protocols available from successful breeding institutions. The Elephant Husbandry Resource Guide can be a useful resource for developing the institutional birth protocol.

3.4.3 Hand-rearing and reintroduction protocols

Standard: Written hand-rearing and reintroduction management plans should be included as a part of the birth protocol.

Measurement: Birth protocol is reviewed, including plans for hand-rearing and reintroduction management.

Explanation: Protocols must be in place and supplies on hand well in advance (at least 30 days) of earliest expected parturition date in case hand-rearing is necessary. Every attempt should be made to reunite an elephant calf with its mother as soon as possible following birth.

3.4.4 Recommended means and duration of contraception

Standard: There are no standards for contraception with elephants at this time.

Measurement: Not applicable.

Explanation: Currently, there is not a need for contraception with either African or Asian elephants in human care. Contraception information is available on-line at the AZA Wildlife Contraception Center's web site at www.stlzoo.org/contraception.

4. Behavior management

Standard: All institutions must have an elephant training program in place which allows elephant care providers and veterinarians the ability to accomplish all necessary elephant care and management procedures. A training program must be consistent with the industry standard to assure inter-institutional consistency.

Measurement: Review training and health records and observe elephant/staff interactions to determine if elephant training program is successful and that elephant care needs are being successfully met.

Explanation: Elephant training terminology and descriptions of specific behaviors are outlined in the PEM course curriculum. The PEM-recommended list of commands and their corresponding behaviors are ones that every elephant and elephant keeper must know so that basic husbandry and veterinary practices can be accomplished.

4.1 Daily behavioral assessment

Standard: A daily behavioral assessment will be conducted for each elephant and all unusual behavior or any instances of aggression should be documented in the daily report and/or in an incident report form, if appropriate.

Measurement: Daily records and reports are reviewed.

Explanation: A daily assessment should be made and any unusual behavior (including instances of aggression) should be immediately reported to the supervisor, and recorded in a daily log.

4.2 Successful methodologies for managing elephants

4.2.1 Training methods

Standard: All institutions must have an elephant training program in place which allows elephant care providers and veterinarians the ability to accomplish all necessary elephant care and management procedures. Each institution will adopt and implement an institutional training methodology that promotes the safest environment for elephant care professionals and visitors and ensures high quality care and management of the elephants for routine husbandry, medical management, physical well-being and overall elephant welfare. Institutions must train their elephant care professionals to manage and care for elephants with barriers and/or restraints in place that provide employee safety.

Measurement: Institutions must be able to demonstrate that all AZA Standards for Elephant Management & Care are met.

Explanation: Appropriate elephant training may employ several training aids or tools. If properly executed training procedures are ineffective in eliminating aggressive or inappropriate behavior in a given elephant, institutions should consider other alternatives, including bringing in a consultant and/or transferring to a facility with more experienced staff or a different management system.

4.2.2 Elephant management policy

Standard: Each AZA member institution and related facility that holds elephants must have a written elephant management policy. This policy must be consistent with AZA standards for elephant management & care, and must support the Board mandate that elephant care providers at AZA facilities with elephants shall not share the same unrestricted space with elephants, except in certain, well-defined circumstances (outlined in d. below).

An institution's elephant management policy must, at minimum, include a description of the following key components.

a) Elephant management program's missions and goals.
b) Elephant management policies, including guidelines for handling, training, and transport.
c) Plan to separate elephants from each other, safely manage elephants that are aggressive towards other elephants, safely move elephants from one location to another, and safely manage elephants that are aggressive toward humans.
d) Clear protocols for frequency and duration when elephant care professionals and elephants may share the same unrestricted space for the specific purposes of required* health and welfare procedures, transport, research, active breeding and calf management programs, and medical treatments and testing. *The word "required" is intended, first, to allow for a degree of flexibility, recognizing the wide array of conditions that occur in managing animals and, second, to indicate that a decision to engage in any specific exceptions should involve more than a single individual and must be approved by the facility director.
e) Staff management policies, including guidelines for keeper safety.
f) Individual elephant profiles and incident reports for all cases in which elephants show aggression toward keepers or the public, regardless if any injury actually resulted.
g) Emergency response protocols. Institutions must be able to demonstrate readiness to respond to an emergency situation, such as a keeper injury, an elephant escape, or to natural disasters.
h) Written protocol for routine foot care and evidence of its implementation
i) Written environmental enrichment plan and evidence of its implementation
j) Written exercise plan and evidence of its implementation

Measurement: An updated institutional Elephant Management Policy exists and all records and annual reports pertaining to elephant care and or management are reviewed.

Explanation: This policy should be developed with input from many parties, including elephant keepers, managers, curators, veterinarians, safety experts and directors. It should follow a thoughtful process taking into account the animals, staff and facility.

4.3 Procedures successful in facilitating introductions, including separation of individuals from group, stationing, tolerance while feeding, cooperative feeding, "howdy" units, visitation gates, etc.

Standard: Protocols must be in place for safe and effective introductions and control of potential social issues.

Measurement: Institution must be able to demonstrate their ability to introduce and separate elephants.

Explanation: Gradual introductions generally follow a pattern of increasing familiarity as follows: olfactory and auditory contact, visual contact at a distance, close proximity visual contact, tactile contact over or through a barrier that allows for either individual or group to move at choice out of tactile contact

range, and finally full unfettered introduction. Each phase should be observed and evaluated before moving to the next introductory phase. When doing full introductions, it is important to maintain the ability to intervene in any aggressive escalation and be able to either provide sufficient open or barrier enhanced space for one elephant to avoid another, or multiple gates to facilitate safe separation of the elephants. It should be cautioned that some elephants are able to very rapidly move through the introductory stages and may become frustrated or increasingly aggressive if the introduction moves too slowly. Hence, continual behavioral assessment of the introduction is important.

4.4 Enrichment programs

Standard: All institutions must have a written environmental enrichment plan for their elephants and show evidence of implementation (See 1.4.6).

Measurement: Enrichment plan and records of daily enrichment activities should be reviewed.

Explanation: An effective enrichment program should promote species-appropriate behaviors. Two useful resources on enrichment programs for elephants include the Elephant Husbandry Resource Guide and www.animalenrichment.org.

5. Management Structure, Safety and Program Assessment

5.1 Management structure, technical skills and competencies

Standard: Each institution must demonstrate a management structure which provides (1) staff training; (2) program development and maintenance; and (3) communication with others about the elephant program. The elephant program's manager(s) and keepers must demonstrate knowledge about all emergency protocols and continually improve elephant management techniques as the industry standards evolve. Overall responsibility for the program must be clearly defined.

All elephant care professionals, managers and directors must complete AZA's Principles of Elephant Management I course within three (3) calendar years from the date they begin working in that capacity. *E.g. If someone begins work in April of 2018, they are required to complete the course by December 31, 2021.*

All elephant managers must complete AZA's Principles of Elephant Management II course within three (3) calendar years from the date they begin working in that capacity. *E.g. If someone is assigned the role of elephant manager in April of 2018, they are required to complete the course by December 31, 2021.*

Measurement: Institutional elephant management responsibility is clearly defined and understood by elephant manager(s) and keepers. All elephant care professionals, managers and directors have attended PEM I within three (3) calendar years from the date they begin working in that capacity and are knowledgeable in institutional safety and elephant care protocols. All elephant manager(s) have attended PEM II within three calendar years from the date they begin working in that capacity.

Explanation: Most institutions typically assign one person to be the Elephant Manager, however, some institutions have more than one person sharing the duties described above.

5.1.1 Keeper safety proficiency

Standard: Each institution must implement the standardized methods and protocols to evaluate and maintain records of each elephant care professional's safety-proficiency, in a manner that integrates his/her experience level with the specific behavior profiles of the elephants in his/her care.

Measurement: Written evaluations of each elephant care professional's safety-proficiency exist and are up to date.

Explanation: An elephant keeper training and safety proficiency program should include regular check-ins with the elephant manager(s) and should assess the progress of all employees in safely handling the elephants at his or her facility.

5.2 Animal and keeper safety

Standard: A minimum of two qualified elephant keepers must be present within visual and auditory contact at all times during any contact with elephants (any time a keeper is within trunk's reach of an elephant).

Measurement: Related keeper injuries should be reported annually (See 5.4).

Explanation: A qualified elephant keeper is a person the institution acknowledges as a trained, responsible individual, capable of and specifically experienced in the training and care of elephants. The two qualified elephant keepers should be in close enough proximity to one another to allow the second person to intervene if required.

5.2.1 Elephant aggression

Standard: Any elephant that displays aggression towards an elephant care provider(s) must be immediately documented and evaluated by the elephant management team and, as soon as possible, should be managed with barriers or restraints in place between the elephant and that care provider(s).

Measurement: Daily behavioral assessment reports and incident reports should be available and should be reviewed.

Explanation: AZA is committed to maximizing the safety of elephant care staff while continuing to advance the care and welfare of the elephants. Individual elephants occasionally display aggression toward a particular keeper which may warrant managing with barriers or restraints in place when that particular keeper is present. If properly executed training procedures are ineffective in eliminating aggressive or inappropriate behavior in a given elephant, institutions should consider other alternatives, including bringing in a consultant and/or transferring to a facility with more experienced staff or a different management system.

5.3 Visitor safety and acceptable forms of human/animal interaction

Standard: Elephant enclosures must be designed to ensure that no physical contact is possible between the visitors and the elephants that is not directly supervised and under the control of trained elephant staff.

Measurement: No incidents of visitor injury or inappropriate contact with elephants.

Explanation: All elephant/human interaction must be supervised by institutionally qualified elephant staff. Where elephant rides are done, or elephants are walked in public areas or outside their normal exhibit containment, protocols, assessments and reviews must be documented to ensure staff and public safety.

5.4 Program assessment

Standard: Each institution must perform an annual review of its overall elephant management program including:

- The circumstances under which elephant care professionals share unrestricted space with elephants versus when barriers and/or restraints are in place.
- The number of workplace injuries or fatalities, if any, that occurred in the care and management of elephants and the specific conditions under which each occurred.
- The number of elephant births and mortalities and a description of the specific practices and protocols used during each event.

- Elephant management policies, procedures and protocols
- Elephant containment parameters and structures
- Staff performance and program goals

Measurement: Written report of the annual program assessment with recommendations for actions to be taken where appropriate. This report shall be submitted to the Accreditation Commission.

Explanation: Elephant management continues to evolve as new information, knowledge and technologies become available. An annual review of the entire program will assist in identifying areas of unwanted change, assessing programs strengths and needs, and developing action plans to meet the goals of the program.

6. Conservation, Education, and Research

6.1 Conservation and research activities

Standard: AZA Zoos should contribute to in situ and ex situ conservation and research efforts.

Measurement: Records of participation in situ and ex situ conservation and research efforts should be reviewed.

Explanation: AZA zoos that currently exhibit or desire to exhibit elephants should make every effort to maintain elephants in their collections so that they can contribute to conservation through public education, scientific research, and the support of field conservation. Elephants are an important flagship species and the cornerstone of many members' African and Asian exhibit areas. (Board of Directors 3/21/00). Every institution should contribute in some way to in situ conservation of elephants and their habitats (EMA 1999, Hutchins and Smith, 2000). AZA members are strongly encouraged to provide financial, personnel, logistical, and other support for priority research and conservation initiatives listed in the AZA Elephant TAG/SSP Strategic Plan. Every institution should contribute in some way to elephant research activities (Keele and Dimeo-Ediger 1997, EMA 1999, Hutchins and Smith, 2000). Involvement in one or more of the following disciplines is strongly recommended: behavior, cognition, reproduction, communication, enrichment, health (disease/pathology, nutrition), and education.

6.2 Education programs

Standard: Every institution should institute a program to educate zoo visitors about elephant and elephant conservation issues (EMA 1999, Hutchins and Smith, 2000).

Measurement: Records of elephant education program should be reviewed.

Explanation: Assistance is available from the Elephant TAG/SSP Education Advisor. Every institution should have up-to-date educational graphics and/or information about elephants on display to the public.

7. Cooperative management

Standard: All acquisition, transfer, reintroduction, or breeding of elephants in AZA institutions is subject to approval of the AZA Elephant TAG/SSP. All breeding, management and transfer recommendations of the AZA Elephant TAG/SSP should be followed. The success of cooperative breeding programs depends on all institutions supporting TAG/SSP recommendations.

If differences regarding TAG/SSP recommendations occur between the TAG/SSP Steering Committee and a member institution, the AZA SSP Handbook clearly articulates the process that both parties must utilize to resolve these differences prior to engaging in the Animal Management Reconciliation Policy.

Measurement: Records of participation and cooperation with the Elephant TAG/SSP should be reviewed.

Explanation: The goals and mission of the Elephant TAG/SSP will only be met if each AZA institution managing elephants honors its commitment as either a holding or breeding facility. Each institution must make every effort to abide by Elephant TAG/SSP breeding and transfer recommendations.

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Appendix 1 - Nutrition

Table 1 - from Nutrition Advisory Group Handbook, "Elephants: Nutrition and Dietary Husbandry" (Ullrey et al. 1997).

Nutrient	Maintenance, Breeding	Late pregnancy	Lactation	Juvenile growth
Crude Protein, %	8-10[a]	12	12-14[b]	12-14[c]
Lysine, %	0.3	0.4	0.4-0.5	0.5-0.6
Calcium, %	0.3	0.5	0.5	0.5-0.7
Phosphorus, %	0.2	0.3	0.3	0.3-0.4
Magnesium, %	0.1	0.1	0.1	0.1
Potassium, %	0.4	0.4	0.5	0.4
Sodium, %	0.1	0.1	0.1	0.1
Sulphur, %	0.15	0.15	0.15	0.15
Iron, ppm	50	50	50	50
Copper, ppm	10	10	10	10
Manganese, ppm	40	40	40	40
Zinc, ppm	40	40	40	40
Cobalt, ppm	0.1	0.1	0.1	0.1
Iodine, ppm	0.6	0.6	0.6	0.6
Selenium, ppm	0.2	0.2	0.2	0.2
Vitamin A, IU/kg	3000	3000	3000	3000
Vitamin D, IU/kg	800	800	800	800
Vitamin E, IU/kg	100	100	100	100
Thiamine, ppm	3	3	3	3
Riboflavin, ppm	3	3	3	3

[a]Adult maintenance, 8% CP, breeding bull, pregnant cow (1st two-thirds of pregnancy), 10%CP.
[b]First year of lactation, 14% CP, 2nd year of lactation, 12% CP
[c]Weanling, 14% CP; 3-year old, 13% CP, 4-year old to year old, 12% CP.

Deficiencies in vitamin E in elephants in human care has lead to a range of symptoms, including necrotizing myopathies, anemia, reproductive failure (Kenny 2001), capture myopathy (Dierenfeld and Dolensek 1988; Barnett 1990), and white muscle disease (Dierenfeld and Dolensek 1988). Levels of circulating α-tocopherol in wild elephants have been recorded at 0.77 µg/ml; circulating levels in elephants in human care showing no clinical signs of vitamin E deficiency had an average level of only

0.43 µg/ml (Dierenfeld 1989). In order to increase circulating levels of α-tocopherol, supplementation of elephant diets with natural and artificial sources of vitamin E is recommended.

Grass hay with an ADF of > 30% should be provided to elephants (Ullrey et al., 1997), and can be mixed with legume hays. All hay fed should be of high quality, properly dried and cured, and regularly assessed for nutritional content (Oftedahl and Allen, 1996). To provide a more nutritionally complete diet, concentrated pellets can be offered in addition to hay. These pellets should be high-fiber and low in starch. Providing browse for elephants increases foraging time, can add important nutritional benefits, and can promote dental health. As with other food items offered to elephants, it is important to have browse nutritionally analyzed.

Appendix 2 – Body Condition Index

Criteria and point scores used to assess body condition in Asian elephants (Elephas maximus). When a particular body region is intermediate between two criteria, an intermediate point score (i.e. 0.5, 1.5 points) should be assigned.

A. Head - temporal depression (view from several angles)
- 2 points: full and convex in outline when viewed from behind (at the level of the neck or shoulder); frontal ridge vaguely outlined at best.
- 1 point: slightly to moderately concave; frontal ridge defined.
- 0 points: deeply concave; frontal ridge forms a crater-like rim around the temporal depression.

B. Scapula (shoulder blade) (view from side)
- 2 points: spinous process of the shoulder blade not visible, or slightly visible when the foreleg is in certain positions.
- 1 point: spinous process visible as a vertical ridge with a concavity between the ridge and the posterior edge of the scapula.
- 0 points: spinous process pronounced and bladelike with the acromial process pronounced as a knot.

C. Thoracic region (view from side)
- 2 points: ribs not visible, barrel smooth.
- 1 point: some ribs visible, but the extent and demarcation not pronounced.
- 0 points: many ribs strongly demarcated (even behind the scapula) with pronounced intercostal depressions.

D. Flank area - immediately in front of pelvic girdle (view from side and behind)
- 1 point: no depression visible; flank bulges outwards in front of the pelvis.
- 0 points: depression visible as a sunken area immediately in front of pelvis.

E. Lumbar vertebrae - behind ribs and in front of pelvis (view from behind, an elevated vantage point may be necessary)
- 2 points: not visible, lower back smooth and rounded.
- 1 point: visible as a ridge; skin slopes away from the top of the ridge; height of the vertebrae does not exceed width.
- 0 points: visible as a knife-like blade; sides of spinal ridge almost parallel, and the height equal to or exceeds the width.

F. Pelvic bone - external angle of the ilium (view from several angles)
- 2 points: not visible (or slightly visible); rump region between the ilium and caudal vertebrae filled with tissue (and not forming a depressed zone).
- 1 point: visible but not pronounced; the rump is a slightly depressed zone between the ilium and the caudal vertebrae.
- 0 points: visible as a jutting bone; rump is a pronounced sunken zone between ilium and the caudal vertebrae.

Acknowledgment to Directors:

"The AZA Board of Directors recognizes all the incredible work that has taken place in order to comply with this policy since it was originally adopted in 2011. In particular, the Board recognizes the work of the Elephant TAG in developing and carrying out this policy, the PDC for creating and implementing the associated training programs, and the Accreditation Commission for ensuring compliance. The Board also recognizes and appreciates the work of the elephant holding institutions that have made physical changes to their facilities and protocol changes to their elephant care program, as well as the open and honest dialogue that has taken place to help make certain that elephant care professionals have the safest working conditions possible."

Maximizing Occupational Safety of Elephant Care Professionals At AZA-accredited and AZA-certified Facilities

The Association of Zoos and Aquariums (AZA) continually strives to advance the occupational safety of elephant care professionals[1] as well as the care and welfare of elephants. Through a series of AZA actions over the past two decades, AZA has attempted to promote significant improvements in safety, care and welfare. Among other things, AZA has developed a Principles of Elephant Management training course and has adopted minimum Standards for Elephant Management & Care, which were made mandatory in 2001. These Principles and Standards have assisted AZA entities and organizations in developing sound practices regarding elephant care professionals.

In January 2011, the AZA Board of Directors initiated another review of the occupational safety of elephant care professionals. As part of this review, in May 2011 the AZA convened a special meeting of all directors of AZA facilities[2] with elephants and their elephant managers to discuss occupational safety in elephant care and management. While every facility is as different as are their elephants, a number of factors emerged from this discussion that have and will continue to increase workplace safety and reduce occupational risk, including adherence to high standards, increased staff training, well-developed management communications and protocols, and frequent program evaluation.

Concurrent with this review, in March 2011, the Association of Zoos and Aquariums Board of Directors adopted revised Accreditation Standards for Elephant Management & Care.[3] These are comprehensive, performance-based standards that were developed over several years.

In March 2014, the Board of Directors convened a task force to review the 2011 policy and proposed language that would better reflect the original intent to maximize the safety of elephant care professionals.

The above-listed safety measures notwithstanding, preliminary information suggests that the amount of time (both frequency and duration) an elephant care professional spends with an elephant in the same unrestricted space increases occupational risk.[4] Therefore the Board of Directors is taking the following measures to maximize the safety of elephant care staff by limiting the sharing of space with elephants, while continuing to advance the care and welfare of elephants.

As soon as possible and no later than September 1, 2014, elephant care providers at AZA facilities with elephants shall not share the same unrestricted space with elephants, except for certain, limited exceptions outlined in II.d below. Within six (6) months of reissuance of this Policy, the Director may request a variance in writing to the Accreditation Commission to allow time for the Institution to meet the criteria of II.d below. Variances will expire June 1, 2017.

Restricted contact is defined as managing elephants with a primary containment barrier between human and elephant.[5] Tethers may be used and if used must be placed on at least two (2) legs of the elephant (one front and one back). Tethers must be placed on the elephant from outside the primary containment barrier prior to entry into the shared space.[6] Routine husbandry should not be performed exclusively while elephants are on tethers.

In order to maximize safety while working in restricted contact, keepers must always monitor the position of themselves and their elephant(s) in relation to the barrier/restraints, the reach of the elephant(s) especially the reach of the trunk and the behavior of the elephant(s). The head and/or torso of a person must never cross the plane of the primary containment barrier unless the elephant is on restraints as this is no longer restricted contact.

The Board recognizes that, in order to achieve the above-stated goal, a transition period will be necessary. This transition period is sequenced to encompass:

- Additional work from the AZA Elephant Taxonomic Advisory Group (TAG) to support AZA facilities in safely managing elephants and providing advanced care and welfare;
- Program safety assessments;
- Immediate steps regarding the management of aggressive elephants;
- Program planning and documentation;
- Staff training; and
- Facilities/infrastructure changes.

The Board:

I. Tasks the AZA Elephant Taxonomic Advisory Group (TAG) with the following:

   a. By September 1, 2012, to develop standardized methods and protocols for AZA facilities to maintain daily behavioral profiles/ethograms for each elephant and document all instances of aggression[7] to be applied in item II.e. below;

   b. By September 1, 2012, to develop an appendix to this document that provides guidance and examples to AZA facilities making modification to their infrastructure to accommodate this change in policy (see item II.i. below).

   c. By September 1, 2012, to develop standardized methods and protocols for AZA facilities to report annually on:

      1. The exceptions in which elephant care professionals share unrestricted space with elephants versus when barriers and/or restraints are present (see item II.d).

2. The number of workplace injuries or fatalities, if any, that occurred in the care and management of elephants and the specific conditions under which each occurred.

3. The number of elephant births and mortalities and a description of the specific practices and protocols used during each event.

d. By January 1, 2013, to develop standardized methods and protocols for AZA facilities to evaluate and maintain records of each elephant care professional's safety-proficiency, in a manner that integrates their experience level with the specific behavioral profiles of the elephants in his/her care (to be applied in II.g. below).

e. Convene a task force to research means of successful breeding, health care and welfare that will be increasingly effective with barriers in place between elephant care professionals and elephants.

