



October 25, 2018

Arts, Entertainment, Parks & River Committee
c/o: Eric Villanueva, Office of the City Clerk
200 N. Spring Street, Room 395
Los Angeles, California 90012

"Creating dynamic experiences to connect people and animals"

Los Angeles Zoo
5333 Zoo Drive
Los Angeles
California 90027
323/644-4200
Fax 323/662-9786
<http://www.lazoo.org>

Reference: Council File No. 17-0453

RECOMMENDATION

That the Arts, Entertainment, Parks and River Committee note and file the attached response from Los Angeles Zoo to questions outlined in June 13, 2018 memo to Arts, Entertainment, Parks and River Committee from the Chief Legislative Analyst and City Administrative Officer.

BACKGROUND

On April 19, 2017, Councilmember Koretz introduced a motion to relocate "Billy", male Asian elephant, from the Los Angeles Zoo to a suitable sanctuary environment. On January 24, 2018, the item was discussed at the Arts, Entertainment, Parks and River Committee and the Committee instructed the Chief Legislative Analyst and the City Administrative Officer to report on the feasibility of convening a three-person panel of medical experts to "independently study the safety, health and environment of the elephant, Billy at the Los Angeles Zoo" and respond to a series of questions posed by the Committee. On June 13, 2018 these questions were included in a memo to Members of the Arts, Entertainment, Parks and River Committee from the Chief Legislative Analyst and City Administrative Officer. On October 24, 2018, the Committee amended and approved the report dated September 21, 2018 from the Chief Legislative Analyst and City Administrative Officer.

FISCAL IMPACT

There is no fiscal impact.

Respectfully submitted,

JOHN R. LEWIS
Zoo Director

JRL/dmt

Attachment

Eric Garcetti
Mayor

David E. Ryu
Council Member
4th District

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Zoo Director



LOS ANGELES ZOO'S RESPONSE TO:
QUESTIONS POSED BY THE ARTS, ENTERTAINMENT, PARKS AND
RIVER COMMITTEE – June 18, 2018

1. What does accreditation mean to the Zoo in relation to the possibility of Billy being sent to a Sanctuary, but retaining the other elephants?

Ans: The Los Angeles Zoo has agreed to fully participate in the Asian Elephant Species Survival Plan (SSP). That means that we will participate in the development of sustainability plans within Association of Zoos and Aquarium (AZA) facilities and ultimately follow the final plan. Declaring our intent to participate and then not following through could result in ethics charges, possible loss of accreditation and removal from the Asian Elephant SSP. Any of these actions could cause the owners of our other elephants to remove them from the LA Zoo.

2. Sanctuary:
 - a. What is the impact on accreditation if we move Billy to a sanctuary? Under what scenarios has the LA Zoo moved animals to a sanctuary in the past?

Ans: AZA Accreditation Standards 6.3 and 6.4 read as follow:

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.

Violating these standards can cause an AZA Institutional Member to lose their accreditation. In 2007 the LA Zoo sent African elephant, Ruby to the PAWS Sanctuary. The Zoo was focusing on Asian elephants only; no other AZA facility was willing to take Ruby so after she was declared surplus to the SSP population the sanctuary was her only option. Ruby died at PAWS in 2011.

- b. What would the process of moving Billy to a sanctuary look like? Give examples from other Zoos that have moved elephants to a sanctuary.

Ans: Moving an elephant is a complicated task and requires months of training to prepare the elephant. Due to Billy's size and strength, he would have to be moved in a specialized crate. He would be trained to enter the crate and have tethers placed around his ankles. Billy has a large set of tusks which may have to be trimmed to safely transport him. Transporting an elephant can cost \$40-60,000.

Over the years several zoos have sent elephants to a sanctuary when they decided to discontinue their elephant program for various reasons (financial, programmatic, animal welfare, etc.) and no other home could be found for their elephant. This has not been an issue when it is the zoo deciding the destination for the elephant however; in 2012 the Toronto Zoo was forced to send their elephants to a sanctuary without the concurrence of the Zoo's CEO. As a result the Toronto Zoo lost their accreditation. In another case a zoo sent elephants to a sanctuary without informing one of the elephant's owner which resulted in the CEO losing their AZA membership after being charged with an ethics violation.

3. What permissions, if any, would need to be obtained from the AZA?

Ans: The LA Zoo would have to tell the Asian elephant SSP that we would no longer fully participate in the SSP programs which would leave us out of the decision making process on receiving any additional elephants.