II. Directs all AZA facilities with elephants in their care to:

a. As soon as possible, move any elephant that displays aggression towards an elephant care provider(s) into management and care with barriers or restraints in place between that elephant and that care provider(s).

b. By January 1, 2012, perform at least one of the semi-annual program safety assessments, as outlined in AZA Elephant Standard 1.4.9.5.

c. By January 1, 2012, specifically address the facility's elephant program in the risk management policy required in AZA Accreditation Standard 11.4.1.

d. By September 1, 2012, amend their existing elephant management plans to include clear exception protocols (including frequency and duration) when elephant care professionals and elephants may share the same unrestricted space.[8]

When there are crises or medical emergencies or for birth management, written protocols used with dangerous animals apply. Examples include critically ill elephants, elephant down, hand rearing of elephant calves (up to 24 months of age) and in rare cases geriatric cows that require special care as prescribed by the staff veterinarian.

The following are <u>not</u> considered to be crisis or medical emergencies and therefore are not exceptions.

- Trunk washes
- Foot care
- Blood draw
- Research
- Exercise
- Bathing
- Donor/guest interaction
- Routine husbandry
- Calf training (after 24 months of age)
- Transportation
- Routine care and facilities maintenance (e.g. feeding and cleaning of the barn and/or exhibit)

e. By January 1, 2013, maintain daily behavioral profiles/ethograms for each elephant and document all instances of aggression.

f. By January 1, 2013 provide a report (required annually) to the Accreditation Commission, the Elephant TAG, and the AZA staff that, for the previous year, defines:

1. The exceptions under which elephant care professionals share unrestricted space with elephants versus when barriers and/or restraints are in place.

2. The number of workplace injuries or fatalities, if any, that occurred in the care and management of elephants and the specific conditions under which each occurred.

3. The number of elephant births and mortalities and a description of the specific practices and protocols used during each event.

The Accreditation Commission and/or AZA staff will follow up where institutional reports indicate challenges in meeting the elephant safety standards.

g. By June 1, 2013, evaluate and maintain records of each elephant care professional's safety-proficiency, in a manner that integrates their experience level with the specific behavioral profiles of the elephants in his/her care.

h. By September 1, 2013, train their elephant care professionals to manage and care for elephants with barriers and/or restraints in place that provide employee safety.

i. By September 1, 2014, have put in place and implemented use of adequate infrastructure to manage and care for elephants with barriers and/or restraints in place that provide employee safety.

j. By January 1, 2015, if a facility cannot meet the infrastructure standard (see item II.i. above), it must apply for a variance. Before the variance can be issued by the Accreditation Commission the facility must describe to the Commission its plan to meet the standard. Variances will expire June 1, 2017.

III. Tasks the Professional Development Committee to:

a. By September 1, 2012, update the Principles of Elephant Management-I course curriculum, which shall include mechanisms to:

1. Manage and care for elephants with barriers and/or restraints in place.

2. Minimize the frequency and duration elephant care professionals share unrestricted space with elephants subject to the exceptions outlined in item II.d. above.

3. Develop and maintain detailed elephant behavioral profiles/ethograms.

All elephant care professionals[9], managers and directors of AZA facilities with elephants will complete within three (3) calendar years from the date they begin working in that capacity. *E.g. If someone begins work in April of 2018, they are required to complete the course by December 31, 2021.*

b. By September 1, 2016, create and deliver a series of online elephant training modules on subjects including: safety, elephant record keeping, behavioral profiling and developing and maintaining elephant ethograms, positive operant conditioning, assessment of elephant aggression, and assessment of personal safety-proficiency.

All elephant care professionals will complete by June 2017.

c. By September 2013, create a facilities-based Principles of Elephant Management-II course curriculum, which includes experience with managing live elephants with the use of barriers and restraints and the application of advanced principles of elephant management, care, welfare, and occupational safety.

All elephant managers will complete within three (3) calendar years from the date they

begin working in that capacity. *E.g. If someone is assigned the role of elephant manager in April of 2018, they are required to complete the course by December 31, 2018.*

1 The term "elephant care professionals" includes all who provide for the care and welfare of elephants including veterinary care and other health care providers.

2 In this document the term "AZA facilities" refers to all AZA-accredited and AZA-certified Related Facilities.

3 References to "elephant standards" refer to "AZA Standards for Elephant Management & Care" as approved by the AZA Board of Directors in March 2011.

4 The Board understands that non-AZA entities and organizations may assess and address these risks in a different manner, and the policies adopted herein are only intended to be applied to AZA facilities.

5 See standard 1.4.9.1 for a definition of elephant containment barriers.

6 See Standard 3.3.2.7 for an explanation of tethering requirements.

7 This is an expansion of Elephant Standards: 2.2.1.9 (Daily and life stage variation in patterns of social affiliation, which requires that a behavioral profile must be maintained for each individual elephant and updated annually); 3.3.2.1 (Daily Care, which requires that all elephants must be visually inspected on a daily basis); and, 5.2 (Animal and Keeper Safety, which encourages that a record of all elephant-related keeper injuries or aggression directed at keepers should be kept, and related keeper injuries or aggression directed at keepers, and elephant behavioral profiles should be reviewed annually.).

8 This is an expansion of Elephant Standard 4.1.1 Training Methods.

9 Veterinary staff are encouraged but not required to complete this course. Elephant managers who have already completed PEM-I will not be required to re-take the course but will be required to complete the online elephant training modules outlined in III.b.

AZA Standards For Cetacean Care & Welfare

Approved July 2017

INTRODUCTION

These standards are in addition to AZA general *Accreditation Standards and Related Policies*, all of which remain applicable. Institutions that include cetaceans in their care (whales, dolphins, porpoises) must follow these AZA Standards for Cetacean Care & Welfare. For reference, general standards that relate to individual cetacean standards are included in brackets at the end of the cetacean standard. There may be other general standards that apply in addition to those that are bracketed. All general standards can be found on pages 7 – 37 of this booklet.

1. Responsible Population Management

General Considerations:

In addition to this section, the institution must meet, at minimum, all requirements contained in AZA's Policy on Responsible Population Management (RPM Policy) [pages 99 – 106].

1.1. Acquisition

1.1.1. The institution must provide for each animal's proper care and welfare in accordance with AZA standards.

1.1.2. Any cetacean may only be added to an AZA-accredited institution's care by means of current best practices. Institutions should not acquire animals collected from any drive fishery post 2004. However, AZA-accredited institutions must consider providing housing and care to cetaceans in critical need regardless of collection origin. [See also General Standard 1.3.2]

1.1.3. The institution's responsible population management plan must prohibit the collection of cetaceans from the wild except on a case by case basis where it is essential to maintain healthy and diverse managed cetacean populations, or for rescues, or as part of a threatened or endangered species conservation program. [See also General Standard 1.3.2]

Explanation: AZA-accredited institutions must comply with applicable laws, and should also consider introducing and caring for non-releasable cetaceans from rescue programs.

1.1.4. Institutions acquiring cetaceans from the wild must prove that the population in the wild remains sustainable. [See also General Standards 1.3.2, 1.7.1]

Explanation: AZA supports environmentally sustainable and beneficial acquisition from the wild when conservation is a positive outcome.

1.1.5. The institution must maintain detailed and complete acquisition and chain of custody records through disposition, consistent with the AZA Policy on Responsible Population Management ("RPM Policy"). [See also General Standards 1.3.2, 1.4.5, 1.4.7]

1.2. Transfer

1.2.1. Cetaceans must only be transferred or loaned pursuant to compliance with the AZA Policy on Responsible Population Management ("RPM Policy"). [See also General Standard 1.3.2]

1.2.2. In making the decision to transfer any cetacean to a non-AZA accredited facility, the institution must comply strictly with the specific procedures and requirements of the AZA RPM Policy, including documentation that the receiving non-AZA institution can provide proper care and has a record of good animal welfare. [See also General Standard 1.3.2]

1.2.3. Unless a cetacean is rescued, rehabilitated, and then released back into its natural habitat under the direction of the national or local authority, cetaceans cannot be released to the wild. This does not apply to cetaceans that are part of a permitted and scientifically-based reintroduction program with the ultimate goal of sustaining a threatened or endangered population. [See also General Standard 1.3.2]

Explanation: All relevant local, state/provincial, and federal laws and/or regulations for release into the wild must be followed. In cases where an AZA standard is more stringent than existing law, the AZA standard must be met.

2. Conservation, Research, and Education

General Considerations:

Conservation efforts are a priority for AZA-accredited zoos and aquariums. AZA institutions that house cetaceans have a unique opportunity to educate and connect guests with these animals and their ecosystems. Cetacean holding members also have the professional skills and resources to facilitate both *in situ* and *ex situ* conservation research and initiatives that support marine mammals in their ecosystems. Participation in these types of activities should be demonstrated and should be in proportion to the size and scope of the institution. [See also General Standards 3.1.1, 3.2.1, 3.3.4]

2.1. Conservation and Research

2.1.1. AZA-accredited institutions should participate in or support *in situ* and *ex situ* conservation and research efforts for cetaceans. [See also General Standards 3.2.1, 3.3.4]

Explanation: AZA institutions are strongly encouraged to provide financial, personnel, logistical, and other support for priority research and conservation initiatives.

2.2. Education

2.2.1. The institution must have education programs about cetaceans to improve public understanding and appreciation for these animals and their ecosystems. [See also General Standards 4.2.1, 4.3.1]

2.2.2. Education programs about cetaceans must be based on current scientific knowledge. [See also General Standard 4.3.1]

2.2.3. Education programs about cetaceans must be under the direction of a paid staff person who is knowledgeable about cetaceans and has a working rapport with the facility's zoological

experts in cetacean care and welfare. [See also General Standard 4.2.2]

3. Care for Cetaceans

General Considerations:

Care, welfare and sustainable population management are among the most critical and complex tasks performed by AZA-accredited zoos and aquariums. Administration and management of husbandry programs must be guided by modern professional principles establishing plans and procedures to execute those functions. Cetaceans have both general care requirements similar to all other mammals and some that are specific to their species. All AZA-accredited institutions must uphold a commitment to provide for the health and wellbeing of the animals, and must invest in the resources necessary to properly care for the species they foster.

3.1. Food/Nutrition

3.1.1. Cetaceans must be provided with appropriate nutrition. A consistent review of food intake vs. body weight (body condition/score) is recommended. [See also General Standard 2.6.2]

3.2. Veterinary Program

3.2.1. A veterinarian with experience in cetacean medicine must be on call at all times. Physical examinations must be performed regularly, as prescribed by the veterinarian (at least annually) on each cetacean residing at the institution, and regular visual examinations (at least quarterly) must be performed by the veterinarian. Medical imaging equipment in the form of ultrasound and radiography should be readily available. [See also General Standards 2.0.2, 2.1.2, 2.3.2]

Explanation: As with all other preventative care programs, at minimum, exams must include food intake vs. body weight and general body condition, blood sampling for hematology and chemistry, and all other lab tests deemed appropriate by the attending veterinarian in collaboration with curatorial staff.

3.2.2. Physiological values and serum banks should be established for each cetacean residing at the institution. [See also General Standard 1.4.8]

3.2.3. Health, medical and husbandry records are covered under the general AZA accreditation standards, section 1.4 [see pages 11-12].

3.2.4. AZA-accredited institutions must disinfect and maintain cetacean handling equipment and all related areas. [See also General Standards 10.1.0, 10.1.1, 10.2.0]

3.2.5. The institution must comply with the applicable sections on quarantine of the most recent edition of the *Guidelines for Zoo and Aquarium Veterinary Medical Programs and Veterinary Hospitals*, published by the American Association of Zoo Veterinarians (AAZV) http://www.aazv.org/displaycommon.cfm?an=1&subarticlenbr=839. [See also General Standard 2.0.1]

4. Cetacean and Guest Interactive Programs

General Considerations:

The AZA recognizes the value and positive impact of interactive and ambassador animal programs. Cetacean interactive programs provide a unique opportunity for guests to engage and connect with whales and dolphins, and to appreciate the behaviors and characteristics of these animals. Program development and management must be conducted in a way that prioritizes animal and guest safety, as well as maximizes opportunities for guest education and experience. The following standards apply to an in-water interactive program where one or more guests are entering the water with the animals.

4.1. Interactive programs must be managed in areas that include open spaces where the animals can swim away from program participants if they choose. [See also General Standards 1.5.2.2, 1.5.4]

4.2. The amount of time each cetacean participates in interactive program activities must be determined by the managing curator or paid supervisory staff member based on a number of factors, including the behavioral observation of the animal. Cetaceans undergoing medical treatment may only participate in interactive programs with the approval of the attending veterinarian. [See also General Standard 1.5.4]

4.3. Proper training of cetaceans that participate in guest interactive programs must take place at all AZA-accredited institutions and be under the supervision of qualified paid staff with appropriate training and experience. Paid staff must manage the interaction between animals and guests, and must be prepared to stop the interaction should the situation warrant. [See also General Standards 1.5.4, 1.5.12, 1.6.4]

4.4. The ratio of guests to animals should be determined by the type of interactive program being offered, and must be approved by the managing curator or paid supervisory staff. [See also General Standard 1.5.4]

4.5. The ratio of paid staff to cetaceans during interactive programs should be 1:1. [See also General Standards 1.5.4, 1.5.13, 11.4.1, 11.5.3]

Explanation: The behavior of each individual animal and guest may vary at any given time, requiring supervisory staff to focus on many different factors simultaneously.

4.6. In addition to a 1:1 ratio of paid staff to cetaceans (see 4.5. above) there should be at least one additional paid staff member assigned to provide safety oversight of all interactions during each session. The number of safety observers should be based on the number of guests and animals participating. Safety observers, dedicated solely to the task, must have an unobstructed view of the interactions at all times. [See also General Standards 1.5.4, 1.5.13, 11.4.1, 11.5.3]

Explanation: The safety observer(s) must provide oversight throughout the interaction to assure that encounters are conducted in a safe manner for all involved.

4.7. Interactive programming must include an educational component. Visitors should also receive instructions about appropriate behavior, and broader warnings that feeding, approaching, or swimming with cetaceans in the wild can harm both the cetaceans and humans, and is illegal in waters of some countries including the United States. [See also General Standards 1.5.3]

5. Reproduction and Perinatal Care

General Considerations:

The success of cooperative breeding programs is a fundamental AZA priority. Genetic diversity and demographic stability are vital to the population sustainability of species under human care. In many instances, they are also vital to the survival of a species worldwide. To focus on these twin goals, AZA has long required members to participate fully and cooperatively in the scientifically managed breeding of hundreds of species. These basic principles apply to cetacean-holding institutions.

A small number of jurisdictions prohibit breeding of certain cetaceans. AZA opposes government breeding bans on AZA-accredited institutions. Government bans are contrary to modern science, hinder vital reproductive, behavioral, and other scientific research that can be essential to the survival of a species, and are inconsistent with the long range welfare of the animals in human care and in the wild. Members in these jurisdictions cannot legally comply with the standards in this section 5 but must comply with all other AZA standards.

5.1 The institution must follow a written breeding plan to optimize the population sustainability of the species in collaboration with other cetacean-holding institutions. [See also General Standard 3.3.2]

5.2. Institutions engaged in cetacean reproduction should have paid staff with expertise in cetacean breeding.

5.3. Institutions engaged in cetacean reproduction must have facilities appropriately sized and designed to facilitate nursing, calf rearing, and separation from other animals if necessary. [See also General Standards 1.5.2, 10.3.3]

Explanation: Habitats housing females with calves must have sufficient straight-line glide paths for nursing, based on the professional judgment of the managing curator or paid supervisory staff and the attending veterinarian.

5.4. The institution must follow a detailed birth protocol and contingency plan which provides for the care of the mother during pregnancy and parturition and safety and care for the calf.

6. Behavioral Management and Training

General Considerations:

AZA considers behavioral management and applied animal training through the use of positive reinforcement to be critical and integral to maximizing the health and wellbeing of cetaceans.

6.1. The institution must engage all cetaceans in a behavior management program that enhances their care and welfare. [See also General Standard 1.6.4]

Explanation: Proper management programs should be individually as well as group based. Animal training techniques must be accomplished through positive reinforcement and operant conditioning that are designed to improve the animal's psychological and physical well-being.

7. Environment

General Considerations:

The management of water and environmental quality in cetacean habitats should meet the basic physiological needs of the species. Consideration should be given to contemporary and emerging scientific understanding of best practices in cetacean husbandry.

While zoos and aquariums may be required to meet minimum space government standards such as those of the U.S. Animal and Plant Health Inspection Service (APHIS), AZA seeks to strengthen cetacean animal welfare by focusing on output based welfare standards. AZA strongly supports scientifically based research that aims to optimize animal health and welfare.

There is considerable variation in the design of water treatment systems, and the establishment of optimum water parameters should be based on the physiological needs of the animals and the effectiveness of the water processing techniques involved.

Water systems of cetacean habitats can be open (flow-through), closed or semi-closed.

In open systems, water enters from a natural source or municipal line, passes through the habitat and exits as waste water into a natural source or municipal sewage system. Open systems typically do not require mechanical filtration, but filters or screens may be added to improve water clarity and reduce intake of fouling organisms or organic material.

Semi-closed systems rely on a lower replacement of habitat water which necessitates both filtration and water treatment to maintain a healthy environment for the animals.

Closed systems require the most intensive water treatment since virtually all of the water is reused or recirculated. Processes may include disinfection, temperature control, removal of solids, and color reduction.

7.1. Space

7.1.1. Habitats must provide consideration of the 3-dimensional space use, and provide sufficient space and environmental complexity to stimulate and promote natural behavioral activities and social interactions, resulting in healthy and socially-adapted cetaceans. [See also General Standards 1.5.1, 1.5.2, 10.3.3]

Explanation: Habitats must provide sufficient space so that the animal can make normal postural and social adjustments with adequate freedom of movement to be able to demonstrate species appropriate behaviors that promote positive welfare.

Space is one of the most difficult measures to standardize. There are no definitive scientific data which clearly define the amount of space needed for a cetacean to be healthy. Species-specific needs should dictate the size and architecture of the habitat required to enhance the animal's physical, psychological, and behavioral well-being. In-house experience and the experiences of other institutions, field biologists, or other experts should be considered in determining the best designs to meet these needs.

It is the quality of both the space and overall programmatic approach to good cetacean management that determines adequacy of the facility, not simply the square footage/volume of the habitat. Thus, if the cetaceans are healthy and socially adapted, then what is being provided meets the standard. It is inaccurate to say that because a facility has a certain amount of space it has good cetacean management.

7.1.2. Cetacean habitats must be designed to maintain cetaceans in appropriate social groups based on current scientific knowledge. [See also General Standards 1.5.2.1, 1.5.2.2]

Explanation: Each cetacean requires an environment that allows for social contacts and positive interactions with other cetaceans. The institution must be able to mitigate situations involving incompatible animals. This may be accomplished through a number of methodologies including training, transferring animals from one habitat into another, allowing animals to separate themselves from each other, or by other means.

7.2. Environmental Quality

7.2.1. Environmental conditions for animals must be designed, constructed, and managed to promote positive health and welfare; animals must be protected from environmental conditions which could be detrimental to their health and welfare. [See also General Standards 1.5.7, 1.5.9, 1.5.14, 1.5.15, 1.5.16]

Explanation: Environmental conditions to be considered include, but are not limited to, sunlight/UV exposure, temperature, air quality, water quality, and sound. Natural or anthropogenic environmental factors must be mitigated or eliminated when there is the possibility and/or evidence of potential negative impacts on the animals.

7.2.2. Water temperatures must be maintained within appropriate thermal tolerances for the species. [See also General Standard 1.5.2]

7.2.3. Indoor facilities should provide sufficient air exchanges with filtration technology appropriate to the location's outside air quality to effectively minimize exposure to particulates, chemical compounds, contaminants or pathogens that could be detrimental to the health and welfare of the animal. Institutions must implement an airborne environmental monitoring plan and mitigate concerns as deemed necessary by appropriate experts/professionals/scientific standards. [See also General Standards 1.5.2, 10.3.2]

7.2.4. The institution must minimize exposure of cetaceans to noises that have the potential to cause auditory discomfort or distress due to high amplitude or other characteristics. Both in-air and underwater noise must be considered in facility design for cetaceans, including the type and location of mechanical equipment, choice of habitat materials, and the sound profile of in-water equipment and activities. Noise exposure should be monitored with a system that is sensitive to the full frequency range of the species' hearing range and with systematic behavioral observations that would detect startle or

avoidance behavior. [See also General Standard 1.5.2]

7.3. Water Quality

7.3.1. Cetacean habitats must be designed and constructed to minimize the unsanitary accumulation of materials that may be detrimental to the health and well-being of the animals. This should include management to reduce and eliminate debris, and the growth of opportunistic or fouling organisms that could present a physical hazard to the animals (such as mussels, barnacles, etc.). [See also General Standards 1.5.1, 1.5.2, 1.5.9]

7.3.2. Baseline water quality parameters for cetacean habitats with acceptable range variances appropriate to the facility and species must be established by qualified senior curatorial and veterinary staff. These parameters must meet all regulatory requirements and be sufficient to maintain the health of the animals. Routine surveillance should monitor baseline parameters and track variances and trends in deviation from baseline parameters. In addition, known and predictable habitat extremes which may be beyond established variances should be monitored (such as seasonal high and low water temperature in outdoor habitats). [See also General Standard 1.5.9]

7.3.3. Source water for cetacean habitats should be adjusted as needed to meet the physiological needs specific to the species, and to optimize animal health and welfare. [See also General Standards 1.5.2, 1.5.9]

7.3.4. Water filtration, disinfection, turnover of replacement water, and water chemistry management must be monitored and sufficient to meet the needs of the species, and must comply with acceptable parameters and ranges established by qualified senior curatorial and veterinary staff. [See also General Standard 1.5.9]

8. Transportation

General Considerations:

The transport of cetaceans is executed through a detailed planning process managed by curatorial staff experienced in cetacean transport and approved by a qualified veterinarian. Careful attention is placed on assuring cetacean transports are executed safely and efficiently, and consider the animals' unique physiologies and their environmental requirements. In addition to adhering to AZA's general standard on transport (see general standard 1.5.11, pages 14 – 15), AZA-accredited institutions must also follow the cetacean-specific standards listed below. These standards apply to movement of cetaceans requiring more than two hours for transport from the time of removal from the habitat to the destination habitat.