4. Financial impact of losing accreditation?

Ans: It is hard to quantify the financial impacts that would be chronic over time due to the programmatic challenges and competition with other AZA Accredited zoos and aquariums in Southern California. Loss of AZA Accreditation would have many programmatic impacts. LA Zoo staff would no longer be eligible to chair AZA Committees, be species Studbook Keepers, SSP Coordinators or serve on the AZA Board or Ethics Committee. That will directly affect 12-15 City employees as well as retention and staff recruitment. Many AZA Institutional Members will not engage in animal transactions with non AZA facilities. Some may require that we return animals to them that live here on loan. There are State and Federal regulations that are stream lined for AZA Members. Zoo and Zoo Staff would have to pay full nonmember price for AZA conferences and professional development programs. The LA Zoo would no longer be among the elite, professional zoos and aquariums distinguished from "roadside zoos" and for profit animal menageries. Bond measures, such as the statewide bond measure (Proposition 12 State Park Bond Act 2000) which under the Zoo and Aquarium Facilities Grant Program provided \$257,000 for AZA Accredited facilities. Accreditation also contributes to enhanced development opportunities.

5. What is the annual cost of supporting an elephant at the LA Zoo?

Ans: Two costs are presented based on 3 to 4 hours per day of Keeper time.

Category	Costs	Costs
Animal Care Staff (Curator, Prin. Keeper and Keepers)	\$69,740 2 Keepers x 3hrs/day	\$84,877 2 Keepers x 4hrs/day
Food	37,000	37,000
Veterinary Care	8,100	8,100
Veterinary technicians	8,840	8,840
TOTAL	\$123,769	\$138,817

6. What is the status of the captive breeding experience with Billy?

Ans: Since there are no breeding age females at the LA Zoo there are not attempts to naturally breed Billy. Attempts to collect semen from him for potential artificial insemination elsewhere were stopped over 3.5 years ago.

7. How are Billy's feet inspected and cared for to prevent Osteomyelitis and what risk, if any, is he at of currently having or obtaining it?

Ans: The elephants at the Los Angeles Zoo undergo frequent and routine foot care which includes daily visual inspection of their nails and foot pads along with weekly pedicures to maintain, clean and trim their nails and foot pads. The keepers have trained Billy to present all four feet for routine inspections, which gives us a visualization of all aspects of each foot. He is also trained to allow x-rays for the veterinarians to examine.

The daily elephant activities and habitats at the Los Angeles Zoo further support the elephants' foot care. The elephants are provided with 24 hour access to the outside habitats which are roto-tilled and cleaned allowing for access to a variety of topography, substrates and enrichment items. This environment promotes natural grooming activities, while time spent in their pools supports foot hygiene and exercise.

8. What modifications have been made to the LA Zoo's Elephants of Asia exhibit to increase levels of care and comfort for the Zoo's elephants?

Ans: Elephants of Asia is a new habitat at the Zoo that opened in 2010. It is one of the largest most complex zoo elephant facilities in North America. Of the 32 elephant facilities in the AZA only 8-10 are comparable in size to the LA Zoo's. The 3.6 acre area for the elephants is, by design, divided into four yards to provide optimum flexibility for the elephants and safety of the staff. Each yard is covered with two feet of sand for comfort, has hills and valleys and several enrichment opportunities like food puzzles and timed hay feeders to stimulate the elephants to move around the spaces. There are several vertical scratching posts, and large boulders for self-grooming. The elephant barn is large and roomy with in-floor heating, automatic waterer and scratching brushes. While our elephants typically have access outside throughout the day and night, two stalls have rubber floors in the event an elephant had to stay in the barn for an extended period.

9. Describe the seminal fluid collection process used with Billy.

Ans: Billy is asked to enter the ERD (see answer b. below) and the back door is closed. Once he is in position feces are removed from his rectum manually and with an enema. A trained staff member then stimulates his urethra and vas deferens via his rectum until an erection and ejaculation occurs. The entire procedure takes five to fifteen minutes.

- a. Why does the Zoo and AZA believe this process is necessary?