AZA strongly supports the continued evolution of science to ensure continual improvement of animal welfare.

8.1 A pre-transport examination must be conducted by a qualified veterinarian to determine if the cetacean is fit for transport. [See also General Standards 1.5.11, 2.4.2]

8.2 A thorough written transport plan is required prior to transport and should include, at a minimum, mode of transport, roster of transport personnel and designated responsibilities, time line, equipment list, contingency plan, and emergency contact

information. [See also General Standards 1.5.11, 11.2.4]

8.3 Cetaceans should be monitored continuously during transport. One attending qualified paid or unpaid staff member per cetacean should be used on transports of four or less animals, with a minimum of two attending paid staff per transport, one of which includes a veterinarian. If more than four cetaceans are transported, additional qualified paid and/or unpaid staff should be added (the number to be determined by the managing curator or paid supervisory staff and the attending veterinarian). [See also General Standard 1.5.11]

8.4 Cetaceans should be properly secured, in open-top containers with the appropriate amount of water for proper welfare. In the event of emergency and/or rescue situations alternate methods may be considered as approved by the attending veterinarian. [See also General Standards 1.5.11, 10.3.3]

8.5 Water parameters, air temperature, and cabin pressure should be dictated by the approving veterinarian and managed appropriately by the transport supervisor. [See also General Standard 1.5.11]

END

ANIMAL CONTACT WITH THE GENERAL PUBLIC

Nearly every contact with other living organisms, whether it be with humans or other animals, carries some risk of disease transmission. Diseases that are spread from animals to humans are called zoonoses (adj. = zoonotic diseases). Responsible zoos should and do make reasonable attempts to limit the risk of the spread of disease from the animals in their care to their employees and to the general public. [4,9] For the general public, the risk of contracting disease from most zoo animals is minimal to nonexistent due to their distance and isolation from the animals. However, contact areas for the general public can present increased risks that can be controlled with reasonable precautions. For this paper, contact areas refers to those areas in which there is direct physical contact between animals and people. These precautions are most effective when they are part of an overall preventative medicine program for the zoological park. [5,8]

Risks of zoonotic disease can be markedly reduced by avoiding direct animal contact. However, this forgoes many valuable educational experiences and the establishment of a direct relationship between animals and the public. A reasonable alternative is adequate hand washing for those in direct contact with the animals. Hand washing is perhaps the single most effective personal hygiene procedure for reducing the risk of infection. [4] Given that fact, all areas in which the public has direct contact with animals should have access to hand washing facilities that are in the immediate vicinity of the contact (or an equivalent; e.g., bacteriocidal hand-wipes).

As outlined by the AZA and the USDA's Animal Welfare Act, animal contact areas should always be supervised by a trained zoo representative. Obviously, animals that are ill, should not be used. Human food consumption should not occur in the immediate area of contact. Additionally, zoological institutions should be aware that the Centers for Disease Control (CDC) standards advise additional precautions may be necessary for humans that they classify as at increased risk of disease, including those that are immunocompromised. When a reportable disease is identified, all appropriate local, state, and federal regulatory officials should be contacted.

More detailed information on zoonotic diseases may be obtained from a variety of veterinary and medical textbooks and journals, [1,6] and from public health officials. Additionally, the AZA's Quarantine Protocol provides further testing recommendations. [7] Also referenced at the end of this report is a review of some of the risks associated with animals and immunocompromised humans. [3] Following is a list of disease considerations and control programs recommended for animals commonly used in contact programs. Depending on the disease and history of the animals, testing protocols may vary from an initial or incoming quarantine test, to yearly repetitions. This protocol should be at the discretion of the institutional veterinarian.

Reptiles and Amphibians

Most notable among the disease risks presented by reptiles is the transmission of *Salmonella* sp. Salmonellosis is a common and often nonpathogenic infection of reptiles (in one survey, according to species, the infection rate ranged from 3 to 55 percent). [2] Diagnosis may be difficult. A cloacal swab or other sample positive on culture for *Salmonella* sp. is diagnostic for infection. However, due to intermittent fecal shedding of these organisms, false negative cultures frequently occur. So it is difficult, if not impossible to ascertain with certainty that an animal is *Salmonella* "negative". Therefore, all reptiles should be treated as *salmonella* carriers. Attempts to eliminate *Salmonella* carriers with antibiotic therapy have been unsuccessful and may be contraindicated as they can lead to chronic carrier states and increased resistance of these bacteria to antibiotics. Risks of transmission can be reduced in two ways: 1) avoid all direct contact with reptiles or surfaces with which they have come in contact, or, 2) allow only supervised contact followed by hand washing as previously described.

Reptiles can also transmit a variety of other organisms, mostly gastrointestinal in origin, and the same procedures described above should be effective in reducing the risks of transmission to those in contact. These other risks include other gram negative bacterial infections. Reptiles used in contact areas should be free of snake mites and pentastomids (e.g., *Armillifer* sp.).

Amphibians may present several of the same zoonotic risks as reptiles, so again, contact should be followed by hand washing.

Birds

Birds used in contact areas should be free of chlamydiosis and zoonotic parasites (e.g., giardia). Chlamydiosis testing is appropriate for members of the orders *Psittaciformes*, *Galliformes*, and *Columbiformes*. As in reptiles, salmonellosis can be present and difficult to diagnose and so, birds should be treated as suspects. In the general human population, avian tuberculosis is generally considered to have very low zoonotic potential, however, it can present significant risks for immunocompromised individuals. Care should be taken to avoid public contact with known infected flocks.

Mammals—General

All mammals are considered at risk for infection with rabies. Current rabies vaccines are licensed for use in only six domestic species: dogs, cats, ferrets, sheep, horses, and cows. For wild-caught individuals of most species, a prolonged (three-six month) quarantine is necessary to reduce the risk that they are infected with the virus. Even then, some species such as skunks, foxes, raccoons, and bats may still represent a greater risk.

Any skin lesions compatible with dermatomycosis ("ringworm") should be carefully evaluated in order to prevent transmission to those in direct contact with them.

Mammals—Primates

Unless extensive testing has been performed for a variety of viral, parasitic, and bacterial diseases, all direct public contact with primates should be avoided. Public contact also places the primates at considerable risk of contracting diseases from humans.

Mammals—Small Ruminants/Neonatal Ruminants

All small ruminants; e.g., pygmy goats, sheep, dwarf cattle, llamas, etc., that are greater than six months of age and used in contact areas should be tested for tuberculosis, brucellosis, and leptospirosis. Obviously, any animals with lesions compatible with sarcoptic mange (mange mite = *Sarcoptes scabeii*) should be removed from contact. Any animals with lesions compatible with contagious ecythema ("orf" in man) should be tested and removed from contact until proven negative. Calves should be checked and found free of *Cryptosporidium* sp. and other infections with protozoa. Other diseases of a potential zoonotic nature include infection with *Coxiella burneti* (Q-fever) in endemic areas. Additionally, recent reports indicate that infection with Johnes disease (*Mycobacterium paratuberculosis*) may present zoonotic concerns, primarily in goats.

Mammals—Swine

These animals should be checked for gastrointestinal infection with *Balantidium* sp. efforts made to control this infection. Additionally, consideration should be given to regular vaccination for the bacterial disease, *Erysipelothrix rhusipathae* ("diamond skin disease").

Mammals—Small Carnivores

In general, due to the potential for bites, small carnivores should be used in contact areas only with extreme caution. Due to the risk of bites, small felids are generally not used in direct contact. If they are, care must be taken that such animals are negative for infection with *Toxoplasma gondii*. All carnivores should be tested for and be free of zoonotic species of roundworms such as *Baylascaris* sp. Small

carnivores (e.g., raccoons and skunks) obtained from the wild may present a greater risk of rabies and their use should be avoided in contact areas.

Mammals—Rodents and Lagomorphs

When using rodents and lagomorphs in contact areas, consideration should be given to the risk of bites, past history, and exposure to hantavirus, salmonella, and tularemia.

Mammals—Chiroptera

At the present time, CDC regulations effectively prohibit the use of bats in direct contact areas.

Fish/Aquatic Tanks

Due to the potential for infection with atypical mycobacteria, *Vibrio* sp., *Erysipelothrix rhusiopathae*, and a variety of gram negative bacteria, contact with fish or touch tanks should also be followed by hand washing.

Summary

It is important to evaluate the risks of zoonotic diseases in a rational context. Contact animals can provide a valuable educational experience for visitors and participants in public programs to zoological parks and aquariums. Most zoonotic diseases of concern in public areas can be prevented with reasonable testing and quarantine programs and proper hand-washing techniques.

These are intended to be general guidelines and the risk of diseases can vary by area, so each zoological institution should develop its own zoonoses control program. Two excellent resources for reviewing testing and preventative procedures for many of these diseases are the American Association of Zoo Veterinarians= *Infectious Disease Notebook*, [1] and the American Veterinary Medical Association's *Zoonoses Updates*. [6] In summary, the most effective method for disease prevention is a complete and thorough veterinary program and common sense sanitary measures.

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Ambassador Animal Policy

Originally approved by the AZA Board of Directors – 2003
Updated and approved by the Board – July 2008 & June 2011
Modified from "Program Animal" to "Ambassador Animal" to avoid confusion with "Animal Programs"; approved by the CEC; no change to meaning of these terms - January 2015

The Association of Zoos & Aquariums (AZA) recognizes many benefits for public education and, ultimately, for conservation in ambassador animal presentations. AZA's Conservation Education Committee's Ambassador Animal Position Statement summarizes the value of ambassador animal presentations (see pages 85 - 87).

For the purpose of this policy, an Ambassador Animal is defined as "an animal whose role includes handling and/or training by staff or volunteers for interaction with the public and in support of institutional education and conservation goals". Some animals are designated as Ambassador Animals on a full-time basis, while others are designated as such only occasionally. Ambassador Animal-related Accreditation Standards are applicable to all animals during the times that they are designated as Ambassador Animals.

There are three main categories of Ambassador Animal interactions:

1. On Grounds with the Ambassador Animal Inside the Exhibit/Enclosure:
    i. Public access outside the exhibit/enclosure. Public may interact with animals from outside the exhibit/enclosure (e.g., giraffe feeding, touch tanks).
    ii. Public access inside the exhibit/enclosure. Public may interact with animals from inside the exhibit/enclosure (e.g., lorikeet feedings, 'swim with' programs, camel/pony rides).
2. On Grounds with the Ambassador Animal Outside the Exhibit/Enclosure:
    i. Minimal handling and training techniques are used to present Ambassador Animals to the public. Public has minimal or no opportunity to directly interact with Ambassador Animals when they are outside the exhibit/enclosure (e.g., raptors on the glove, reptiles held "presentation style").
    ii. Moderate handling and training techniques are used to present Ambassador Animals to the public. Public may be in close proximity to, or have direct contact with, Ambassador Animals when they're outside the exhibit/enclosure (e.g., media, fund raising, photo, and/or touch opportunities).
    iii. Significant handling and training techniques are used to present Ambassador Animals to the public. Public may have direct contact with Ambassador Animals or simply observe the in-depth presentations when they're outside the exhibit/enclosure (e.g., wildlife education shows).
3. Off Grounds:
    i. Handling and training techniques are used to present Ambassador Animals to the public outside of the zoo/aquarium grounds. Public may have minimal contact or be in close proximity to and have direct contact with Ambassador Animals (e.g., animals transported to schools, media, fund raising events).

These categories assist staff and accreditation inspectors in determining when animals are designated as Ambassador Animals and the periods during which the Ambassador Animal-related Accreditation Standards are applicable. In addition, these Ambassador Animal categories establish a framework for understanding increasing degrees of an animal's involvement in Ambassador Animal activities.

Ambassador animal presentations bring a host of responsibilities, including the safety and welfare of the animals involved, the safety of the animal handler and public, and accountability for the take-home, educational messages received by the audience. Therefore, AZA requires all accredited institutions that make ambassador animal presentations to develop an institutional ambassador animal policy that clearly identifies and justifies those species and individuals approved as ambassador animals and details their long-term management plan and educational program objectives.

AZA's accreditation standards require that education and conservation messages must be an integral component of all ambassador animal presentations. In addition, the accreditation standards require that the conditions and treatment of animals in education programs must meet standards set for the remainder of the animal collection, including species-appropriate shelter, exercise, appropriate environmental enrichment, access to veterinary care, nutrition, and other related standards. In addition, providing ambassador animals with options to choose among a variety of conditions within their environment is essential to ensuring effective care, welfare, and management. Some of these requirements can be met outside of the primary exhibit enclosure while the animal is involved in a program or is being transported. For example, free-flight birds may receive appropriate exercise during regular programs, reducing the need for additional exercise. However, the institution must ensure that in such cases, the animals participate in programs on a basis sufficient to meet these needs or provide for their needs in their home enclosures; upon return to the facility the animal should be returned to its species-appropriate housing as described above.

Ambassador Animal Position Statement

LAST REVISION 1/28/03
Re-authorized by the Board June 2011
Updated 1/28/15 to change "program animal" to "ambassador animal"

THE CONSERVATION EDUCATION COMMITTEE (CEC) OF THE ASSOCIATION OF ZOOS AND AQUARIUMS SUPPORTS THE APPROPRIATE USE OF AMBASSADOR ANIMALS AS AN IMPORTANT AND POWERFUL EDUCATIONAL TOOL THAT PROVIDES A VARIETY OF BENEFITS TO ZOO AND AQUARIUM EDUCATORS SEEKING TO CONVEY COGNITIVE AND AFFECTIVE (EMOTIONAL) MESSAGES ABOUT CONSERVATION, WILDLIFE AND ANIMAL WELFARE.

Utilizing these animals allows educators to strongly engage audiences. As discussed below, the use of ambassador animals has been demonstrated to result in lengthened learning periods, increased knowledge acquisition and retention, enhanced environmental attitudes, and the creation of positive perceptions concerning zoo and aquarium animals.

Audience Engagement

Zoos and aquariums are ideal venues for developing emotional ties to wildlife and fostering an appreciation for the natural world. However, developing and delivering effective educational messages in the free-choice learning environments of zoos and aquariums is a difficult task.

Zoo and aquarium educators are constantly challenged to develop methods for engaging and teaching visitors who often view a trip to the zoo as a social or recreational experience (Morgan and Hodgkinson, 1999). The use of ambassador animals can provide the compelling experience necessary to attract and maintain personal connections with visitors of all motivations, thus preparing them for learning and reflection on their own relationships with nature.

Ambassador animals are powerful catalysts for learning for a variety of reasons. They are generally active, easily viewed, and usually presented in close proximity to the public. These factors have proven to contribute to increasing the length of time that people spend watching animals in zoo exhibits (Bitgood, Patterson and Benefield, 1986, 1988; Wolf and Tymitz, 1981).

In addition, the provocative nature of a handled animal likely plays an important role in captivating a visitor. In two studies (Povey, 2002; Povey and Rios, 2001), visitors viewed animals three and four times longer while they were being presented in demonstrations outside of their enclosure with an educator than while they were on exhibit. Clearly, the use of ambassador animals in shows or informal presentations can be effective in lengthening the potential time period for learning and overall impact.

Ambassador animals also provide the opportunity to personalize the learning experience, tailoring the teaching session to what interests the visitors. Traditional graphics offer little opportunity for this level of personalization of information delivery and are frequently not read by visitors (Churchman, 1985; Johnston, 1998). For example, Povey (2001) found that only 25% of visitors to an animal exhibit read the accompanying graphic; whereas, 45% of visitors watching the same animal handled in an educational presentation asked at least one question and some asked as many as seven questions. Having an animal accompany the educator allowed the visitors to make specific inquiries about topics in which they were interested.

Knowledge Acquisition

Improving our visitors' knowledge and understanding regarding wildlife and wildlife conservation is a fundamental goal for many zoo educators using ambassador animals. A growing body of evidence supports the validity of using ambassador animals to enhance delivery of these cognitive messages as well.

- MacMillen (1994) found that the use of live animals in a zoomobile outreach program significantly enhanced cognitive learning in a vertebrate classification unit for sixth grade students.
- Sherwood and his colleagues (1989) compared the use of live horseshoe crabs and sea stars to the use of dried specimens in an aquarium education program and demonstrated that students made the greatest cognitive gains when exposed to programs utilizing the live animals.
- Povey and Rios (2002) noted that in response to an open-ended survey question ("Before I saw this animal, I never realized that . . . "), visitors watching a presentation utilizing an ambassador animal provided 69% cognitive responses (i.e., something they learned) versus 9% made by visitors viewing the same animal in its exhibit (who primarily responded with observations).
- Povey (2002) recorded a marked difference in learning between visitors observing animals on exhibit versus being handled during informal presentations. Visitors to demonstrations utilizing a raven and radiated tortoises were able to answer questions correctly at a rate as much as eleven times higher than visitors to the exhibits.

Enhanced Environmental Attitudes

Ambassador animals have been clearly demonstrated to increase affective learning and attitudinal change.

- Studies by Yerke and Burns (1991) and Davison and her colleagues (1993) evaluated the effect live animal shows had on visitor attitudes. Both found their shows successfully influenced attitudes about conservation and stewardship.
- Yerke and Burns (1993) also evaluated a live bird outreach program presented to Oregon fifth-graders and recorded a significant increase in students' environmental attitudes after the presentations.
- Sherwood and his colleagues (1989) found that students who handled live invertebrates in an education program demonstrated both short and long-term attitudinal changes as compared to those who only had exposure to dried specimens.
- Povey and Rios (2002) examined the role ambassador animals play in helping visitors develop positive feelings about the care and well-being of zoo animals.
- As observed by Wolf and Tymitz (1981), zoo visitors are deeply concerned with the welfare of zoo animals and desire evidence that they receive personalized care.

Conclusion

Creating positive impressions of aquarium and zoo animals, and wildlife in general, is crucial to the fundamental mission of zoological institutions. Although additional research will help us delve further into this area, the existing research supports the conclusion that ambassador animals are an important tool for conveying both cognitive and affective messages regarding animals and the need to conserve wildlife and wild places.

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RECOMMENDATIONS FOR DEVELOPING AN INSTITUTIONAL AMBASSADOR ANIMAL POLICY

LAST REVISION 2003
Re-authorized by the Board June 2011
Updated 1/28/15 to change "program animal" to "ambassador animal"

Rationale

Membership in AZA requires that an institution meet the AZA Accreditation Standards collectively developed by our professional colleagues. Standards guide all aspects of an institution's operations; however, the accreditation commission has asserted that ensuring that member institutions demonstrate the highest standards of animal care is a top priority. Another fundamental AZA criterion for membership is that education be affirmed as core to an institution's mission. All accredited public institutions are expected to develop a written education plan and to regularly evaluate program effectiveness.

The inclusion of animals (native, exotic and domestic) in educational presentations, when done correctly, is a powerful tool. CEC's **Ambassador Animal Position Statement** describes the research underpinning the appropriate use of ambassador animals as an important and powerful educational tool that provides a variety of benefits to zoo and aquarium educators seeking to convey cognitive and affective messages about conservation and wildlife.

Ongoing research, such as AZA's Multi-Institutional Research Project (MIRP) and research conducted by individual AZA institutions will help zoo educators to determine whether the use of ambassador animals conveys intended and/or conflicting messages and to modify and improve programs accordingly and to ensure that all ambassador animals have the best possible welfare.

When utilizing ambassador animals our responsibility is to meet both our high standards of animal care and our educational goals. Additionally, as animal management professionals, we must critically address both the species' conservation needs and the welfare of the individual animal. Because "wild creatures differ endlessly," in their forms, needs, behavior, limitations and abilities (Conway, 1995), AZA, through its Animal Welfare Committee, has recently given the responsibility to develop taxon- and species-specific animal welfare standards and guidelines to the Taxon Advisory Groups (TAG) and Species Survival Plan® Program (SSP). Experts within each TAG or SSP, along with their education advisors, are charged with assessing all aspects of the taxons' and/or species' biological and social needs and developing Animal Care Manuals (ACMs) that include specifications concerning their use as ambassador animals.

However, even the most exacting standards cannot address the individual choices faced by each AZA institution. Therefore, each institution is required to develop an ambassador animal policy that articulates and evaluates program benefits. The following recommendations are offered to assist each institution in formulating its own Institutional Ambassador Animal Policy, which incorporates the AZA Ambassador Animal Policy and addresses the following matters.

The Policy Development Process

Within each institution, key stakeholders should be included in the development of that institution's policy, including, but not limited to representatives from:

- the Education Department
- the Animal Husbandry Department

- the Veterinary and Animal Health Department
- the Conservation & Science Department
- the Behavioral Husbandry Department
- any animal show staff (if in a separate department)
- departments that frequently request special ambassador animal situations (e.g., special events, development, marketing, zoo or aquarium society, administration)

Additionally, staff from all levels of the organization should be involved in this development (e.g., curators, keepers, education managers, interpreters, volunteer coordinators).

To develop a comprehensive Ambassador Animal Policy, we recommend that the following components be included:

I. Philosophy

In general, the position of the AZA is that the use of animals in up close and personal settings, including animal contact, can be extremely positive and powerful, as long as:

1. The use and setting is appropriate.
2. Animal and human welfare is considered at all times.
3. The animal is used in a respectful, safe manner and in a manner that does not misrepresent or degrade the animal.
4. A meaningful conservation message is an integral component. Read the AZA Board-approved Conservation Messages.
5. Suitable species and individual specimens are used.

Institutional ambassador animal policies should include a philosophical statement addressing the above, and should relate the use of ambassador animals to the institution's overall mission statement.

II. Appropriate Settings

The Ambassador Animal Policy should include a listing of all settings both on and off site, where ambassador animal use is permitted. This will clearly vary among institutions. Each institution's policy should include a comprehensive list of settings specific to that institution. Some institutions may have separate policies for each setting; others may address the various settings within the same policy. Examples of settings include:

I. On-site programming
   A. Informal and non-registrants:
      1. On-grounds programming with animals being brought out (demonstrations, lectures, parties, special events, and media)
      2. Children's zoos and contact yards
      3. Behind-the-scenes open houses
      4. Shows
      5. Touch pools
   B. Formal (registration involved) and controlled settings
      1. School group programs
      2. Summer Camps
      3. Overnights
      4. Birthday Parties
      5. Animal rides
      6. Public animal feeding programs

II. Offsite and Outreach

1. PR events (TV, radio)

2. Fundraising events
3. Field programs involving the public
4. School visits
5. Library visits
6. Nursing Home visits (therapy)
7. Hospital visits
8. Senior Centers
9. Civic Group events

In some cases, policies will differ from setting to setting (e.g., on-site and off-site use with media). These settings should be addressed separately, and should reflect specific animal health issues, assessment of distress in these situations, limitations, and restrictions.