Ans: The ultimate goal of any AZA SSP program is to manage a sustainable population that retains 90% or more of the genetic diversity available in the population for 100 years or 10 generations. To accomplish that goal all founding members of the population need to be equally represented. Billy is a wild-born male with no offspring and is unrelated to any other Asian elephants in North America. It would be a great benefit to the overall population for him to sire offspring. Since the LA Zoo has no breeding age females we attempted to collect his semen which could be used to artificially inseminate females at other zoos. This would genetically benefit the overall population and avoid moving elephants around the country. However, we were never successful in collecting semen from Billy.

- b. Is Billy able to voluntarily leave or stop the process? How? Has he ever voluntarily opted to leave? Has he exhibited signs or evidences of enjoying or not enjoying the process?

Ans: Part of Billy's regular routine is to walk through the Elephant Restraining Device (ERD) in the elephant barn. The ERD is a chute with side walls and front and back doors and a weight scale in the floor that can be used to safely examine an elephant. All elephants walk through the ERD so they are comfortable with it when needed. For semen collection Billy walks into the ERD and is given food while in there. The back door is closed to protect the Staff but the front door is left open so Billy can leave as he chooses. He has never left during the procedure which involves a Keeper manually stimulating him via his rectum.

10. How often is the soil at the exhibit rototilled? What logs or data exist to document this?

Ans: All yards are rototilled once a month barring bad weather or mechanical failure of equipment. The activity is recorded on the Keepers' Daily Report and included in each elephant's permanent computer record by the Zoo Registrar. The actions are also recorded on the Grounds Staff calendar.

11. How often are the elephants exercised? What logs or data exist to document this?

Ans: The elephants are exercised each day passively by moving them around the habitat and providing enrichment items (typically food) to encourage searching. Each elephant is actively exercised every day with a target of two hours each. The actual time spent exercising is recorded on the Keeper Daily Report and entered into their individual computer record.

12. Conservation:

- a. Are Asian Elephants on the endangered species list? If so, at what level and are there estimates for when the species could go extinct in the wild?

Ans: Asian elephants are listed as endangered by the US Fish and Wildlife Service and the IUCN Red List. There are an estimated 40,000-50,000 Asian elephants remaining in the wild, but these populations are decreasing rapidly and segmented into small island populations. Elephants used to roam most of Asia, but now they're

restricted to just 15% of their original range. It is very difficult to estimate when or if this species will go extinct in the wild. The work and contributions AZA zoos and other conservation organizations have made are vital to keeping this species from going extinct. It is estimated that there were over 100,000 Asian elephants at the start of the 20th century. You can see how quickly they are disappearing.

http://www.panda.org/what_we_do/endangered_species/elephants/asian_elephants /

- b. How do Species Survival Plans (SSPs) work at the LA Zoo? What are Global Species Survival Plans and how do they differ? How do SSPs work for sustaining global populations in the wild?

Ans: As mentioned above, the goal of any AZA SSP program is to manage a sustainable population that retains 90% or more of the genetic diversity available in the population for 100 years or 10 generations. This is done by looking at the entire SSP population to manage it for maximum genetic diversity and a sustainable demographic (i.e. age and sex ratios) using sophisticated population analysis software. Each SSP has a Coordinator, a Studbook Keeper and Steering Committee all of whom are employees of AZA Accredited facilities. Periodic breeding and transfer plans are developed in concert with all facilities holding the species.

There are only a few Global Species Survival plans as transferring animals globally is challenging both financially and logistically. When done it is often for genetic diversity purposes. When an AZA SSP works globally they usually work with EAZA, the European AZA. They are managed very similar to the regional SSPs only there may be a larger gene pool.

SSPs focus on genetic and demographic diversity for three primary reasons. First is to ensure that populations that reside in our zoos and aquariums are healthy and fully representative of their species. Second is to develop techniques that can be used in the field to support wild populations. And third is to maintain reserve populations that have the genetic capacity to survive in the wild if they are reintroduced.

- c. What animal species have been specifically saved or assisted by LA Zoo efforts and by Zoos in general? How has the California condor program worked to rehabilitate this species?

Ans: In addition to the California condor the LA Zoo has assisted in the direct recovery of bongo antelope, Arabian oryx, golden lion tamarin, Peninsular pronghorn antelope, Sumatran rhino, mountain yellow-legged frog and California red-legged frog. In addition, zoos are known for assisting the direct recovery of the black-footed ferret, Mexican and red wolves, Prezwalski's horse, Bali mynah, Attwater prairie chicken, Guam rail, Wyoming toad and many other amphibian species threatened by chytrid fungus, just to name a few. Just as important is how zoo techniques are being used in the field for conservation and recovery of similar species. Additionally, the LA Zoo donates an average of \$150,000 each year to conservation projects in range countries with funds provided by the Greater Los

Angeles Zoo Association (GLAZA). AZA institutions combined are donating nearly \$250,000,000 each year to field conservation efforts.