III. Compliance with Regulations

All AZA institutions housing mammals are regulated by the USDA's Animal Welfare Act. Other federal regulations, such as the Marine Mammal Protection Act, may apply. Additionally, many states, and some cities, have regulations that apply to animal contact situations. Similarly, all accredited institutions are bound by the AZA Code of Professional Ethics. It is expected that the Institution Ambassador Animal Policy address compliance with appropriate regulations and AZA Accreditation Standards.

IV. Collection Planning

All AZA accredited institutions should have a collection planning process in place. Ambaddador animals are part of an institution's overall collection and must be included in the overall collection planning process. The AZA Guide to Accreditation contains specific requirements for the institution collection plan. For more information about collection planning in general, please see the Collection Management pages in the Members Only section.

The following recommendations apply to ambassador animals:

1. Listing of approved ambassador animals (to be periodically amended as collection changes). Justification of each species should be based upon criteria such as:
   - Temperament and suitability for program use
   - Husbandry requirements
   - Husbandry expertise
   - Veterinary issues and concerns
   - Ease and means of acquisition / disposition according to the AZA code of ethics
   - Educational value and intended conservation message
   - Conservation Status
   - Compliance with TAG and SSP guidelines and policies
2. General guidelines as to how each species (and, where necessary, for each individual) will be presented to the public, and in what settings
3. The collection planning section should reference the institution's population management policies.

V. Conservation Education Message

As noted in the AZA Accreditation Standards, if animal demonstrations are part of an institution's programs, an educational and conservation message must be an integral component. The Ambassador Animal Policy should address the specific messages related to the use of ambassador animals, as well as the need to be cautious about hidden or conflicting messages (e.g., "petting" an animal while stating verbally that it makes a poor pet). This section may include or reference the AZA Conservation Messages.

Although education value and messages should be part of the general collection planning process, this aspect is so critical to the use of ambassador animals that it deserves additional attention. In addition, it is highly recommended to encourage the use of biofacts in addition to or in place of the live animals. Whenever possible, evaluation of the effectiveness of presenting ambassador animals should be built into education programs.

VI. Human Health and Safety

The safety of our staff and the public is one of the greatest concerns in working with ambassador animals. Although extremely valuable as educational and affective experiences, contact with animals poses certain risks to the handler and the public. Therefore, the human health and safety section of the policy should address:

1. Minimization of the possibility of disease transfer from non-human animals to humans, and vice-versa (e.g., handwashing stations, no touch policies, use of hand sanitizer)
2. Safety issues related to handlers' personal attire and behavior (e.g., discourage or prohibit use of long earrings, perfume and cologne, not eating or drinking around animals, smoking etc.)

AZA's Animal Contact Policy provides guidelines in this area; these guidelines were incorporated into accreditation standards in 1998.

VII. Animal Health and Welfare

Animal health and welfare are the highest priority of AZA accredited institutions. As a result, the Institutional Ambassador Animal Policy should make a strong statement on the importance of animal welfare. The policy should address:

1. General housing, husbandry, and animal health concerns (e.g. that the housing and husbandry for ambassador animals meets or exceeds general AZA standards and that the physical, social and psychological needs of the individual animal, such as adequate rest periods, provision of enrichment, visual cover, contact with conspecifics as appropriate, etc., are accommodated).
2. Where ever possible provide a choice for animal program participation, e.g., retreat areas for touch tanks or contact yards, evaluation of willingness/readiness to participate by handler, etc.)
3. The empowerment of handlers to make decisions related to animal health and welfare; such as withdrawing animals from a situation if safety or health is in danger of being compromised.
4. Requirements for supervision of contact areas and touch tanks by trained staff and volunteers.
5. Frequent evaluation of human / animal interactions to assess safety, health, welfare, etc.
6. Ensure that the level of health care for the ambassador animals is consistent with that of other animals in the collection.
7. Whenever possible have a "cradle to grave" plan for each ambassador animal to ensure that the animal can be taken care of properly when not used as an ambassador animal anymore.
8. If lengthy "down" times in ambassador animal use occur, staff should ensure that animals accustomed to regular human interactions can still maintain such contact and receive the same level of care when not used in programs.

VIII. Taxon Specific Protocols

We encourage institutions to provide taxonomically specific protocols, either at the genus or species level, or the specimen, or individual, level. Some taxon-specific guidelines may affect the use of ambassador animals. To develop these, institutions refer to the Conservation Programs Database.

Taxon and species -specific protocols should address:

1. How to remove the individual animal from and return it to its permanent enclosure, including suggestions for operant conditioning training.
2. How to crate and transport animals.
3. Signs of stress, stress factors, distress and discomfort behaviors.

Situation specific handling protocols (e.g., whether or not animal is allowed to be touched by the public, and how to handle in such situations)

1. Guidelines for disinfecting surfaces, transport carriers, enclosures, etc. using environmentally safe chemicals and cleaners where possible.
2. Animal facts and conservation information.
3. Limitations and restrictions regarding ambient temperatures and or weather conditions.
4. Time limitations (including animal rotation and rest periods, as appropriate, duration of time each animal can participate, and restrictions on travel distances).
5. The numbers of trained personnel required to ensure the health and welfare of the animals, handlers and public.
6. The level of training and experience required for handling this species
7. Taxon/species-specific guidelines on animal health.
8. The use of hand lotions by program participants that might touch the animals

IX. Logistics: Managing the Program

The Institutional Policy should address a number of logistical issues related to ambassador animals, including:

1. Where and how the ambassador animal collection will be housed, including any quarantine and separation for animals used off-site.
2. Procedures for requesting animals, including the approval process and decision making process.
3. Accurate documentation and availability of records, including procedures for documenting animal usage, animal behavior, and any other concerns that arise.

X. Staff Training

Thorough training for all handling staff (keepers, educators, and volunteers) is clearly critical. Staff training is such a large issue that many institutions may have separate training protocols and procedures. Specific training protocols can be included in the Institutional Ambassador Animal Policy or reference can be made that a separate training protocol exists.

It is recommended that the training section of the policy address:

1. Personnel authorized to handle and present animals.
2. Handling protocol during quarantine.
3. The process for training, qualifying and assessing handlers including who is authorized to train handlers.
4. The frequency of required re-training sessions for handlers.
5. Personnel authorized to train animals and training protocols.
6. The process for addressing substandard performance and noncompliance with established procedures.
7. Medical testing and vaccinations required for handlers (e.g., TB testing, tetanus shots, rabies vaccinations, routine fecal cultures, physical exams, etc.).
8. Training content (e.g., taxonomically specific protocols, natural history, relevant conservation education messages, presentation techniques, interpretive techniques, etc.).
9. Protocols to reduce disease transmission (e.g., zoonotic disease transmission, proper hygiene and hand washing requirements, as noted in AZA's Animal Contact Policy).

10. Procedures for reporting injuries to the animals, handling personnel or public.
11. Visitor management (e.g., ensuring visitors interact appropriately with animals, do not eat or drink around the animal, etc.).

XI. Review of Institutional Policies

All policies should be reviewed regularly. Accountability and ramifications of policy violations should be addressed as well (e.g., retraining, revocation of handling privileges, etc.). Institutional policies should address how frequently the Ambassador Animal Policy will be reviewed and revised, and how accountability will be maintained.

XII. TAG and SSP Recommendations

Following development of taxon-specific recommendations from each TAG and SSP, the institution policy should include a statement regarding compliance with these recommendations. If the institution chooses not to follow these specific recommendations, a brief statement providing rationale is recommended.

Policy on the Presentation of Animals

Approved by the Board of Directors – July 2008

The Association of Zoos & Aquariums (AZA) is dedicated to excellence in animal care and welfare, conservation, education, research, and the presentation of animals in ways that inspire respect for wildlife and nature. AZA's position is that animals should always be presented in adherence to the following core principles:

1. Animal and human health, safety, and welfare are never compromised.
2. Education and a meaningful conservation message are integral components of the presentation.
3. The individual animals involved are consistently maintained in a manner that meets their social, physical, behavioral, and nutritional needs.

Apes in Media and Commercial Performances

Apes, including chimpanzees, gorillas, bonobos, orangutans, and gibbons, are intelligent, sensitive, long-lived and highly social animals. As humans' closest living relatives, they are fascinating, and ape infants are magnetically appealing. These attributes have made apes popular as performers in commercial entertainment and advertising programs. But this popularity and attractiveness masks the often cruel and dangerous practices commonly required to make apes compliant in such appearances.

This White Paper presents a brief summary of the justification for:

- Eliminating the use of apes as performers in commercial entertainment.
- Establishing standards to ensure that public presentations and interpretive programs portray apes respectfully and accurately represent the biology and conservation status of apes.

Rationale

1. An ape infant normally remains with its mother for several years in a group environment, learning social skills essential for development of normal adult behaviors. But apes destined to be performers or photographic props are typically removed from their mother shortly after birth and, thus, are denied opportunities for normal social and psychological development. This has several commercial advantages to an owner. Infants removed in this manner will be appealing and remain submissive for handling by humans for several years. Mothers whose infants are removed will resume sexual cycling and produce another profitable infant quickly.

   But apes raised by humans in the absence of other members of their species will not normally acquire the skills to be socially and sexually competent as juveniles and adults. They may never readjust to life in a normal social group, and thus they are usually relegated to social and sexual isolation, which often leads to abnormal behaviors such as self-mutilation. For these reasons, it typically is not feasible to involve these individuals in conservation-based breeding programs.

2. Although endearing as infants, apes generally become physically powerful and unpredictable as they near adulthood. Their continued use as performers or props is potentially very dangerous to their handlers and audiences. Thus, handlers of ape performers often must use food deprivation, physical abuse, continuous tranquilization, or even electric shock to maintain control. Additionally, the animals may be modified to reduce their ability to cause harm, for example by removing their teeth. It should be noted that the apparent "smile" of a performing chimpanzee is actually a well-documented expression of fear. Such physical and psychological effects are difficult to alleviate even if the ape is rescued and placed in a caring environment. More often however, when ape performers become too difficult to handle, they lose their commercial value and are sold to roadside menageries with inexpert

handlers and often inhumane conditions.

3. Dressing apes in human clothing, or training them to engage in unnatural (usually human) behaviors, while entertaining to some, inaccurately portrays their biology and conservation status. Since conservation efforts rely on informed public opinion, these practices serve to undermine communications vital to achieving conservation. The use of apes in advertisements and other commercial performances can lead people to conclude falsely that apes make good pets.

4. Because apes and humans are genetically so similar, both are susceptible to many of the same communicable diseases. Close and unprotected contact between performing apes, their handlers, and audiences can threaten all with viral, bacterial, and parasite infection.

In summary, the use of apes in media and commercial performances should be eliminated.

Policy for Full Participation in the Species Survival Plan® Program Adopted by the AZA Board of Directors March 26, 2009

Cooperative animal management and conservation are among the primary goals of the Association of Zoos & Aquariums (AZA). These goals are best exemplified by the Association's shared commitment to its cornerstone animal management and conservation program: the Species Survival Plan® (SSP). The AZA Board of Directors recognizes that: 1. Cooperative animal management is vital to the long-term survival of professionally managed zoological parks and aquariums and their valuable and often irreplaceable live animal collections; and 2. All AZA-accredited institutions and Certified Related Facilities should be fully committed to the animal management, conservation, and public education goals as well as the collaborative spirit of the SSP partnership. Therefore, in 2000, the Board adopted the first policy of Full Participation in the SSP program by all AZA member institutions.

An SSP Master Plan articulates long- and short-term goals for a population. It plans the "family tree" of each managed population to minimize the rate of loss of genetic diversity and maintain the long-term demographic stability of the population. Breeding and other population management recommendations are made for each animal with consideration of logistical feasibility, animal welfare, and other factors that can improve SSP outcomes. In addition to breeding recommendations, Master Plans also include a recommendation not to breed certain animals for sound husbandry reasons and the betterment of the population. The Board recognizes that, in the collaborative process of managing the SSPs, the responsibility of each SSP Management Group is to make sound Master Plan recommendations, and also recognizes that, at times, these may conflict with a member institution's plans.

The Board emphasizes the responsibility of all institutions to cooperate in SSP Master Planning. If differences occur between an SSP's recommendations and a participating institution, the SSP Coordinator and the IR have a joint responsibility to work collaboratively to resolve it. When an SSP recommendation is fundamental to the collaborative management of the *ex situ* population, then the SSP recommendation should take precedence. In this process, all institutions' clearly stated and reasonable needs will be considered. If an SSP recommendation is not fundamental to the collaborative management of the *ex situ* population, then the SSP Management Group may elect to change it before the Master Plan is finalized. Thus, when an SSP Master Plan is approved its animal management recommendations will accurately reflect the vital needs of both the SSP and the participating institutions.

The Policy for Full Participation in the SSP Program ensures that AZA Accredited Institutions and Certified Related Facilities have input into the SSP Master Planning process and that they fully comprehend, agree to, and follow the final SSP recommendations. The Board now further defines Full Participation in the SSP program, and the processes used to achieve Full Participation, as follows:

- The Institutional Liaison (IL) at AZA Accredited Institutions or Certified Related Facilities will ensure that an Institutional Representative (IR) is appointed for each SSP species the institution/facility owns or holds, or for which the institution selects to support as defined by the SSP Management Group.

- Each IR must serve as the primary point of contact for all matters relating to their assigned SSP and will ensure that their institution responds to SSP needs for information during Master Planning.
- Periodically and regularly, the SSP Coordinator will ask each participating institution's IR how their institution will participate in the SSP: breeding, non-breeding (where an institution cannot breed due to space, or other factors), or support.

- Prior to the Master Plan development, at the request of the SSP Coordinator, each IR will provide all relevant data regarding individual SSP animals to the corresponding SSP Coordinator and Studbook Keeper in a timely manner. Further, IRs *must* ensure that all proposed acquisitions, transfers, or reintroductions of the SSP species are included in the SSP Master Plan or, if the Master Plan is

already published, are approved in advance by the SSP Coordinator or, preferably the SSP Management Group. SSP Coordinators and IRs must work collaboratively to develop an SSP Master Plan that strives to meet the needs of the SSP program and the needs of participating institutions.

- A draft of the SSP Master Plan, which must include a written record of all animal management recommendations, will be published on the AZA web site for a 30-day comment period and the SSP Coordinator will notify all IRs as soon as the Plan is available for comment. IRs at all participating institutions must inform the SSP Coordinator during the comment period that they will adhere to the Master Plan recommendations, or why they cannot, which will initiate the resolution discussions described below. If all participants agree with the recommendations, the final Master Plan will be published and implemented.

- Each IR must ensure that their institution's Director and IL are aware of the Master Plan and its recommendations and must initiate a collaborative discussion with the SSP Coordinator to resolve differences regarding Master Plan recommendations during the comment period. All involved should maintain accurate records of all related communications and discussions.

- If a resolution with no change to the SSP recommendations is found, then the final Master Plan will be published and implemented.

- If a resolution that causes changes in the SSP recommendations is reached, the edited Master Plan will be re-posted for a final 30-day comment period. IRs at institutions affected by the edited recommendation(s) must respond to the SSP Coordinator during the final comment period regarding their agreement to adhere to the recommendations; institutions not affected by the changes will not need to respond again. At this stage, the finalized Master Plan will be published and all institutions agreeing to adhere to the Master Plan's recommendations will commence implementing the Plan.

- If no resolution is found through direct discussion between the SSP Coordinator and the IR(s), they must work cooperatively with the IL, institutional Director, and corresponding TAG Chair to find one. If necessary, the discussion can extend for an additional 30 days, during which time the institution disputing a recommendation must not engage in any breeding or acquisitions and / or dispositions of species that run counter to the SSP recommendations.

If differences are not resolved by the steps outlined above, then the SSP Coordinator and / or any other involved parties must request that AZA's Wildlife Conservation Management Committee (WCMC) mediate the situation as defined in the AZA Animal Management Reconciliation Policy and, again, the institution disputing the recommendation must not engage in any population management practices that run counter to the SSP recommendations until the mediation and, if necessary, the reconciliation process is complete. Emergencies or other extraordinary circumstances will be considered for the health and welfare of the animals. Institutions not affected by the disagreement will continue carrying out their recommendations. (See: http://www.aza.org/board-policies/).

Species Survival Plan® – Animal Management Reconciliation Policy Adopted by the AZA Board of Directors March 26, 2009

The success of cooperative breeding programs depends on all institutions supporting Species Survival Plan® (SSP) recommendations. Therefore, the Board emphasizes the crucial nature of the cooperative process in the development of SSP Master Plans to ensure that animal management recommendations accurately reflect the vital needs of both the SSPs and participating Accredited Institutions and Certified Related Facilities.

If differences regarding SSP recommendations occur between the SSP Management Group and a member Institution, AZA's Full Participation Policy clearly articulates the process that both parties must utilize to resolve them prior to engaging in the Animal Management Reconciliation process. However, if such differences cannot be resolved, then the parties involved must request that AZA's Wildlife Conservation Management Committee (WCMC) mediate the situation.

- WCMC will (1) determine if all efforts to resolve differences have been exhausted and, (2) determine if the recommendations in question are fundamental to the cooperative management of the *ex situ* population. If both situations are true, then WCMC will notify all parties and appoint a Mediation Task Force which includes the WCMC Chair / designee, one member of WCMC selected by each party to represent them, the SSP Coordinator, the institution's Director and two other institutional representatives, and AZA's VP of Animal Conservation.

- The Mediation Task Force will conduct a confidential review of the situation in less than 30 days. Within 2 weeks of the completed review, the WCMC Chair / designee will draft a mediation report describing a consensus decision, which will be reviewed by the participating parties. Comments on the draft report must be returned within a week of distribution. The WCMC Chair / designee will consider all comments and produce a final mediation report. Assuming a resolution is reached, the report will be submitted to all participants involved in the process and the matter will be closed.

- If the mediation process yields no resolution, WCMC must notify all parties and initiate the reconciliation process, during which the institution in question must not engage in any population management practices that run counter to the SSP until a resolution is found. The Reconciliation Committee, over which the WCMC Chair / designee presides, will include the institution's Director or designee, the WCMC Board Liaison, and AZA's Sr. VP of Conservation, VP of Animal Conservation, and Executive Director. The Reconciliation Committee will consider the Mediation Task Force report and determine if additional information is required.

- In its call for greater accountability, the AZA Board holds that action by the Accreditation Commission and / or the Ethics Board can be taken against a member institution that: (1) demonstrates a pattern of a failure to participate and / or (2) demonstrates an action contrary to an SSP program recommendation which threatens the short- or long-term management of the *ex situ* population. Therefore, the Reconciliation Committee will specifically consider if either of these instances is found to be valid.

- If it is determined that the member institution's action is not detrimental to the cooperative management of the *ex situ* population, then the Master Plan will be changed accordingly and the results of these findings will be incorporated into a reconciliation final report submitted to the AZA Conservation Office.

- If it is determined that the member institution's action is detrimental to the cooperative management of the *ex situ* population, and / or is part of a pattern of a failure to participate, then the Master Plan will stand as is and the Reconciliation Committee will notify the institution that they must comply with it. If the institution refuses this directive, the Reconciliation Committee will note this in the reconciliation final report filed with AZA's Conservation Office and provide the report to the Accreditation Commission and the Ethics Board for consideration.

AZA Policy on Responsible Population Management

Approved by the AZA Board of Directors January 12, 2016

PREAMBLE

The stringent requirements for AZA accreditation, and high ethical standards of professional conduct, are unmatched by similar organizations and far surpass the United States Department of Agriculture's Animal and Plant Health Inspection Service's requirements for licensed animal exhibitors. Every AZA member must abide by a Code of Professional Ethics (https://www.aza.org/code-of-ethics). In order to continue these high standards, AZA-accredited institutions and certified related facilities should make it a priority, when possible, to acquire animals from and transfer them to other AZA member institutions, or members of other regional zoo associations that have professionally recognized accreditation programs.

AZA-accredited institutions and certified related facilities cannot fulfill their important missions of conservation, education, and science without live animals. Responsible management and the long-term sustainability of living animal populations necessitates that some individuals be acquired and transferred, reintroduced or even humanely euthanized at certain times. The acquisition and transfer of animals should be prioritized by the long-term sustainability needs of the species and AZA-managed populations among AZA-accredited and certified related facilities, and between AZA member institutions and non-AZA entities with animal care and welfare standards aligned with AZA. AZA member institutions that acquire animals from the wild, directly or through commercial vendors, should perform due diligence to ensure that such activities do not have a negative impact on species in the wild. Animals should only be acquired from non-AZA entities that are known to operate legally and conduct their business in a manner that reflects and/or supports the spirit and intent of the AZA Code of Professional Ethics as well as this Policy.

I. INTRODUCTION

This AZA Policy on Responsible Population Management provides guidance to AZA members to:

1. Assure that animals from AZA member institutions and certified related facilities are not transferred to individuals or organizations that lack the appropriate expertise or facilities to care for them [*see taxa specific appendices (in development)*],

2. Assure that the health and conservation of wild populations and ecosystems are carefully considered as appropriate,

3. Maintain a proper standard of conduct for AZA members during acquisition and transfer/reintroduction activities, including adherence to all applicable laws and regulations,

4. Assure that the health and welfare of individual animals is a priority during acquisition and transfer/reintroduction activities, and

5. Support the goals of AZA's cooperatively managed populations and associated Animal Programs [Species Survival Plans® (SSPs), Studbooks, and Taxon Advisory Groups (TAGs)].

This AZA Policy on Responsible Population Management will serve as the default policy for AZA member institutions. Institutions should develop their own AZA Policy on Responsible Population Management in order to address specific local concerns. Any institutional policy must incorporate and not conflict with the AZA acquisition and transfer/transition standards.

II. LAWS, AUTHORITY, RECORD-KEEPING, IDENTIFICATION AND DOCUMENTATION

The following must be considered with regard to the acquisition or transfer/management of all living animals and specimens (their living and non-living parts, materials, and/or products):

1. Any acquisitions, transfers, euthanasia and reintroductions must meet the requirements of all applicable local, state, federal and international laws and regulations. Humane euthanasia must be performed in accordance with the established euthanasia policy of the institution and follow the recommendations of current AVMA Guidelines for the Euthanasia of Animals (2013 Edition https://www.avma.org/KB/Policies/Documents/euthanasia.pdf) or the AAZV's Guidelines on the Euthanasia of Non-Domestic Animals. Ownership and any applicable chain-of-custody must be documented. If such information does not exist, an explanation must be provided regarding such animals and specimens. Any acquisition of free-ranging animals must be done in accordance with all local, state, federal, and international laws and regulations and must not be detrimental to the long-term viability of the species in the wild.

2. The Director/Chief Executive Officer of the institution must have final authority for all acquisitions, transfers, and euthanasia.

3. Acquisitions or transfers/euthanasia/reintroductions must be documented through institutional record keeping systems. The ability to identify which animal is being transferred is very important and the method of identifying each individual animal should be documented. Any existing documentation must accompany all transfers. Institutional animal records data, records guidelines have been developed for certain species to standardize the process (https://www.aza.org/idmag-documents-and-guidelines).

4. For some colonial, group-living, or prolific species, it may be impossible or highly impractical to identify individual animals when these individuals are maintained in a group. These species can be maintained, acquisitioned, transferred, and managed as a group or colony, or as part of a group or colony.

5. If the intended use of specimens from animals either living or non-living is to create live animal(s), their acquisition and transfer should follow the same guidelines. If germplasm is acquired or transferred with the intention of creating live animal(s), ownership of the offspring must be clearly defined in transaction documents (e.g., breeding loan agreements).

   Institutions acquiring, transferring or otherwise managing specimens should consider current and possible future uses as new technologies become available. All specimens from which nuclear DNA could be recovered should be carefully considered for preservation as these basic DNA extraction technologies already exist.

6. AZA member institutions must maintain transaction documents (e.g., confirmation forms, breeding agreements) which provide the terms and conditions of animal acquisitions, transfers and loans, including documentation for animal parts, products and materials. These documents should require the potential recipient or provider to adhere to the AZA Policy on Responsible Population Management, and the AZA Code of Professional Ethics, and must require compliance with the applicable laws and regulations of local, state, federal, and international authorities.

7. In the case of animals (living or non-living) and their parts, materials, or products (living or non-living) held on loan, the owner's written permission should be obtained prior to any transfer and documented in the institutional records.

8. AZA SSP and TAG necropsy and sampling protocols should be accommodated.

9. Some governments maintain ownership of the species naturally found within their borders. It is therefore incumbent on institutions to determine whether animals they are acquiring or transferring

are owned by a government entity, foreign or domestic, and act accordingly by reviewing the government ownership policies available on the AZA website. In the case of government owned animals, proposals for and/or notifications of transfers must be sent to the species manager for the government owned species.

III. ACQUISITION REQUIREMENTS

A. General Acquisitions

1. Acquisitions must be consistent with the mission of the institution, as reflected in its Institutional Collection Plan, by addressing its exhibition/education, conservation, and/or scientific goals regarding the individual or species.

2. Animals (wild, feral, and domestic) may be held temporarily for reasons such as assisting governmental agencies or other institutions, rescue and/or rehabilitation, research, propagation or headstarting for reintroduction, or special exhibits.

3. Any receiving institution must have the necessary expertise and resources to support and provide for the professional care and management of the species, so that the physical, psychological, and social needs of individual animals and species are met.

4. If the acquisition involves a species managed by an AZA Animal Program, the institution should communicate with the Animal Program Leader and, in the case of Green SSP Programs, must adhere to the AZA Full Participation Policy (http://www.aza.org/assets/2332/board_approved_full_participation_26_mar_097.pdf).

5. AZA member institutions should consult AZA Wildlife Conservation and Management Committee (WCMC)-approved TAG Regional Collection Plans (RCPs), Animal Program Leaders, and AZA Animal Care Manuals (ACMs) when making acquisition decisions.

6. AZA member institutions that work with commercial vendors that acquire animals from the wild, must perform due diligence to assure the vendors' collection of animals is legal and using ethical practices. Commercial vendors should have conservation and animal welfare goals similar to those of AZA institutions.

7. AZA member institutions may acquire animals through public donations and other non-AZA entities when it is in the best interest of the animal and/or species.

B. Acquisitions from the Wild

Maintaining wild animal populations for exhibition, education and wildlife conservation purposes is a core function of AZA-member institutions. AZA zoos and aquariums have saving species and conservation of wildlife and wildlands as a basic part of their public mission. As such, the AZA recognizes that there are circumstances where acquisitions from the wild are needed in order to maintain healthy, diverse animal populations. Healthy, sustainable populations support the objectives of managed species programs and the core mission of AZA members. In some cases, acquiring individuals from the wild may be a viable option in addition to, or instead of, relying on breeding programs with animals already in human care.

Acquiring animals from the wild can result in socioeconomic benefit and environmental protection and therefore the AZA supports environmentally sustainable/beneficial acquisition from the wild when conservation is a positive outcome.

1. Before acquiring animals from the wild, institutions are encouraged to examine alternative sources including other AZA institutions and other regional zoological associations or other non-AZA entities.

2. When acquiring animals from the wild, both the long-term health and welfare impacts on the wild population as well as on individual animals must be considered. In crisis situations, when the

survival of a population is at risk, rescue decisions will be made on a case-by-case basis by the appropriate agency and institution.

3. AZA zoos and aquariums may assist wildlife agencies by providing homes for animals born in nature if they are incapable of surviving on their own (e.g., in case of orphaned or injured animals) or by euthanizing the animals because they pose a risk to humans or for humane reasons.

4. Institutions should only accept animals from the wild after a risk assessment determines the zoo/aquarium can mitigate any potential adverse impacts on the health, care and maintenance of the existing animals already being housed at the zoo or aquarium, and the new animals being acquired.

IV. TRANSFER, EUTHANASIA AND REINTRODUCTION REQUIREMENTS

A. Living Animals

Successful conservation and animal management relies on the cooperation of many entities, both AZA and non-AZA. While preference is given to placing animals with AZA-accredited institutions or certified related facilities, it is important to foster a cooperative culture among those who share AZA's mission of saving species and excellence in animal care.

1. AZA members should assure that all animals in their care are transferred, humanely euthanized and/or reintroduced in a manner that meets the standards of AZA, and that animals are not transferred to those not qualified to care for them properly. Refer to IV.12, below, for further requirements regarding euthanasia.

2. If the transfer of animals or their specimens (parts, materials, and products) involves a species managed by an AZA Animal Program, the institution should communicate with that Animal Program Leader and, in the case of Green SSP Programs must adhere to the AZA Full Participation Policy (http://www.aza.org/assets/2332/board_approved_full_participation_26_mar_097.pdf).

3. AZA member institutions should consult WCMC-approved TAG Regional Collection Plans, Animal Program Leaders, and Animal Care Manuals when making transfer decisions.

4. Animals acquired solely as a food source for animals in the institution's care are not typically accessioned. There may be occasions, however, when it is appropriate to use accessioned animals that exceed population carrying capacity as feeder animals to support other animals. In some cases, accessioned animals may have their status changed to "feeder animal" status by the institution as part of their program for long-term sustained population management of the species.

5. In transfers to non-AZA entities, AZA members must perform due diligence and should have documented validation, including one or more letters of reference, for example from an appropriate AZA Professional Fellow or other trusted source with expertise in animal care and welfare, who is familiar with the proposed recipient and their current practices, and that the recipient has the expertise and resources required to properly care for and maintain the animals. Any recipient must have the necessary expertise and resources to support and provide for the professional care and management of the species, so that the physical, psychological, and social needs of individual animals and species are met within the parameters of modern zoological philosophy and practice. Supporting documentation must be kept at the AZA member institution (see #IV.9 below).

6. Domestic animals should be transferred in accordance with locally acceptable humane farming practices, including auctions, and must be subject to all relevant laws and regulations.

7. AZA members must not send any non-domestic animal to auction or to any organization or individual that may display or sell the animal at an animal auction. *See certain taxa-specific appendices to this Policy (in development) for information regarding exceptions.*

8. Animals must not be sent to organizations or individuals that allow the hunting of these individual animals; that is, no individual animal transferred from an AZA institution may be hunted. For purposes of maintaining genetically healthy, sustainable zoo and aquarium populations, AZA-accredited institutions and certified related facilities may send animals to non-AZA organizations or individuals (refer to #IV.5 above). These non-AZA entities (for instance, ranching operations) should follow appropriate ranch management practices and other conservation minded practices to support population sustainability.

9. Every loaning institution must annually monitor and document the conditions of any loaned specimen(s) and the ability of the recipient(s) to provide proper care (refer to #IV.5 above). If the conditions and care of animals are in violation of the loan agreement, the loaning institution must recall the animal or assure prompt correction of the situation. Furthermore, an institution's loaning policy must not be in conflict with this AZA Policy on Responsible Population Management.

10. If living animals are sent to a non-AZA entity for research purposes, it must be a registered research facility by the U.S. Department of Agriculture and accredited by the Association for the Assessment & Accreditation of Laboratory Animal Care, International (AAALAC), if eligible. For international transactions, the receiving facility must be registered by that country's equivalent body having enforcement over animal welfare. In cases where research is conducted, but governmental oversight is not required, institutions should do due diligence to assure the welfare of the animals during the research.

11. Reintroductions and release of animals into the wild must meet all applicable local, state, and international laws and regulations. Any reintroduction requires adherence to best health and veterinary practices to ensure that non-native pathogens are not released into the environment exposing naive wild animals to danger. Reintroductions may be a part of a recovery program and must be compatible with the IUCN Reintroduction Specialist Group's Reintroduction Guidelines (http://www.iucnssc rsg.org/index.php?option=com_content&view=article&id=197&Itemid=59).

12. Humane euthanasia may be employed for medical reasons to address quality of life issues for animals or to prevent the transmission of disease. AZA also recognizes that humane euthanasia may be employed for managing the demographics, genetics, and diversity of animal populations. Humane euthanasia must be performed in accordance with the established euthanasia policy of the institution and follow the recommendations of current AVMA Guidelines for the Euthanasia of Animals (2013 Edition https://www.avma.org/KB/Policies/Documents/euthanasia.pdf) or the AAZV's Guidelines on the Euthanasia of Non-Domestic Animals.

B. Non-Living Animals and Specimens

AZA members should optimize the use and recovery of animal remains. All transfers must meet the requirements of all applicable laws and regulations.

1. Optimal recovery of animal remains may include performing a complete necropsy including, if possible, histologic evaluation of tissues which should take priority over specimens' use in education/exhibits. AZA SSP and TAG necropsy and sampling protocols should be accommodated. This information should be available to SSP Programs for population management.

2. The educational use of non-living animals, parts, materials, and products should be maximized, and their use in Animal Program sponsored projects and other scientific projects that provide data for species management and/or conservation must be considered.

3. Non-living animals, if handled properly to protect the health of the recipient animals, may be utilized as feeder animals to support other animals as deemed appropriate by the institution.

4. AZA members should consult with AZA Animal Program Leaders prior to transferring or disposing of remains/samples to determine if existing projects or protocols are in place to optimize use.

5. AZA member institutions should develop agreements for the transfer or donation of non-living animals, parts, materials, products, and specimens and associated documentation, to non-AZA entities such as universities and museums. These agreements should be made with entities that have appropriate long term curation/collections capacity and research protocols, or needs for educational programs and/or exhibits.

Appendix I: DEFINITIONS

Acquisition: Acquisition of animals can occur through breeding (births, hatchings, cloning, and division of marine invertebrates = "fragging"), trade, donation, lease, loan, transfer (inter- and intra-institution), purchase, collection, confiscation, appearing on zoo property, or rescue and/or rehabilitation for release.

Annual monitoring and Due diligence: Due diligence for the health of animals on loan is important. Examples of annual monitoring and documentation include and are not limited to inventory records, health records, photos of the recipient's facilities, and direct inspections by AZA professionals with knowledge of animal care. The level of due diligence will depend on professional relationships.

AZA member institution: In this Policy "AZA member institutions" refers to AZA-accredited institutions and certified related facilities (zoological parks and aquariums). "AZA members" may refer to either institutions or individuals.

Data sharing: When specimens are transferred, the transferring and receiving institutions should agree on data that must be transferred with the specimen(s). Examples of associated documentation include provenance of the animal, original permits, tags and other metadata, life history data for the animal, how and when specimens were collected and conserved, etc.

Dispose: "Dispose/Disposing of" in this document is limited to complete and permanent removal of an individual via incineration, burying or other means of permanent destruction

Documentation: Examples of documentation include ZIMS records, "Breeding Loan" agreements, chain-of-custody logs, letters of reference, transfer agreements, and transaction documents. This is documentation that maximizes data sharing.

Domestic animal: Examples of domestic animals may include certain camelids, cattle, cats, dogs, ferrets, goats, pigs, reindeer, rodents, sheep, budgerigars, chickens, doves, ducks, geese, pheasants, turkeys, and goldfish or koi.

Ethics of Acquisition/Transfer/Euthanasia: Attempts by members to circumvent AZA Animal Programs in the acquisition of animals can be detrimental to the Association and its Animal Programs. Such action may also be detrimental to the species involved and may be a violation of the Association's Code of Professional Ethics. Attempts by members to circumvent AZA Animal Programs in the transfer, euthanasia or reintroduction of animals may be detrimental to the Association and its Animal Programs (unless the animal or animals are deemed extra in the Animal Program population by the Animal Program Coordinator). Such action may be detrimental to the species involved and may be a violation of the Association's Code of Professional Ethics.

"Extra" or Surplus: AZA's scientifically-managed Animal Programs, including SSPs, have successfully bred and reintroduced critically endangered species for the benefit of humankind. To accomplish these critical conservation goals, populations must be managed within "carrying capacity" limits. At times, the number of individual animals in a population exceeds carrying capacity, and while meaning no disrespect for these individual animals, we refer to these individual animals as "extra" within the managed population.

Euthanasia: Humane death. This act removes an animal from the managed population. Specimens can be maintained in museums or cryopreserved collections. Humane euthanasia must be performed in accordance with the established euthanasia policy of the institution and follow the recommendations of current AVMA Guidelines for the Euthanasia of Animals (2013 Edition https://www.avma.org/KB/Policies/Documents/euthanasia.pdf) or the AAZV's Guidelines on the Euthanasia of Non-Domestic Animals.

Feral: Feral animals are animals that have escaped from domestication or have been abandoned to the wild and have become wild, and the offspring of such animals. Feral animals may be acquired for temporary or permanent reasons.

Group: Examples of colonial, group-living, or prolific species include and are not limited to certain terrestrial and aquatic invertebrates, fish, sharks/rays, amphibians, reptiles, birds, rodents, bats, big herds, and other mammals,

Lacey act: The Lacey Act prohibits the importation, exportation, transportation, sale, receipt, acquisition or purchase of wildlife taken or possessed in violation of any law, treaty or regulation of the United States or any Indian tribal law of wildlife law. In cases when there is no documentation accompanying an acquisition, the animal(s) may not be transferred across state lines. If the animal was illegally acquired at any time then any movement across state or international borders would be a violation of the Lacey Act.

Museum: It is best practice for modern zoos and aquariums to establish relationships with nearby museums or other biorepositories, so that they can maximize the value of animals when they die (e.g., knowing who to call when they have an animal in necropsy, or specimens for cryopreservation). Natural history museums that are members of the Natural Science Collections Alliance (NSCA) and frozen biorepositories that are members of the International Society of Biological and Environmental Repositories (ISBER) are potential collaborators that could help zoos find appropriate repositories for biological specimens.

Non-AZA entity: Non – AZA entities includes facilities not accredited or certified by the AZA, facilities in other zoological regions, academic institutions, museums, research facilities, private individuals, etc.

Reintroduction: Examples of transfers outside of a living zoological population include movements of animals from zoo/aquarium populations to the wild through reintroductions or other legal means.

Specimen: Examples of specimens include animal parts, materials and products including bodily fluids, cell lines, clones, digestive content, DNA, feces, marine invertebrate (coral) fragments ("frags"), germplasm, and tissues.

Transaction documents: Transaction documents must be signed by the authorized representatives of both parties, and copies must be retained by both parties*. In the case of loans, the owner's permission for appropriate activities should be documented in the institutional records. This document(s) should be completed prior to any transfer. In the case of rescue, confiscation, and evacuation due to natural disasters, it is understood that documents may not be available until after acceptance or shipping. In this case documentation (e.g., a log) must be kept to reconcile the inventory and chain of custody after the event occurs. (*In the case of government owned animals, notification of transfers must be sent to species manager for the government owned species).

Transfer: Transfer occurs when an animal leaves the institution for any reason. Reasons for transfer or euthanasia may include cooperative population management (genetic, demographic or behavioral management), animal welfare or behavior management reasons (including sexual maturation and individual management needs). Types of transfer include withdrawal through donation, trade, lease, loan, inter- and intra-institution transfers, sale, escape, theft. Reintroduction to the wild, humane euthanasia or natural death are other possible individual animal changes in a population.

Appendix 2: RECIPIENT PROFILE EXAMPLE

Example questions for transfers to non-AZA entities (from AZA-member Recipient Profile documents):

Has your organization, or any of its officers, been indicted, convicted, or fined by a State or Federal agency for any statute or regulation involving the care or welfare of animals housed at your facility? (If yes, please explain on a separate sheet).

Recipients agree that the specimen(s) or their offspring will not be utilized, sold or traded for any purpose contrary to the Association of Zoos and Aquariums (AZA) Code of Ethics (enclosed)

References, other than (LOCAL ZOO/AQUARIUM) employees, 2 minimum (please provide additional references on separate sheet):		
Reference Name		Phone
Facility		Fax
Address		E-mail
City	State	Zip
Country		AZA Member?
Reference Name		Phone
Facility		Fax

Address		E-mail	
City	State		Zip
Country		AZA Member?	
Veterinary Information:			
Veterinarian		Phone	
Clinic/Practice		Fax	
Address		E-mail	
City	State		Zip
Country			

How are animals identified at your facility? If animals are not identified at your facility, please provide an explanation about why they are not here:

Where do you acquire and send animals? (Select all that apply)			
AZA Institutions	Non-AZA Institutions	Exotic Animal Auctions	Pet Stores
Hunting Ranches	Dealers	Private Breeders	Non-hunting Game Ranches
Entertainment Industry	Hobbyists	Research Labs	Wild
Other			

What specific criteria are used to evaluate if a facility is appropriate to receive animals from you?

Please provide all of the documents listed below:
Required:
1. Please provide a brief statement of intent for the specimens requested.
2. Resumes of primary caretakers and those who will be responsible for the husbandry and management of animals.
3. Description (including photographs) of facilities and exhibits where animals will be housed.
4. Copy of your current animal inventory.

Only if Applicable:
5. Copies of your last two USDA inspection reports (if applicable).
6. Copies of current federal and state permits.
7. Copy of your institutional acquisition/disposition policy.

(in-house use only) In-Person Inspection of this facility (Staff member/Date, attach notes):

(Local institution: provide Legal language certifying that the information contained herein is true and correct)

(Validity of this: This document and all materials associated will be valid for a period of 2 years from date of signature.)

Example agreement for Receiving institution (agrees to following condition upon signing):

> Recipient agrees that the animal(s) and its (their) offspring will not be utilized, sold or traded for the purpose of commerce or sport hunting, or for use in any stressful or terminal research or sent to any animal auction. Recipient further agrees that in the event the recipient intends to dispose of an animal donated by (INSTITUTION), recipient will first notify (INSTITUTION) of the identity of the proposed transferee and the terms and conditions of such disposition and will provide (INSTITUTION) the opportunity to acquire the animal(s) without charge. If (INSTITUTION) elects not to reclaim the animal within ten (10) business days following such notification, then, in such event, (INSTITUTION) waives any right it may have to the animal and recipient may dispose of the animal as proposed.

Institutional note: The text above is similar to the language most dog breeders use in their contracts when they sell a puppy. If people can provide that protection to the puppies they place, zoos/aquariums can provide it for animals that we place too! Some entities have been reluctant to sign it, and in that case we revert to a loan and our institution retains ownership of the animal. Either way, we are advised of the animal's eventual placement and location.

CODE OF PROFESSIONAL ETHICS

PREAMBLE

The continued existence of zoological parks and aquariums depends upon recognition that our profession is based on the respect for the dignity of the animals in our care, the people we serve, and most importantly, for each other. Members of the American Association of Zoological Parks and Aquariums (known as American Zoo and Aquarium Association or "AZA") have an important role in the preservation of our heritage. To fulfill this role, we must understand the relationships we share with the public, the animals under our care, and with each other. A consequent obligation of membership is to maintain high standards of ethical conduct. Members must have the courage and foresight to live up to their responsibilities within principles of professionalism.

A code of ethics provides standards by which we can judge our professional conduct. We must find in our consciences the point against which to test our actions. It is our desire to maintain the respect and confidence of fellow members and the public that ought to provide us with incentive for the highest degree of ethical conduct. The possible loss of that respect and confidence numbers among the severest sanctions possible.

So long as our profession is guided by these principles, ours will continue to be a respected profession.

CODE OF PROFESSIONAL ETHICS

The following Code of Professional Ethics of the American Zoo and Aquarium Association (AZA) shall form the basis for all disciplinary actions of the Association.

Deviation by a member from the AZA Code of Professional Ethics or from any of the rules officially adopted by the Board of Directors supplemental thereto, or any action by a member that is detrimental to the best interest of the zoo and aquarium profession and the AZA, shall be considered unethical conduct. The member shall be subject to investigation by the AZA Ethics Board and, if warranted, to disciplinary action by the Ethics Board and/or the AZA Board of Directors. The Code is intended as an inspirational guide for members and as a basis for disciplinary action.

This Code cannot apply to nonmembers, except as they have agreed to follow the Code in a signed agreement to participate in an AZA program. This Code defines the type of ethical conduct the public has a right to expect, not only of staff members of an institution but also of their nonprofessional employees and associates in all matters pertaining to professional zoological park and aquarium employment. The director and/or governing authority of a member institution should ultimately be responsible for the conduct of their employees and others affiliated with the member institution.

The Obligations of Professional Ethics set forth are aspirational in character and represent the objectives towards which every member should strive.

The Code's Mandatory Standards, unlike the Obligations of Professional Ethics, are mandatory in character and, if violated, may result in disciplinary action. The Mandatory Standards, to be uniformly applied to all members, establish a level of conduct below which no member may fall without being subject to disciplinary action. The Code makes no attempt to prescribe either disciplinary procedures or penalties for violation of Mandatory Standards. The severity of judgment against a member found to be in violation of a Mandatory Standard shall be determined by the character of the offense and the attendant circumstances. The Ethics Board, in applying the Mandatory Standards, may find interpretive guidance in the basic principles embodied in the standards and objectives reflected in the Obligations of Professional Ethics.