At one time the California condor ranged over the western United States. However, in the 1980's their numbers had decreased to just 22 birds due largely to the effects of pesticides thinning their eggs, lead poisoning and loss of habitat. By 1987 all surviving birds were captured and brought to the Los Angeles and San Diego zoos due to our preexisting techniques for managing and breeding vultures and large birds of prey. Beginning in 1991 and 92 in concert with the US Fish and Wildlife Service and the California Department of Fish and Wildlife condors were being released back into California and Arizona. Today we are approaching 500 condors in and out of the wild with most birds in the wild. In July 2018 a California condor was spotted in Wyoming for the first time in 100 years. This past year along with our partners of zoos, state and federal wildlife agencies and NGO's committed to condor conservation the LA Zoo was awarded AZA's North American Conservation award.

d. How does the LA Zoo work to support local elephants programs in Asia?

Ans: Each year the LA Zoo donates to two separate Asian elephant programs. Since 2007 the Zoo has donated \$204,000 to Wild Earth Allies (formerly Fauna and Flora International) to help protect Asian elephants in Cambodia. FFI began working in Cambodia in 1996. Particular attention has been given to mapping elephant distribution and identifying priority areas for their management along with teaching residents how to live compatibly with elephants. With this foundation, FFI has addressed the conservation needs of threatened areas and flagship species (Asian Elephants, Pileated Gibbons, Yellow-Cheeked Gibbons and Siamese Crocodiles) through strategic partnerships with the Cambodian Government, non-governmental organizations, universities and local communities.

For the past four years, the LA Zoo has donated \$5,000 annually to the Biodiversity & Elephant Conservation Trust. This is a Schools' Awareness Program that is carried out in the rural districts of Sri Lanka, where there are incidents of human-elephant conflict. The program consists of a half-day session in each school, where the children are given lectures/presentations on Sri Lanka's elephants, natural environment and biodiversity. Over 2,100 schools have been completed under this program in the last fourteen years at around 150 schools per year.

13. What is the typical lifespan and age and mortality of elephants in zoos and sanctuaries?

Ans: Longevity of elephants is not well understood, and most of the available information comes from African elephants. Recent data suggests that African elephants rarely live to the age of 50. Evidence suggests that Asian elephants typically live into their mid-50s, but there is not enough consistent data available on wild Asian elephants to accurately estimate their lifespan. Wiese and Willis calculated life expectancies of captive elephants in 2003 using data on live and dead elephants through 2001 and found an average life expectancy of 44.8 for Asian elephants in North America using survival analysis estimates. They predicted that life expectancy would increase over time as zoo elephants continued to age. Elephant ages at the LA Zoo currently are 54, 52, 48 and 33 years of age.

14. What is the practice of other zoos in keeping their bull elephants separate from other elephants? (How do other zoos manage elephant social interaction?)

Ans: There is no one way to answer this as it depends on the number of elephants, sex ratio, individual elephant demeanors and habitat layout at each zoo. From conversations we understand that most zoos do not house more than one adult bull at any time. Those bulls may be managed with females fulltime or intermittently if breeding is desired. Denver Zoo is housing all bulls and has been integrating the bulls together at different times.

15. What are typical practices in zoos in captive environments and interaction of a bull elephant in the wild?

Ans: Wild Asian bulls will remain with their maternal herd until they are 8-9 years of age. At that time they are pushed out of the herd and may follow on the periphery as the herd moves through its range. Young males may form loose association with other young bulls but typically live a more solitary life at full maturity. Mature bulls in musth will attempt to enter female herds for breeding and leave after becoming exhausted during a time of heightened activity with little food and water consumed.

16. What is the typical range of an Asian elephant in their natural habitat? (include a family, clan, or herd in square mileage).

Ans: The elephants range is directly related to available resources such as food and water as well as the presence of people, i.e. the more resources the smaller the range. The IUCN Asian Elephant Specialist Group and Smithsonian Scientists report ranges as large as 232 square miles in resource barren Southern India and as small as 11.6 to 61.8 square miles in parts of Sri Lanka or 6 to 20 square miles in Myanmar. Within these ranges the family groups typically traverse .62 to 5.6 miles per day. This is comparable to the activity of our elephants at the LA Zoo.