The Board of Directors and Ethics Board shall be responsible for interpreting the Code of Professional Ethics, subject to all provisions of the Charter and Bylaws. The Ethics Board shall investigate allegations, render decisions, and prescribe subsequent actions and/or penalties. An appeal may be made to the AZA Executive Committee within thirty (30) days of the date of mailing the Ethics Board decision to the complainant and defendant. Appeals may be granted if the Executive Committee concludes that the complainant or defendant appealing the Ethics Board decision has demonstrated that (1) there are new facts, not known at the time of the Ethics Board investigation, which the Executive Committee believes may have changed the outcome; or (2) the Ethics Board did not follow relevant AZA procedures; or (3) the penalty recommended by the Ethics Board was excessive under the circumstances. An appeal shall be granted upon a majority vote of the AZA Executive Committee. If the request for an appeal is granted, the Board of Directors shall hear the appeal at its next regularly scheduled meeting. The appellate decision of the Board of Directors shall be final and cannot be appealed.

I. OBLIGATIONS OF PROFESSIONAL ETHICS

In order to promote high standards of conduct in our profession, the AZA has formulated the following basic principles for the guidance of its members:

AS A MEMBER OF THE AZA, I PLEDGE TO:

A. Realize that I have moral responsibilities not only to my professional associates, my fellow employees, and the public, but also to the animals under my care.
B. Display the highest integrity, the best judgment or ethics possible, and use my professional skills to the best interests of all.
C. Deal fairly with members in the dissemination of professional information and advice.
D. Use only legal and ethical means when seeking to influence governmental legislation or regulations.
E. Promote the interests of wildlife conservation, biodiversity, and animal welfare to the public and to colleagues.
F. Maintain high standards of personal, professional, and business conduct and behavior.
G. Promote the interests of AZA and do my full share of work in support of the concepts and ideals of AZA.
H. Cooperate with qualified zoos/aquariums and other qualified persons/organizations in breeding programs of endangered and other species.
I. Aid the professional development of those who enter the zoological park and aquarium profession by assisting them to understand the functions, duties, and responsibilities of the profession.
J. Seek opportunities to be of constructive service in civic affairs and, to the best of my ability, advance the understanding of all nature to the community in which I live.
K. Encourage publication of significant achievements in breeding husbandry, medical technology, architecture, etc., in the appropriate publications generally familiar to members.
L. Endeavor at all times to improve zoos and aquariums.

II. MANDATORY STANDARDS

1. MAINTAINING INTEGRITY AND COMPETENCE OF THE ZOOLOGICAL PARK AND AQUARIUM PROFESSION
   a. A member shall make no materially false statement or deliberately fail to disclose a material fact in connection with an application for membership or accreditation in AZA.
   b. A member shall not endorse the application for membership in AZA of a person known by that member to be unqualified in respect to character, education, length of service, or some other relevant factor.

2. MISCONDUCT
   a. A member shall not violate a Mandatory Standard.

b. A member shall not solicit the aid of another individual to circumvent, or assist another to violate, a Mandatory Standard.
c. A member shall not knowingly engage in activities contrary to local, state, federal, or international laws as such laws relate to our profession; and a member will, to the best of his or her ability, cooperate with governmental agencies regulating animal welfare and animal transactions.
d. A member shall not engage in conduct that adversely affects, or is prejudicial to, the concepts and ideals of the AZA.
e. A member shall make every effort to assure that all animals in his/her collection and under his/her care are disposed of in a manner which meets the current disposition standards of the Association and do not find their way into the hands of those not qualified to care for them properly.

3. DISCLOSURE OF INFORMATION
a. A member shall not knowingly misinform others regarding animal records or specimen disposition, professional information, and advice.
b. A member shall not alter animal records or alter the facts concerning age, condition, or other material information about any animal in order to affect the sale, trade, loan, or other transaction with respect to such animal.
c. A member shall immediately bring to the attention of the Ethics Board of the AZA any information concerning a clear violation of a Mandatory Standard.
d. A member shall issue no statement to the public which he/she knows (or should know) to be false or misleading.

GENERAL ADVISORIES

The policies outlined below have been previously adopted by the AZA Board of Directors and are considered to expand the interpretation of the AZA Code of Professional Ethics that was developed to guide ethical conduct of all members. Amendments can be proposed by the AZA Board of Directors, the Ethics Board, and/or AZA members. Any proposed changes shall be reviewed by the Ethics Board and, as appropriate, by legal counsel. Proposed changes shall be submitted to the AZA Board of Directors for action.

Animal Auctions (1981)

AZA members offering wildlife for sale at auctions attended by the general public are in violation of the AZA Code of Professional Ethics, specifically Mandatory Standards, 2-e, which states, "As a member of AZA, I pledge to...make every effort to assure that all animals...do not find their way into the hands of those not qualified to care for them properly."

Use of Animal Exchange (1984)

Individuals may utilize Animal Exchange to purchase specimens if the following criteria are followed: the individual should, during the initial contact, identify his or her intentions and make the seller aware if the specimen(s) will go to the purchaser's private collection and not the zoo in question (adopted by the Ethics Board at the direction of the AZA Board).

Notification of Ethics Code Violations (1986-revised 1993)

Copies of all final actions (the denial of an appeal to the Executive Committee or notification to the complainant and defendant of the appellate decision) regarding violations of the Code of Professional Ethics shall be sent to the Director, Chief Executive Officer, or Governing Authority of the institution of the defendant(s) involved. Such final actions shall be published in Communiqué, including a brief and factual statement of the action, including the name(s) of the defendant(s) involved in the violation and a listing of the sections of the Code which were violated to provide guidance for AZA members.

Procurement of SSP Animals (1986-modified 1990-revised 1993)

Attempts by members to circumvent AZA conservation programs in the procurement and/or disposition of specimens of SSP animals are detrimental to the Association and its conservation programs. Such action may be detrimental to the species involved and could be construed as a violation of the Association's Code of Professional Ethics. All Association members should work through SSP species coordinators and appropriate propagation groups in efforts to procure or dispose of specimens of SSP species.

ETHICS BOARD

The Ethics Board, elected by the membership, has separate duties from the AZA Board of Directors. The Ethics Board shall consist of nine (9) members. The Ethics Board proposed guidelines on the function of the Ethics Board for consideration during the San Diego Annual Conference in 1977. The AZA Board of Directors unanimously adopted these guidelines and revised them in 1993:

All Ethics Board matters shall be handled in accordance with the objectives and standards of the Association's Code of Professional Ethics.

Matters called to the attention of the Ethics Board must be in writing and addressed to the Chairman or any member of the Ethics Board. The ethics charge must be signed by the complainant and must contain a full statement of the matter to be reviewed by the Ethics Board.

An individual filing an ethics complaint shall be advised that full disclosure of the complaint shall be made available to all parties concerned. At this time, the complainant has the right to withdraw the complaint; and thus, the matter will be closed.

The Ethics Board, the complainant, and the defendant shall at all times during the investigation maintain strict confidentiality regarding the case.

The initial responsibility of the Ethics Board is to determine the validity of the charge(s). If the charge(s) appears to be valid, the Ethics Board shall initiate a full investigation. Once a full investigation is initiated, the Ethics Board must determine if an Ethics Code violation has occurred and what action and/or penalty is necessary. In making its determination, the Ethics Board shall consult, where necessary or appropriate, with AZA legal counsel. The Ethics Board has the responsibility and authority to issue a judgment and determine disciplinary actions. The AZA Board of Directors serves as an appellate board.

The AZA Board of Directors may also direct the Ethics Board to perform additional duties as needed.

The following procedures are hereby established:

The Chairman of the Ethics Board will distribute copies of all duly received ethics complaints to members of the Ethics, Board, the AZA President, Executive Director, Deputy Director, and the AZA Board Liaison to the Ethics Board. All correspondence pertaining to the case shall be marked "Confidential." The Chairman shall request each Ethics Board member to render an opinion as to the validity of the complaint and make a recommendation on how to proceed and action to be taken.

The Chairman shall review all recommendations, suggest an Ethics Board action and, if necessary, arrange an appearance before the Ethics Board and/or a site visitation.

The Ethics Board may dismiss any charge for which there is insufficient evidence to pursue the investigation or for which there is no apparent violation of the Ethics Code. The complainant, defendant, and the Board of Directors shall be notified by the Ethics Board of the decision, for which there is no appeal.

The Ethics Board may determine that there is no clear violation or proof of a violation but that there is concern about the conduct of a member. The Ethics Board may issue a letter of concern.

If the Ethics Board determines that a violation of the Code has occurred, the following options shall be considered: (A) Letter of Reprimand from the Ethics Board. (B) Letter of Reprimand from the Ethics Board and the AZA Board of Directors. (C) Censorship and suspension of certain membership privileges (up to 2 years), to be determined on a case-by-case basis. (D) Expulsion from AZA membership for a minimum of two years. The Ethics Board may function as an investigative body as it determines whether or not a violation has occurred. The Ethics Board shall make its determination based upon the greater weight of the evidence presented to it. Ethics matters often do not involve legal matters but are founded on moral values and industry standards and practices. Where necessary or appropriate, the Ethics Board shall consult with AZA legal counsel.

The Ethics Board shall deliberate, during a meeting or conference call, on the final determination and action to be taken. Actions by the Ethics Board shall require a two-thirds (2/3) vote of its members. When a two-thirds (2/3) majority vote of guilty is not received the issue shall be dropped.

The Chairman of the Ethics Board shall submit a report to the President, Executive Director, Deputy Director, AZA Board Liaison Representative, and legal counsel, if necessary, with the Ethics Board's findings and course of disciplinary action to be taken prior to advising the complainant and defendant.

The Chairman of the Ethics Board shall advise the complainant and the defendant of the findings and action taken by the Ethics Board.

An appeal may be made to the AZA Executive Committee within thirty (30) days of the date of mailing the Ethics Board decision to the complainant and defendant. Appeals may be granted if the Executive Committee concludes that the complainant or defendant appealing the Ethics Board decision has demonstrated that (1) there are new facts, not known at the time of the Ethics Board investigation, which the Executive Committee believes may have changed the outcome; or (2) the Ethics Board did not follow relevant AZA procedures; or (3) the penalty recommended by the Ethics Board was excessive under the circumstances. Appeals shall be granted upon a majority vote of the AZA Executive Committee. The AZA Board of Directors shall hear the appeal at its next regularly scheduled meeting. The appellate decision of the Board of Directors shall be final and cannot be appealed.

At least one member of the Ethics Board shall be present during the appeal.

The Ethics Board shall notify the complainant and the defendant of the final action of the AZA Board of Directors once the appellate decision has been rendered.

GENERAL ADMINISTRATIVE POLICIES OF THE ACCREDITATION COMMISSION

Accidents Involving Injury or Welfare. Should an accident occur at an accredited institution or certified related facility involving serious staff injuries, serious public injuries, animal incidents/escapes, or significant barrier breaches, a written report must be submitted to the Accreditation Commission within thirty (30) days explaining what happened and noting what actions are being taken by the institution as a result. The Commission will determine if a special inspection or other action is necessary and will notify the institution in writing once a decision has been made.

Considerations for submitting such reports include:
Staff Injuries – site and/or animal-related injury to staff, causing death or significant trauma resulting in an emergency care visit and/or sustained disability.
Public Injuries – site and/or animal-related injury to people other than staff, causing death or significant trauma resulting in an emergency care visit and/or sustained disability.
Animal Incidents/Escapes – these include unusual circumstances involving a single animal or group of animals, and/or multiple similar individual cases or incidents of mass mortality; escape of a dangerous animal or mass escapes of any species within the zoo or during transport; or death/grievous trauma to individuals or group of individuals within the zoo or during transport.
Barrier Breaches – these include incidents in which a visitor crosses a barrier or guardrail, putting themselves, others, or the animal in jeopardy of serious injury, significant trauma, or death.

Accidents Resulting In Human Fatality: An on-site inspection shall be automatic after any accident *involving an animal* that results in a human fatality. The inspection shall focus on the incident and shall be scheduled to take place as soon after the incident as can be reasonably scheduled. Site related human fatalities not involving an animal shall be immediately assessed by AZA relative to the AZA Accreditation Standards. The Commission shall determine if a special inspection is necessary in those cases and will notify the institution in writing once a decision has been made. Institutions are responsible for submitting a written report to the Accreditation Commission as noted under *"Accidents Involving Injury or Welfare"*, above.

Accreditation Cycle: The cycle of accreditation shall be five years, after which an institution must undergo the full accreditation process again. *Exceptions:* •In cases where an applicant processes and is granted accreditation on a cycle in conflict with the geographic rule, its *initial* accreditation cycle will be shortened to four and a half years to place it on the proper seasonal cycle for future inspections (see *Geographic Location*, pages 115 – 116). •If an extension is granted, the year of extension shall be deducted from the institution's subsequent five-year accreditation cycle if the institution receives accreditation at the end of the year of extension (see *Extensions of Accreditation*, page 115). •If an institution is tabled, the year of tabling shall be deducted from the institution's subsequent five-year accreditation cycle if the institution receives accreditation at the end of the tabled year (see *Table Accreditation*, page 31 – 32 of the 2019 *Guide to the Accreditation of Zoological Parks and Aquariums*).

Achieving Accreditation: Accreditation can only be achieved by a judgment from the AZA Accreditation Commission that the applicant institution meets or exceeds all AZA standards,

and supports and employs AZA practices and philosophies. This decision is preceded by a lengthy application and full evaluation process, involving information from a number of sources, including a thorough on-site inspection.

Addition of an Elephant Inspector. For institutions with elephants, an inspector who specializes in elephants will be added to the regular team and will focus on the institution's elephant program.

Addition of a Specialist Inspector. It is occasionally necessary for a specialist inspector to be added to an inspection team. The Commission will determine, on a case by case basis, when this is justified and will notify the institution. Examples would be zoological parks with aquarium facilities of a sufficient size and nature to require an inspection team member specializing in aquatics. The same would be true of aquariums with exhibits containing land-based animals, etc.

Attendance At The Hearing (Who Should Be There). The institution's CEO/Director must attend the hearing to answer questions, authorize action, and to make any statements desired. The CEO/Director may bring to the hearing any individual(s) he or she would like to have present. This may include members of the institution's staff, governing authority, support organization, or local government officials. If the CEO/Director cannot attend, a written notification must be provided to AZA as soon as possible. The notification must include an explanation, and give full authority to an individual selected by the CEO/Director to represent the institution in place of the CEO/Director.

CEO/Director Requirement For Applicants Not Currently AZA-Accredited. Any institution not currently accredited may not apply for accreditation if it is without a *permanent*, full-time CEO/Director. Materials may not be submitted under the leadership of an *Interim* or *Acting* Director.

CEO/Director Vacancy. When a vacancy occurs in the position of CEO/Director the AZA-accredited institution must notify the Accreditation Commission in writing, and a follow-up letter must be submitted to the Commission every six months thereafter reporting the status of the search until such time as the position is filled. The status update must include details as to what has occurred, how the institution is being managed in the interim, and an estimate as to when it is expected the position may be filled. An AZA-accredited institution that is without the services of a permanent, full-time, compensated CEO/Director for longer than one year may be subject to loss of accreditation and membership. An AZA-accredited institution that is temporarily without a permanent fulltime CEO/Director must process for accreditation on its regular 5-year cycle. Extensions may not be granted. Institutions that are not accredited by AZA may not apply without a permanent fulltime CEO/Director in place.

CEO/Director Vacancy Occurring Immediately After Receiving AZA Accreditation. If a CEO/Director vacates his or her position at the institution within ninety days of receiving accreditation, the Commission may, in its discretion, require written biannual progress reports, or may require that the institution reprocess again at the earliest opportunity to do so once a new CEO/Director is in place.

Change of Governance. A change in governance refers to a change of the governing authority, such as from a governmental agency to society or vice versa. If a change in governance occurs, a letter or affidavit from the CEO or chairperson of the new governing authority is required pledging to uphold and abide by accreditation standards, including the AZA Charter & Bylaws, Code of Ethics, Policy on Responsible Population Management, and

other related policies. The letter must be sent to the Commission within 30 days of the governance change.

Change of Location. In the event of a relocation of an accredited institution, the institution must reprocess for accreditation as soon as the new location is officially open. An application must be received by the submission deadline that falls immediately prior to, or following, the opening.

Change of Ownership. A change in ownership refers to the sale or formal transfer of ownership of an institution. In the event of a change in ownership of an accredited institution, the institution must reprocess for accreditation within 12 months, regardless of when its accreditation is scheduled to expire. A letter or affidavit from the CEO or chairperson of the purchasing or receiving organization is also required pledging to uphold and abide by accreditation standards, including the AZA Charter & Bylaws, Code of Ethics, Policy on Responsible Population Management, and other related policies. The letter must also indicate the new owner's intent to submit materials applying for accreditation within the required time period. The letter must be sent to the Commission within 30 days of final sale or transfer.

Change of Scope. Accredited institutions must notify the Commission in writing in the event that a change in the scope of its facility occurs (for example, the opening of a new exhibit of significant proportions, or an exhibit that changes the overall scope of the institution, such as an aquarium in a zoo, or land-based animals in an aquarium, etc.). The Commission may assign a team, or individual, to conduct an inspection. Cost of such inspection shall be borne by the accredited institution concerned. (See *Interim and Follow-up Inspections*, page 116.)

Complaints. If a documented, written complaint is received from a member of the general public, the institution's staff, or a professional colleague regarding an AZA-accredited institution, the Commission will take steps to determine the situation and, based upon its findings, will make recommendations to the institution, or take appropriate action. In some cases the Commission may assign a team to conduct an inspection. (See *Interim and Follow-up Inspections*, page 116.)

Determining Compliance: The AZA Accreditation Commission, based on the collective professional training and experience of its 15 member panel, is the body officially tasked with determining whether a standard is being met or not. The Commission's decision is absolute. In cases of denial of accreditation, an appeal of that denial may be made to the AZA Executive Committee [see page 32 of the 2019 *Guide to the Accreditation of Zoological Parks & Aquariums*].

Elephant Management and Care – Requesting A Temporary Variance Under the AZA Standards. Institutions requesting a temporary variance under the AZA Standards For Elephant Management & Care should submit that request to the Accreditation Commission at the time it becomes apparent that a temporary variance may be needed. The request should be in the form of a letter detailing the temporary variance being requested, and should include all necessary documentation. The Commission will consider the requested temporary variance and will thereafter notify the institution of its decision. Temporary variances must be re-applied for prior to the expiration date contained in the variance, or documentation must be provided that the reason for the temporary variance has been addressed. **NOTE**: institutions not currently AZA-accredited must be in full compliance with AZA standards at the time application is made.

Elephant Management and Care – Special Welfare Variance. In cases where an elephant's physical and/or psychological welfare is believed to be at risk by implementation of a

standard, an institution may request a special welfare variance under the AZA Standards For Elephant Management & Care. To qualify for a special welfare variance, the elephant(s) in question must be considered geriatric, and the institution must provide evidence that the elephant's welfare will be at risk without the variance, or that moving the elephant could result in serious injury or death. Evidence must be in the form of documentation from the institution's veterinary and animal management professional staff. The request for a special welfare variance must be in the form of a letter detailing the variance being requested, and containing all necessary documentation. The AZA Accreditation Commission will consider the request and will thereafter notify the institution of its decision. If granted, the variance will be for three (3) years and must be re-applied for prior to the expiration date contained in the variance. If granted, institutions must submit an annual report documenting the status and health of the elephant(s), including veterinary records, assessments, behavioral profiles, and the written recommendations of the institution's veterinary and animal management professional staff. **NOTE:** for the purpose of this variance, welfare is defined as physical health and function, and psychological well-being.

Elephant Management and Care – Substantial Compliance Extension. In cases where a deadline is set in a standard, and an institution has an existing variance until that deadline but has not yet achieved full compliance by the deadline, a Substantial Compliance Extension of the existing variance may be approved by the Accreditation Commission. Approval may be granted only if the institution can demonstrate clear and steady progress toward compliance with the standard, is actively engaged and working towards full compliance, and has identified a realistic completion date. Regular updates will be required until compliance is achieved, and the Commission may require an inspection of the elephant program, at its discretion, as a condition of maintaining accreditation.

Enforcement of Standards: Institutions holding accreditation from AZA must maintain all AZA standards, and support AZA practices and philosophies during the period that accreditation is held. If AZA has evidence that this is not taking place, it will work with the institution to see that standards are met, or will take whatever action is appropriate to ensure the integrity of its process, including removal of AZA-accreditation when deemed necessary. (See *Interim and Follow-up Inspections*, page 116, and *Rescinding Accreditation*, page 118.)

Extensions of Accreditation. Under extenuating or special circumstances extensions of accreditation may be granted to extend current accreditation by one year. An institution desiring an extension must submit a request in writing to the Accreditation Commission, including a full explanation as to why the extension is being requested, as soon as possible to avoid a potential lapse in accreditation and AZA membership. Before considering the request, the Commission may require a site visit to assess the institution's ability to maintain accreditation standards during the period of extension. If a site visit is deemed necessary, it must take place prior to any decision being made by the Commission. The Commission will thereafter make a determination, and the institution will be notified. A second extension will be considered only in extreme cases, and will require a site visit. If an extension is granted, the year of extension shall be deducted from the institution's subsequent five-year accreditation cycle should the institution receive accreditation at the end of the year of extension. [NOTE: *Missing a deadline will not be considered an acceptable reason for extension of accreditation. Extenuating or special circumstances shall not include a vacancy in the position of CEO/Director.]*

Geographic Location and Accreditation Cycle. To optimize weather conditions for inspectors and to create a more even distribution of the case load for the Commission, institutions located in geographic areas that typically experience a mild winter season will be

placed on a five-year accreditation cycle that affords a fall-winter inspection (i.e., will have their accreditation expire in March). Institutions located in geographic areas that typically experience a harsh winter season will be placed on a five-year accreditation cycle that affords a spring-summer inspection (i.e., will have their accreditation expire in September). In cases where an applicant processes and is granted accreditation on a cycle in conflict with the geographic rule, its *initial* accreditation cycle will be shortened to four and a half years to place it on the proper seasonal cycle for future inspections. **NOTE:** Because aquariums, by their nature, are primarily indoor facilities, they will be placed on a five-year accreditation cycle that affords a fall-winter inspection (i.e., will have their accreditation expire in March).

Institution's Membership In AZA: An institution's membership and participation in AZA must be maintained as a condition of accreditation.

Institutions Under Construction. Institutions currently being constructed may apply for accreditation prior to the opening date; however, the on-site inspection will not take place until the institution is officially open to the general public and a permanent, full-time CEO/Director has been on board for at least six months. (See *Deadlines* and *Early Submittals* page 20 of the 2019 *Guide to the Accreditation of Zoological Parks and Aquariums*).

Institutions Within Institutions. In order to be accredited, a zoological park or aquarium which is a part of a larger institution (such as a university, museum, or botanical garden) must be distinct enough to be separately identified and must adequately fulfill the definition of a zoological park or aquarium as earlier defined. When accreditation is granted in such cases, it will apply only to the zoological park or aquarium concerned and not to the non-zoological activities of the larger organization in fields in which AZA has no expertise.

Interim and Follow-up Inspections. The Accreditation Commission or AZA Board of Directors may, at its discretion, assign a team to conduct an interim or follow-up inspection of any AZA-accredited institution at any time during the five-year accreditation period. A follow-up inspection shall be conducted for all tabled institutions at the end of the tabled period, as a condition of proceeding forward in the process. While on site, the individual or team may, at their discretion, inspect all or portions of the institution. Cost of such inspection shall be borne by the institution as a requirement of maintaining and/or achieving accreditation. *(See Mid-Cycle Inspections,* page 117*).*

"Last Minute" Inspector Replacements. Although it is highly unusual, a "last minute" change in inspectors may become necessary in a sudden emergency. In this case, there may not be sufficient time for AZA to follow its standard procedure and provide the institution with a list of potential replacements. Every effort will be made to alert the institution in advance, but in extreme circumstances, AZA will assign a replacement inspector and notify the institution thereafter.

Mentoring Program. The Commission, itself, does not conduct "pre-accreditation" inspections. However, the Commission strongly encourages institutions that are not AZA-accredited to have their operations evaluated by an official mentor approved and assigned by the Accreditation Commission prior to submitting an application. The Commission recommends that currently-accredited institutions consider doing the same prior to undergoing the process again when accreditation expires at the end of five-years (see *Long Term Expectations* page 33 of the 2019 *Guide to the Accreditation of Zoological Parks and Aquariums*). [Note: Institutions currently accredited by AZA: all institutions accredited by AZA are expected to maintain AZA standards as a condition of accreditation. A mentor can aid an institution in identifying areas that need to be strengthened or addressed during the period between AZA

inspections. Should a mentor discover that serious concerns exist or standards are not being consistently met at an accredited institution, tabling of accreditation may occur.]

To request assignment of a Commission-approved mentor, the institution should contact AZA accreditation staff. A Commission-approved mentor is a professional from an accredited institution who serves regularly as an inspector, is a past or present member of the Accreditation Commission, or an Accreditation Commission Advisor. The Commission-approved mentor is considered by the Accreditation Commission as being particularly well versed in current accreditation standards, expectations, and fundamental AZA philosophies and best practices, and can be consulted throughout the preparation phase. The mentor will be available to the institution by phone throughout the preparation process to provide guidance regarding policies, procedures, agreements, situations, philosophies, and the assembly of the application materials as needed. In addition, it is considered important that the mentor visit the applicant institution for an unofficial inspection at least once, and thereafter as desired by the institution. Following the inspection, the mentor will provide a list identifying all things (including physical facilities and related issues, as well as practices and/or documents) that need work prior to making application, or before the official inspection, as the case may be. Additionally, in the case of *first-time* applicants, the mentor will provide a professional opinion as to whether the institution is best advised to make application later rather than sooner and, if later, may continue to work with the institution long-term in guiding it to full readiness. Any costs incurred by the mentor (including related travel, accommodations, and meals) are to be reimbursed directly to the mentor by the applicant institution.

Mentors should be requested *at least one year prior to submitting an application*, and no earlier than five years prior to submitting an application. Mentors cannot be provided at the time of application or after an application is submitted. *Having a mentor does not guarantee that an institution will be granted accreditation.* Accreditation can only be achieved by a judgment from the AZA Accreditation Commission that the applicant institution meets or exceeds all AZA standards, and supports and employs AZA practices and philosophies.

Mid-Cycle Inspections. The Accreditation Commission may, at its discretion, require a mid-cycle inspection as a condition of maintaining accreditation. When such an inspection is required, the visiting team will focus on key areas identified when accreditation was issued, and will also review the institution as a whole. Cost of such inspection shall be borne by the institution as a condition of maintaining accreditation. An application and application fees are not required.

Mid-cycle inspections may apply to the following:

- Institutions that are tabled and receive accreditation one year later.
- Institutions that meet minimum standards when accreditation is granted but that the Commission believes may be challenged in successfully maintaining AZA standards throughout the full five-year cycle of accreditation.
- Institutions with a large number of identified concerns; institutions with significant safety and/or animal welfare concerns; institutions that are not well prepared for the inspection.

Multiple Facilities Under One Authority. If two or more institutions are under the same ownership and governing authority, administration, or control, are located adjacent to each other, and public admittance for all institutions is covered by a single entrance fee, they will be

considered as a single institution. In such cases, the institution(s) should first submit a request in writing for the consideration of the Commission. All facilities are subject to inspection. Should the Commission determine that the institutions do not meet the above criteria, processing as separate facilities will be necessary.

Offsite Facilities. The inspection will include an institution's offsite facilities. An offsite facility is one that is owned and operated by the institution, is not open to the public, and operates in support of the institution. Institutions must list all offsite facilities. Examples of offsite facilities include, but are not limited to: food storage areas, maintenance, quarantine, and animal holding areas. The Primary Reviewer, in consultation with the inspection team chair, will determine which of these areas need to be inspected.

Rescinding Accreditation. The Commission may rescind accreditation at any time if it concludes that accreditation standards are not being consistently met and maintained.

Temporary Closings. Institutions temporarily closed to the public will retain their accreditation and their AZA membership. Should an institution's cycle of accreditation review fall within the period of temporary closure, an extension must be requested in writing prior to the institution's regular deadline for submission of accreditation materials. During the period of closure, a written Progress Report must be submitted every six months until such time as the institution has re-opened. Upon re-opening, the institution must submit materials for full accreditation review by the first deadline that falls after re-opening. In the case of institutions closed for less than six (6) months, a waiver may be requested in writing.

SUPPLEMENTAL AFFIDAVIT OF JAMES BREHENY, RESPONDENT, IN OPPOSITION TO PETITION, SWORN TO DECEMBER 3, 2018 [A-458 - A-464]

SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF ORLEANS

In the Matter of a Proceeding under Article 70 of the CPLR for a Writ of Habeas Corpus and Order to Show Cause,

THE NONHUMAN RIGHTS PROJECT, INC., on behalf of HAPPY,

Petitioner,

v.

JAMES J. BREHENY, in his official capacity as Executive Vice President and General Director of Zoos and Aquariums of the Wildlife Conservation Society and Director of the Bronx Zoo, and WILDLIFE CONSERVATION SOCIETY,

Respondents.

SUPPLEMENTAL AFFIDAVIT OF JAMES BREHENY

Index No. 18-45164

STATE OF NEW YORK)
) SS.:
COUNTY OF BRONX)

James J. Breheny, being duly sworn, deposes and says:

1. I was appointed Director of Respondent Wildlife Conservation Society's ("WCS") Bronx Zoo in 2005, and Executive Vice President and General Director, Zoos and Aquarium, and Jonathan Little Cohen Director, Bronx Zoo in 2011. I earned a B.S. in Biology from Manhattan College and an M.S. in Biology from Fordham University. I have been a staff member of WCS for over 35 years, and taught as an adjunct professor of Biology at Manhattan College for 17 years. I have also served as the Chair of the Board of Directors for the Association of Zoos and Aquariums ("AZA"), and currently serve as AZA Board Liaison to the AZA Accreditation Commission. As such, I am fully familiar with the facts and circumstances of this matter.

2. I submit this affidavit in opposition to Petitioner the Nonhuman Rights Project, Inc.'s ("NRP") petition for a writ of habeas corpus on behalf of Happy, an Asian elephant currently at the Bronx Zoo.

3. I have reviewed the affidavit of Ed Stewart, sworn to September 26, 2018 ("Stewart Aff."); the affidavit of Joyce Poole, sworn to December 2, 2016; the undated supplemental affidavit of Joyce Poole ("Poole Sup. Aff."); the joint affidavit of Lucy Bates and Richard W. Byrne, sworn to January 5, 2017; the affidavit of Karen McComb, sworn to December 22, 2016; and the affidavit of Cynthia J. Moss, sworn to May 6, 2017, all submitted in support of NRP's petition.

4. In addition to the fact that most of these affidavits in substance are almost verbatim duplicates of each other, as discussed below, the affidavits provide little to no relevant information regarding whether Happy is "unlawfully imprisoned" at the Bronx Zoo.

A. NRP's petition entirely fails to take into consideration Happy, her well-being, or her specific needs

5. The affidavits NRP relies upon only provide generalized, anecdotal discussions of African and Asian elephants as observed in the wild. For example, the affidavits posit that elephants are generally better suited to the company of other elephants, without accounting for the particular needs, wants, and temperament of any one elephant. *E.g.*, Poole Sup. Aff. ¶¶ 4-5.

6. None of the affidavits submitted in support of NRP's petition make any reference to Happy, her current state of well-being, or her needs as an approximately 47 year-old Asian elephant who has lived for over forty years at the Bronx Zoo.

7. Elephants who have lived at zoos for long periods of time are significantly different from elephants in the wild, and the characteristics of one cannot be generally attributed to the other.

8. NRP's supporting affidavits therefore have very limited applicability to Happy and her specific needs.

9. In contrast, the Bronx Zoo employees, including myself, have been protecting Happy's interests and caring for her well-being, knowing her as an individual, for over forty years.

10. As further detailed in the affidavits of Patrick R. Thomas and Paul P. Calle, VMD, the Bronx Zoo has significant resources for the care and well-being of Happy that cannot be guaranteed (and may not even be available) at another facility, including a large number of highly experienced and trained staff that provides excellent care and medical attention for Happy, as well as the sustained financial resources of a major institution.

11. Happy also has longstanding relationships and familiarity with her caregivers and surroundings at the Bronx Zoo, where she has lived for nearly all of her life.

12. Ironically, although the affidavits submitted by NRP assert that elephants are intelligent, "autonomous" beings, NRP's position relies almost entirely upon generalized observations of elephants in the wild, without taking into consideration Happy's unique characteristics, personality and needs.

13. For example, Happy has a history of not interacting well with other elephants at the Bronx Zoo, which is why she has been housed separately since her companion died. Happy nevertheless is able to interact and communicate with the other elephant at the Bronx Zoo through sound, olfaction, and touch.

14. NRP's petition to transfer Happy to an animal sanctuary, such as the one operated by the Performing Animal Welfare Society ("PAWS") in California, fails to take into consideration the distinct possibility that Happy would not socialize well with the elephants at the PAWS facility. Instead, NRP appears to assume that Happy would choose to befriend these unfamiliar elephants, and further assumes that the PAWS elephants would allow her to do so.

15. Even the Stewart affidavit submitted by NRP concedes that "[t]hough naturally social, it is unnatural for unrelated elephants to live together, as they do in captivity, and social interactions can range from harmonious to acrimonious." Stewart Aff. ¶ 15. And, Happy is an animal known to exhibit this behavior. The Stewart affidavit alludes to simply separating elephants into compatible groups. *Id.*

16. Thus, granting NRP's petition to transfer Happy to the PAWS facility in no way guarantees that Happy could be successfully introduced into a group of elephants in which she would find positive social interaction.

17. NRP's petition also fails to take into consideration the impact of moving Happy from the Bronx Zoo to the PAWS facility in San Andreas, California. Separating her from the keepers and surroundings she has known for nearly all her life could damage her welfare and physical well-being by forcing her to adapt to a completely new and alien environment without the emotional support of the people she has come to know and rely on.

18. Based upon past experiences with Happy, the Bronx Zoo knows that she becomes particularly distressed by even short moves within the zoo. If Happy were to

be moved from the Bronx Zoo to the PAWS facility in California, that move would be highly stressful and potentially detrimental to Happy's well-being.

19. The transportation of animals for long distances, particularly large mammals such as elephants, is an inherently risky process. This is especially true of older animals with a history of difficulty and stress in carrying out even brief moves.

20. By failing to take into consideration Happy's specific needs, NRP has prioritized the advancement of its own agenda over Happy's well-being.

B. Granting NRP's petition would not provide Happy with bodily liberty

21. NRP posits that Happy's alleged unlawful confinement may be cured by moving Happy to the PAWS facility or another animal sanctuary.

22. However, NRP's supporting affidavits fail to establish how animal sanctuaries generally or the PAWS facility specifically would promote Happy's well-being or release her from confinement.

23. With regard to animal sanctuaries generally, NRP merely asserts through that "[f]or elephants in captivity . . . human-run sanctuaries are currently the best option," without providing any analysis or support. Poole Sup. Aff. ¶ 5.

24. Ms. Poole also opines that "[h]olding [elephants] captive and confined prevents them from engaging in normal, autonomous behavior and can result in the development of arthritis, osteoarthritis, osteomyelitis, boredom and stereotypical behavior," yet Ms. Poole does not explain how an animal sanctuary, which is also a captive environment, could prevent any of the harms she enumerates. *Id.* ¶ 4.

25. The Stewart affidavit submitted by NRP establishes that even if Happy were transferred to the PAWS facility, Happy would still be living in an environment of confinement.

26. For example, the Stewart affidavit states that "[t]he elephant habitats are enclosed with steel pipe fencing and pipe-and-cable fencing," and the "African elephant habitat includes a system of gates that can be used to control access to particular areas for management purposes." Stewart Aff. ¶ 12.

27. Although most elephants at the PAWS facility "have indoor-outdoor access during the night," older elephants, such as Happy, "may be kept indoors overnight" in elephant barns. *Id.* ¶ 13. The elephant barns at the PAWS facility have "heaters, hydraulic gates, restraint devices for veterinary procedures, heated and padded concrete floors, dirt floors . . . ."

28. Thus, even if Happy were transferred to NRP's facility of choice, Happy would still be confined in an environment controlled by humans. NRP's petition does not actually seek to provide Happy with "bodily liberty," but again, only advances NRP's agenda and seeks to transfer Happy to a facility of NRP's choosing, without consideration for Happy's well-being.

29. Based upon my expertise, decades-long experience with Happy, and the foregoing, it is my professional opinion that Happy's interests would not be best served at this time by moving her to an animal sanctuary. I therefore respectfully request that the Court deny NRP's petition.

30. Allowing humans to petition for the removal of animals from environments such as the Bronx Zoo, and to grant those requests, could have substantial, wide-ranging implications for millions of animals in various circumstances.

James J. Breheny

Sworn to before me this
3rd day of December, 2018.

Notary Public

Doc #01-3164517

Bruno M. Santos
Public, State of New York
No. 02SA6108087
Qualified in Kings County
Commission Expires April 12, 2020

AFFIRMATION OF KEVIN SCHNEIDER, FOR PETITIONER, IN SUPPORT OF PETITION, DATED DECEMBER 10, 2018 [A-465 - A-466]

47

SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF ORLEANS

In the Matter of a Proceeding under Article 70 of the CPLR for a Writ of Habeas Corpus and Order to Show Cause,

THE NONHUMAN RIGHTS PROJECT, INC., on behalf of HAPPY,

Petitioner,

-against-

JAMES J. BREHENY, in his official capacity as Executive Vice President and General Director of Zoos and Aquariums of the Wildlife Conservation Society and Director of the Bronx Zoo, and WILDLIFE CONSERVATION SOCIETY,

Respondents.

Index No.: 18-45164

ATTORNEY AFFIRMATION

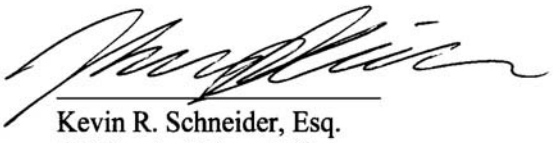
ORLEANS CO CLERK NY
2018 DEC 17 AM10:33

I, KEVIN SCHNEIDER, an attorney duly admitted to practice before the Courts of the State of New York, hereby affirm under penalty of perjury:

1. I submit this Affirmation in support of the Petitioner Nonhuman Rights Project, Inc. ("NhRP") in the above-captioned proceeding.
2. I am the Executive Director of the NhRP, a position I have held since October 2015.
3. On April 6, 2017, I contacted Bryan Gamer, editor-in-chief of Black's Law Dictionary, on behalf of the NhRP by letter and email and asked him to change the definition of "person" in that volume to make plain that a "legal person" can be the subject of "rights *or* duties," not "rights *and* duties" (see attached as "Exhibit 1" a true and correct copy of my letter to Mr. Gamer, including the referenced pages from the 10th ed. of Salmond's Jurisprudence).

4. Mr. Gamer responded by email on the same day and said, "I've marked it for correction in the 11th edition," thereby acknowledging that the dictionary's present definition of "person" is in fact erroneous to the extent it says that the ability to bear legal duties and responsibilities is a prerequisite for legal personhood (see attached as "Exhibit 2" a true and correct copy of the email correspondence between me and Mr. Gamer, dated April 6, 2017).

Dated: December 10, 2018



Kevin R. Schneider, Esq.
15 Woodruff Ave. #C3
Brooklyn, New York 11226
Tel: (857) 991-4148
Email: KSchneider@nonhumanrights.org

A-467

EXHIBIT 1 TO SCHNEIDER AFFIRMATION -
LETTER FROM KEVIN SCHNEIDER TO BRYAN GARNER, DATED APRIL 6, 2017 [A-467 - A-471]

Kevin Schneider, Esq.
68 West 107th St. #62
New York, NY 10025
kschneider@nonhumanrights.org

By Regular Mail and Email

April 6, 2017

Bryan Garner
c/o LawProse, Inc.
14180 Dallas Parkway
Suite 280
Dallas, TX 75254
Email to: bgarner@lawprose.org and info@lawprose.org

Re: Serious error in Black's Law Dictionary (Definition of "Person")

Dear Mr. Garner:

I am a New York attorney and the Executive Director of the Nonhuman Rights Project, Inc. ("NhRP"). I am writing to call your attention to a serious error in *Black's Law Dictionary*, specifically, its definition of "person." This error has had grave implications for the NhRP's litigation to secure habeas corpus rights for chimpanzees. *See People ex rel. Nonhuman Rights Project, Inc. v. Lavery*, 124 A.D.3d 148, 151-52 (3d Dept. 2014) (chimpanzees cannot be "legal persons" because they are unable to bear correlative duties and responsibilities).

The *Lavery* court, in partial reliance upon *Black's Law Dictionary* (7th ed.), quoted a passage from the 10th edition of Salmond's *Jurisprudence* that was alleged to support the proposition that "legal personhood has consistently been defined in terms of both rights *and duties*." *Id.* (emphasis in original). In *Black's*, the passage reads in part: "So far as legal theory is concerned, a person is any being whom the law regards as capable of **rights *and* duties**."

However, that is not what *Jurisprudence* stated.[1] In the original quote—as can be seen in the attached scanned pages of Salmond's *Jurisprudence* (10th ed.) which attorney Spencer Lo obtained from the Library of Congress—the conjunctive "and" does not appear; rather, the disjunctive "or" is used in the phrase "**rights or duties**." Every edition of Salmond's *Jurisprudence* repeats: "a person is any being whom the law regards as capable of rights or duties."[2] This "rights and duties" error persists even in the latest edition of *Black's Law Dictionary*.

[1] The court erred in citing Gray's *Nature and Sources of Law* at 27, as well. However, Gray states that "[o]ne who has rights *but not duties*, or has duties but no rights, is ... a person."

[2] John Salmond, *Salmond on Jurisprudence* (Patrick John Fitzgerald, Sweet & Maxwell, 12 ed. 1966) 299; John Salmond, *Salmond on Jurisprudence* (Glanville Williams, London, Sweet & Maxwell, Limited, 11th ed. 1957) 350; Glanville L. Williams, *Jurisprudence* 318 (10th ed. 1947); John Salmond, *Jurisprudence* (C.A.W. Manning, London: Sweet & Maxwell, Limited, 8th ed. 1930) 329; John Salmond, *Jurisprudence*, 7th ed. (London: Sweet & Maxwell, Limited, 1924) 329; John Salmond, *Jurisprudence*, 6th ed. (London: Sweet & Maxwell, Limited, 1920)

Likewise, some of the very few cases *Lavery* cited to support its statement that personhood is contingent upon the ability to shoulder duties *and* responsibilities unfortunately relied upon the same erroneous *Black's Law Dictionary* definition. *See Western Sur. Co. v ADCO Credit, Inc.*, 251 P3d 714, 716 (Nev. 2011); *State of Washington v A.M.R.*, 147 Wash. 2d 91, 94, 51 P3d 790, 791 (2002); *Amadio v Levin*, 501 A2d at 1098.

Other courts, which did not rely upon *Black's*, have correctly applied personhood to entities able to bear rights *or* duties. The latest example was on March 20, 2017, when the High Court of Uttarakhand declared two rivers in India — the Ganga and Yamuna — "legal persons" with rights under the Constitution of India. *See Mohd. Salim v. State of Uttarakhand & Others*, (PIL) 126/2014 (High Court Uttarakhand, 03/20/2017). The judge subsequently enlarged the order to extend legal personhood to the glaciers which feed the Ganga and Yamuna rivers (the Gangotri & Yamunotri), as well as connected rivers, streams, air, meadows, dales, jungles, forests wetlands, grasslands, springs and waterfalls. Relying in part upon the 12th edition of *Salmond on Jurisprudence*[3] the court stated that it would "'define a person for the purpose of jurisprudence as any entity (not necessarily a human being) to which rights *or* duties may be attributed.'" *Id.* at ¶14, ¶19 (emphasis added) (citing *Shiromani Gurudwara Prabandhak Committee, Amritsar v. Shri Som Nath Dass & others*, AIR 2000 SC 1421 (Supreme Court of India, 2000)).

This erroneous definition of legal personhood in *Black's* has the potential to wreak more havoc. In his *amicus curiae* brief in support of NhRP's ongoing habeas corpus litigation in New York, Professor Laurence H. Tribe argued that the "court in *Lavery* reached its conclusion on the basis of a fundamentally flawed definition of legal personhood."[4] He explained that this "definition, which would appear on its face to exclude third-trimester fetuses, children, and comatose adults (among other entities whose rights as persons the law protects), importantly misunderstood the relationship among rights, duties, and personhood." *Id.*

I urge that you correct this serious error to make plain in *Black's Law Dictionary* that a "legal person" can be the subject of "rights *or* duties," not "rights *and* duties," so that this erroneous definition may not be cited by courts in the future.