17. What is the range of an Asian Bull elephant in the wild compared to captivity?

Ans: Free-ranging elephant home ranges will be as large as necessary to find needed food and water while avoiding human communities but are typically smaller than those recorded for family herds. The elephant range in captivity is limited to the size of the individual habitat provided but resources are also provided so the elephants do not have to search for resources. However, because of that, they have to be encouraged to use the entire habitat through enrichment opportunities and exercise.

18. Please compare Billy's experience to elephants in zoos across the country (and world).

Ans: Billy lives in one of the largest and most complex zoo elephant habitats in the world. In the US there are only 9-10 other zoos that are comparable. Once he began to mature at about 9 years of age he was managed in total protected contact meaning that Keepers did not enter his space and used voice commands to ask him to comply. During his life he has lived among other elephants and was a frequent companion of female Gita. Currently due to the advanced age of our nonbreeding females he can see them, touch, hear, smell and

communicate with the females but not enter the same yards. This is not atypical elephant management within other zoos.

19. What is the health and wellbeing of an elephant at a sanctuary compared to a zoo?

Ans: With the caveat of a good sanctuary and a good zoo, it has the potential to be the same but not superior.

20. What are the typical reasons for a Zoo to move an elephant to a sanctuary? At a sanctuary, what level of staffing and medical care is available? What connection would Billy be able to have with other elephants?

Ans: Zoos would typically move an elephant to a sanctuary when they have decided to close their elephant program and cannot find an acceptable home within another zoological facility. If it is an AZA Accredited zoo they would be expected to make sure the sanctuary had resources including staff, veterinary care and finances to support the elephant(s) through their natural life. We are only aware of one current sanctuary that can house adult bulls. They are housed individually but adjacent to other elephants.

21. What is the social and psychological life of an elephant bull in the wild v. in captivity?

Ans: See answers in questions 14, 15, 17 & 18.

22. How does the LA Zoo's elephant of Asia exhibit compare in size, complexity, and enrichment to other AZA elephant facilities?

Ans: In the past 10 years several zoos have expanded their elephant habitats. There are currently 9-10 facilities with comparable or larger habitats than ours.

23. How does Billy's feet compare, in appearance of the pads and nails, to Asian elephants in the wild and in captivity of a similar age and gender?

Ans: An elephant's foot health is important to their ability to travel for food and water. Foot injuries, infections and lameness occur in free ranging and zoo elephants. Therefore, Billy's feet are inspected and cleaned daily by elephant Keepers to make sure there are no cracks or abscesses that require treatment. The feet of free ranging elephants are rough with wavy undulations that provide traction when walking. Billy's feet are similar except excess skin is removed to prevent dirt from being trapped and potentially injuring his feet. His nails are inspected as well and trimmed when needed to prevent stress on the nails. Billy voluntarily presents all four feet to Keepers and/or Veterinarians for examination.

24. Regarding Billy's head-bobbing.

a. What is stereotypic behavior and how does it evolve? How did Billy come to develop stereotypic behavior and what efforts have been made to mitigate the behavior?

Ans: A stereotypy is a term for a group of phenotypic behaviors that are repetitive, morphologically identical and which possess no obvious goal or function. Billy came to the Zoo as a calf in 1989 and already exhibited a head bobbing behavior that was thought to be a pacifying behavior, like thumb sucking, at that time. Since then he has transferred the behavior to times he anticipates the arrival or attention of his

Keepers. Since his behavior has a purpose we refer to it as repetitive versus stereotypic. Thousands of hours of behavioral observations followed by changes in his daily routine have reduced, but not eliminated his behavior.

- b. What evidence is available to show when Billy's stereotypic behavior developed and why the Zoo believes the behavior is a sign of anticipatory behavior rather than boredom or stress?

Ans: The Zoo's Animal Curator and Elephant Managers accompanied Billy from Malaysia to Los Angeles and reported that he exhibited this behavior in Malaysia. Again, behavioral studies illustrate the relatedness to his behavior to the presence of his Keepers.

25. How does Billy rank amongst AZA Asian elephants for genetic diversity?

Ans: As a wild-born Asian elephant with no offspring, Billy is genetically unique and therefore, important to the North American population. He is one of four genetically important Asian bulls and second in unrelatedness to other Asian elephants in North American.