Sincerely,

Kevin Schneider, Esq.

Encl.

272; John Salmond, *Jurisprudence*, 4th ed. (London, Stevens and Haynes, 1913) 272; John Salmond, *Jurisprudence*, 2nd ed. (London: Stevens and Haynes 1907) 275; and John Salmond, *Jurisprudence or The Theory of the Law* (London, Stevens & Haynes 1902) 334 (emphasis added).

[3] *Id.* at ¶14, ¶16 (citing John Salmond, *Salmond on Jurisprudence* (Patrick John Fitzgerald, Sweet & Maxwell, 12 ed. 1966) 305-306).

[4] *See* "Brief of Amicus Curiae Laurence H. Tribe in Support of Petitioner-Appellant," at pg. 2, available at: https://www.nonhumanrightsproject.org/content/uploads/2016_150149_Tribe_ITMO-The-NonHuman-Right-Project-v.-Presti_Amicus-1-2.pdf.

A-469

JURISPRUDENCE

BY

SIR JOHN SALMOND

A JUDGE OF THE SUPREME COURT OF NEW ZEALAND

TENTH EDITION

BY

GLANVILLE L. WILLIAMS, LL.D. (CANTAB.)

OF THE MIDDLE TEMPLE, BARRISTER-AT-LAW; READER IN ENGLISH LAW IN THE UNIVERSITY OF LONDON

LONDON:

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SYDNEY, MELBOURNE, BRISBANE:
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1947

(Printed in England)

CHAPTER 15

PERSONS

§ 111. The Nature of Personality

The purpose of this chapter is to investigate the legal conception of personality. It is not permissible to adopt the simple device of saying that a person means a human being, for even in the popular or non-legal use of the term there are persons who are not men. Personality is a wider and vaguer term than humanity. Gods, angels, and the spirits of the dead are persons, no less than men are. And in the law this want of coincidence between the class of persons and that of human beings is still more marked. In the law there may be men who are not persons; slaves, for example, are destitute of legal personality in any system which regards them as incapable of either rights or liabilities. Like cattle, they are things and the objects of rights; not persons and the subjects of them. Conversely there are, in the law, persons who are not men. A joint-stock company or a municipal corporation is a person in legal contemplation. So also, in Hindu law, idols are legal persons, and this has been recognised by the Privy Council (*a*). What, then, is the legal meaning of a " person " ?

So far as legal theory is concerned, a person is any being whom the law regards as capable of rights or duties (*b*). Any being that is so capable is a person, whether a human being or not, and no being that is not so capable is a person, even though he be a man. Persons are the substances of which rights and duties are the attributes. It is only in this respect that persons possess juridical significance, and this is the exclusive point of view from which personality receives legal recognition.

Persons as so defined are of two kinds, distinguishable as natural and legal. A natural person is a human being. Legal persons are beings, real or imaginary, who for the purpose of

(*a*) *Pramatha Nath Mullick* v. *Pradyumna Kumar Mullick* (1925), L. R. 52 Ind. App. 245. See Duff, " The Personality of an Idol " (1927), 3 C. L. J. 42; Vesey-Fitzgerald, " *Idolon Fori* " (1935), 41 L. Q. R. 419.

(*b*) For a full discussion see Alexander Nékám, *The Personality Conception of the Legal Entity* (1938).

legal reasoning are treated in greater or less degree in the same way as human beings (*c*).

§ 112. The Legal Status of the Lower Animals

The only natural persons are human beings. Beasts are not persons, either natural or legal. They are merely things—often the objects of legal rights and duties, but never the subjects of them. Beasts, like men, are capable of acts and possess interests. Yet their acts are neither lawful nor unlawful; they are not recognised by the law as the appropriate subject-matter either of permission or of prohibition. Archaic codes did not scruple, it is true, to punish with death in due course of law the beast that was guilty of homicide. "If an ox gore a man or a woman that they die: then the ox shall be surely stoned and his flesh shall not be eaten" (*d*). A conception such as this pertains to a stage that is long since past; but modern law shows us a relic of it in the rule that a trespassing beast may be distrained damage feasant, and kept until its owner or some one else interested in the beast pays compensation (*e*). Distress damage feasant does not, however, in modern law involve any legal recognition of the personality of the animal.

A beast is as incapable of legal rights as of legal duties, for its interests receive no recognition from the law. *Hominum causa omne jus constitutum* (*f*). The law is made for men, and allows no fellowship or bonds of obligation between them and the lower animals. If these last possess moral rights—as utilitarian ethics at least need not scruple to admit—those rights are not recognised by any legal system. That which is done to the hurt of a beast may be a wrong to its owner or to the society of mankind, but it is no wrong to the beast. No animal can be the owner of any property, even through the medium of a human trustee. If a testator vests property in trustees for the maintenance of his favourite horses or dogs, he will thereby create no valid trust enforceable in any way by or on behalf of these non-human beneficiaries. The only effect of such provisions is to authorise the trustees, if they think fit, to expend the property

(*c*) Legal persons are also termed fictitious, juristic, artificial, or moral.
(*d*) Exodus xxi. 28. To the same effect see Plato's *Laws*, 873.
(*e*) Williams, *Liability for Animals*, chaps. 1, 7.
(*f*) D. 1. 5. 2.

A-472

EXHIBIT 2 TO SCHNEIDER AFFIRMATION - E-MAIL CORRESPONDENCE, DATED APRIL 6, 2017

Kevin Schneider <kschneider@nonhumanrights.org>

Serious Error in Black's Law Dictionary (Definition of "Person")

Bryan <bgarner@lawprose.org> Thu, Apr 6, 2017 at 11:53 PM
To: Kevin Schneider <kschneider@nonhumanrights.org>

Kevin—
Thank you for this. I've marked it for correction in the 11th edition. Many thanks.
Sincerely,
Bryan

Bryan A. Garner
LawProse, Inc.
14180 Dallas Parkway
Suite 280
Dallas, TX 75254
214-691-8588
Fax: 214-691-8588

Distinguished Research Professor of Law
Southern Methodist University

bgarner@lawprose.org
Twitter: @bryanagarner

On Apr 6, 2017, at 13:38, Kevin Schneider <kschneider@nonhumanrights.org> wrote:

> Dear Mr. Garner,
>
> Please find attached, in PDF, a copy of the letter I mailed to you today as well as the referenced pages from Salmond's *Jurisprudence* (10th ed.).
>
> Best regards,
> --
> Kevin Schneider, Esq.
> Executive Director
> Nonhuman Rights Project
> www.nonhumanrights.org
> 857-991-4148
>
> ---
>
>
>
> <Letter to Black's re Def. of Person 4.6.17.pdf>
>
> <Salmond 10th Ed Person as Subject of Rights OR Duties.pdf>

SECOND SUPPLEMENTAL AFFIDAVIT OF JOYCE POOLE, PHD., FOR PETITIONER, IN SUPPORT OF PETITION, SWORN TO DECEMBER 10, 2018 [A-473 - A-482]

(48)

SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF ORLEANS

In the Matter of a Proceeding under Article 70 of the CPLR for a Writ of Habeas Corpus,

THE NONHUMAN RIGHTS PROJECT, INC., on behalf of HAPPY,

Petitioner,

-against-

JAMES J. BREHENY, in his official capacity as Executive Vice President and General Director of Zoos and Aquariums of the Wildlife Conservation Society and Director of the Bronx Zoo, and WILDLIFE CONSERVATION SOCIETY,

Respondents.

Index No.: 18-45164

SECOND SUPPLEMENTAL AFFIDAVIT OF JOYCE POOLE, Ph.D.

COUNTRY OF Norway)
)
PROVINCE OF Vestfold) ss :
)
MUNICIPALITY OF Sandefjord)

Second Supplemental Affidavit of Joyce Poole

Joyce Poole being duly sworn, deposes and says:

1. I submit this second supplemental affidavit in support of the Petitioner, the Nonhuman Rights Project (hereinafter referred to "NhRP"), in its petition for habeas corpus for the elephant Happy, presently confined by Respondents, James J. Breheny and the Wildlife Conservation Society (hereinafter collectively referred to as the "Bronx Zoo").

2. I have reviewed the affidavits of James J. Breheny, Paul P. Calle and Patrick Thomas in the above-captioned action.

3. As a preamble, I would like to draw attention to the fact that in 2006 the Bronx Zoo announced that once the current elephants die, the zoo will not replace them with other elephants. This decision took place after several elephant deaths at the zoo (Berger 2006).

4. The Wildlife Conservation Society is recognized for its outstanding conservation and research on wild elephants in Africa and Asia and the knowledge gained from the work of their own scientists undoubtedly played a role in the zoos decision to phase out its elephant exhibit. It is worth noting that none of these elephant scientists have contributed affidavits in support of the Bronx Zoo's desire to continue to hold Happy captive rather than to release her to an elephant sanctuary where she would have much larger space to roam and companions.

The affidavit of James Breheny

5. To Breheny's statement (para. 5) that the affidavits NhRP relies upon "only provide generalized, anecdotal discussions of African and Asian elephants as observed in the wild," the affidavits represent, in part, the body of knowledge acquired over 46 years of study of regular group sightings, family censuses, scan and focal samples, that amount to hundreds of thousands of data points on several thousand individually known free-living elephants in Amboseli, Kenya, quite a number of whom have been alive throughout these four and a half decades. In sum, the affidavits are a true representation of an elephant's life. Although incidents were described that exemplify particular cognitive capabilities, the affidavits were hardly anecdotal. My affidavit included over 70 references to scientific research of which 25 were based on the study of these elephants. I was an author of 13 of these papers.

6. In para. 5 James Breheny further states that I claim that, "elephants are generally better suited to the company of other elephants" but he writes that I don't account "for the particular needs, wants, and temperament of any one elephant E.g. Poole Sup, Aff. pp 4-5". I stand by my statement. Elephants are highly social animals and, whether male or female, they are suited to the company of other elephants. Elephants in captivity, including Happy, often do not get on with the elephants their captors select to put them with. Being fenced into areas too small to permit them to select between different companions and when to be with them, they have no autonomy. Elephants need a choice of social partners, and the space to permit them to be with the ones they want, when they want, and to avoid particular individuals, when they want.

7. By bringing up the temperament of "any one elephant," Breheny seems to be suggesting that Happy has a problem getting along with other elephants. The historical information indicates that Happy is not anti-social, *per se*, but that Maxine and Patty once attacked her and that there is a risk that they would do so again. This situation would likely be resolved by offering Happy the chance to form relationships with other elephants in the larger space that a sanctuary affords.

8. In para. 12 Breheny again takes issue with NRP's position stating that it "relies almost entirely on elephants in the wild without taking into consideration Happy's unique characteristics, personality and needs." As an example of her "unique personality," in para. 13 he writes, "Happy has a history of not getting along with other elephants at the Bronx Zoo, which is why she has been housed separately since her companion died."

9. In this contradictory statement, Breheny claims at once that she had a companion (i.e. an elephant she liked) and that she doesn't get on with other elephants. While there is no doubt that elephants have personalities (Lee, 2011), it is hardly fair to say that Happy has a history of not getting on with other elephants. In forty years at the Bronx Zoo she has only been given a choice of four companions with whom she has been forced to share a space that, for an elephant, is equivalent to the size of a house. Two of these companions she liked and lost, and the other two attacked her. This is hardly a basis for drawing a conclusion that Happy has a "history of not getting on with other elephants". It is rather a confirmation of the zoo's inability to meet Happy's basic needs.

10. In para. 6 Breheny states, "none of the affidavits submitted in support of NRP's petition make any reference to Happy, her current state of well being, or her needs as an approximately 47 year-old Asian elephant who has lived for over forty years at the Bronx Zoo." Other than stating, "based on past experience with Happy, the Bronx Zoo knows that she becomes particularly distressed by even short moves within the zoo," in his affidavit Breheny makes no mention of Happy's well-being or her needs. Again, in her 40 year long history at the Bronx Zoo Happy has had the opportunity to socialize with only four elephants and has spent a quarter of this time in solitary confinement.

11. In para. 7 Breheny states, "elephants who have lived at zoos for long periods of time are different from elephants in the wild, and the characteristics of one cannot be compared to the other." Coming from the Director of the Bronx Zoo, this is a shocking acknowledgement of the profound problems that stem from keeping large, social, intelligent, autonomous animals, like Happy, in a space that cannot meet their social and physical needs. It is likely that any differences are due solely and entirely to the nature of their captivity, of being kept without normal social groups and of lacking the ability to enact normal free-will. This will likely be remedied by releasing Happy to a sanctuary that can offer her both companionship and space to roam. While an elephant sanctuary is not the same as the wild, it offers elephants more autonomy and the possibility to choose where to go, what to eat and with whom and when to socialize. There is no scientific basis for arguing that captive and wild elephants are fundamentally different. They have the same biology and needs, but the failure of captivity to meet these needs results in physical and psychological problems in captive elephants. Breheny also appears to be unaware of the extremely positive transformations that have taken place when captive elephants are given the freedom that larger space in sanctuaries or release back to the wild offer.

12. The claims in relation to Happy, that she does not do well with change; that she will not survive the transport; that a transfer to a sanctuary will be too stressful; that she doesn't know how to socialize; that her unique personality is problematic, have been disproven. In fact, elephants with serious physical or psychological problems in zoos have usually become more normal functioning elephants when given more appropriate space in a sanctuary such as PAWS.

13. For example, Maggie was considered to be an anti-social, aggressive elephant and by the time she was moved from the Alaska Zoo to PAWS she was in such poor condition she could barely stand. She is now a thriving, socially active elephant. Indeed she is considered to be PAWS' most social elephant (Ed Stewart, pers. comm.).

14. Ruby was transferred from the LA Zoo to the Knoxville Zoo in Tennessee where she did not successfully integrate with their elephants. When she was moved to PAWS she integrated easily with the other elephants and has become respected leader of her group (Ed Stewart, pers. comm.).

15. Sissy is another classic example. She had been transferred four times and had spent a decade and a half alone before being sent to the Houston Zoo, where she was labeled autistic and antisocial. She was returned to her solitary zoo where she killed a person. She was moved again to El Paso Zoo, where she was beaten because she was a killer elephant. In 2000 she was transferred to The Elephant Sanctuary in Tennessee and within six months of arrival she was calm and cooperative. She became a leader, putting all elephants at ease. In 2000 the USDA had given Sissy only a year to live. Eighteen years later she is still going strong (Scott Blais, pers. comm.).

16. Bunny had been transferred four times and had only known a less than half an acre exhibit when she arrived at The Tennessee Elephant Sanctuary. She was 47 years old and had spent 40 years alone. Within 24 hours of arriving at sanctuary she had integrated into the group (Scott Blais, pers. comm.).

17. Maia and Guida, the first two elephants at Santuário de Elefantes Brasil, had lived together for 40 years. For most of these years Maia was aggressive to Guida, knocking her over, pushing her down and pinning her to the ground. Within 12 hours of arriving at the sanctuary the gates were opened up between them. Since then they have been together and no further aggression has been seen. Two more rescued female Asians are due to arrive this month. The space currently allocated for Maia and Guida is 75 acres, including one area of 40 acres, another of 22 acres and three other smaller areas ranging from 1.5 to 4 acres. This combination of possible spaces allows easy integration of new elephants. The plan is to expand the space for Asian elephants to multiple hundred acres and possibly a thousand or more, depending upon whether males and females can be integrated. Santuário de Elefantes Brasil owns a total of 2800 acres (Scott Blais, pers. comm.).

18. In South Africa, African elephants that have been released from long-term captivity to the wild, after a period of suitable rehabilitation, have all adapted entirely, successfully resuming life as wild elephants despite decades in captivity, and not having lived in the 'wild' since they were juveniles (see Elephant Reintegration Trust – https://www.elephantreintegrationtrust.com/projects).

19. In paras. 23 and 24 Breheny quotes my assertion that sanctuaries are better than traditional zoos and claims that I don't explain why a sanctuary could prevent any

of the harms I enumerate. The reasons are explained in detail in Poole & Granli, 2008 and relate to the orders of magnitude of greater space that is offered in sanctuaries. Such space permits autonomy and allows elephants to develop more healthy social relationships and to engage in a near natural movement, foraging, and repertoire of behavior. When elephants are forced to live in insufficient space for their biological, social and psychological needs to be met, over time, they develop physical and emotional problems.

20. As the above examples illustrate, the problems seen in captive elephants, like Happy, can usually be mitigated with the proper attention and environment. To re-emphasize, there is no basis for arguing that captive and wild elephants are fundamentally different. They have the same biology and needs, but the failure of captivity to meet these needs results in physical and psychological problems.

The Affidavit of Paul P. Calle

21. As a veterinarian, Paul Calle focuses on the regular medical care that is provided to Happy at the Bronx Zoo. He states that the Bronx Zoo "undertakes a multitude of efforts to ensure Happy's continued physical and psychological well-being and health" (para. 6). To support this statement he notes that this includes "visual checks by the care staff several times a day" (para. 7), "regularly but less than daily" a complete blood count, biochemical profile, elephant inflammatory profile and, quarterly, an elephant tuberculosis antibody screening test and trunk wash for tuberculosis culture and PCR (para 8). He furthermore states, "veterinary staff conduct regular health assessment of Happy through body condition evaluations, oral and dental examinations, and foot examinations" and that, "baseline toe x-rays of Happy's feet were completed, and are repeated for comparative analysis on an as-needed basis to address particular areas of concern as they arise." (para. 9).

22. Nowhere in his affidavit does Dr. Calle comment that Happy is found to be healthy. Indeed his statement in Para 9 regarding Happy's feet indicates that her feet are not healthy. My own observations from watching a number of videos is that Happy lifts her feet repeatedly, indicating that she is either trying to take the weight off of them or is engaging in stereotypic behavior. The Quarterly TB tests are more frequent than normally warranted and suggests that Happy is being

monitored closely because she is housed in the same barn as Patty who has been diagnosed with TB.

23. Dr. Calle's only reference to Happy's psychological well-being is that she becomes "very distressed during short moves from one area of the Bronx Zoo to another." (para. 14) This distress is likely evidence of how traumatic it has been for Happy to be shuffled about at the zoo from confined space to confined space.

24. I saw no documentation of the "multitude of efforts" that the zoo makes to ensure her psychological well-being. Indeed, since the psychological well-being of elephants is very much dependent on the ability to socialize appropriately with other elephants and this is dependent on having adequate space, the zoo has failed to meet Happy's psychological requirements.

25. PAWS has been involved in moving more than a dozen elephants over the years without incident. These moves include older females and from places as far away as Alaska and Toronto, Canada. Some of these elephants had lived in their prior facilities for over 40 years. There is no evidence that the inevitable stress of these moves has had a long-term effect on any of the elephants. Santuário de Elefantes Brasil is about to move Rana, a confiscated ex-circus elephant in her 50s, 1,675 miles to their sanctuary.

The affidavit of Patrick Thomas

26. The affidavit of Patrick Thomas is focused on the compliance of the Bronx Zoo with AZA Standards for Elephant Management and Care and the Animal Welfare Act. He states that these are the "two primary sets of standards for the care and management of elephants in AZA-accredited institutions in the United States" and that they "ensure that Happy is provided with excellent care focused on her well-being."

27. I have long promoted the development of elephant sanctuaries and co-founded one of them (Santuário de Elefantes Brasil), because our more than four decades long study of free living elephants shows that the AZA specifications are woefully inadequate for meeting the needs of elephants (Poole & Granli 2008).

28. It is notable that Thomas' affidavit does not touch on a Bronx Zoo's weak point, the very small space available to Happy. There are three possible locations for elephants at the Bronx Zoo (see methods section Plotnik et al 2006):

1) an indoor "holding area" or elephant barn;

2) a barren, cement walled outdoor elephant yard that appears to be approximately 15 m2 or 0.05 of an acre (see Plotnik et al 2006: http://www.pnas.org/content/suppl/2006/10/26/0608062103.DC1#M1;

3) a zoo exhibit, listed on www.zoochat.com as being only 1.15 acres (https://www.zoochat.com/community/threads/aza-elephant-exhibit-sizes.326779/.

29. Since the Bronx Zoo elephants are incompatible, the naturalistic "exhibit" area has to be shared on a rotational basis. At night Happy is usually in a small pen in the barn or in the barren outdoor yard; during most days, weather permitting, she is also in the barren outdoor elephant yard.

30. In para. 27 Thomas writes, "Weather permitting, Happy has regular, year-round access to a large, naturalistic outdoor exhibit in which she may go swimming and engage in other species-typical behavior, and also has regular overnight access to a large outdoor space." Given that the most species typical behavior of elephants relates to foraging (which is done for her) or social interactions, keeping her in a solitary condition means that she actually has the ability to engage in almost no species typical behavior.

31. It is difficult for members of the public, myself included, to obtain much information about Happy's behavior other than viewing very short videos of her captured by people who have ridden on the monorail at the Bronx Zoo. In these videos we see her engaged in only five activities/behaviors: Standing facing the fence/gate, dusting, swinging her trunk in stereotypic behavior, standing with one or two legs lifted off the ground, either to take weight off painful, diseased feet or again engaging in stereotypic behavior, and once, eating grass. Only two, dusting and eating grass, are natural. Alone, in a small space, there is little else for her to do.

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Joyce Poole, Ph.D.

Sworn to before me
this ____ day of _____, 2018

_____
Notary Public

I hereby certify that this document bears the signature of Joyce Hatneway Poole and that (he/she) has certified its contents before me as required by Norwegian law
Sandefjord Probate court. 10 December 2018

Notary Public
Liss Hansen Barvik

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A-482

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3. Acting in the capacity of:
   Notary public
4. bears the seal/stamp of:
   The Notarius publicus of Sandefjord

Certified

5. at Tønsberg 6. the 10.12.2018
7. by the Governor of the counties of Vestfold
8. No 13444 10. Signature
9. Seal/stamp

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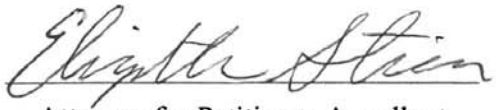
CERTIFICATION PURSUANT TO CPLR § 2105

I, Elizabeth Stein, attorney with Nonhuman Rights Project, Inc., for the Petitioner-Appellant, hereby certify pursuant to Section 2105 of the CPLR that the foregoing papers constituting the Appendix have been personally compared by me with the original Record filed herein and have been found to be true and accurate copies of said originals, which are now on file in the office of the Clerk of the County of Bronx, and are being transferred by subpoena for the purposes of this case.

Dated: July 10, 2020



Attorney for Petitioner-Appellant