

REPORT FROM

OFFICE OF THE CITY ADMINISTRATIVE OFFICER

Date: *December 13, 2005*

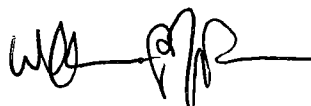
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Council File No.

Council District: 4

To: The Mayor
The City Council

From: William T Fujioka, City Administrative Officer



Reference: Request from Mayor dated August 12, 2005

Subject: **Los Angeles Elephant Exhibit Review**

SUMMARY

The Los Angeles Zoo is in the midst of a capital improvement program that includes the construction of a new exhibit for its three elephants: Ruby, Gita, and Billy. In response to questions raised regarding the appropriate amount of space required to house elephants, the Mayor has requested that this Office conduct an analysis of the housing and health needs of the Zoo's elephants. This analysis is to aid in the determination of whether or not elephants should remain on exhibit at the Zoo, and, if so, the size and elements required for such an exhibit.

In performing this analysis, we reviewed the history and current health of the elephants at the Los Angeles Zoo; the costs of operating an elephant exhibit at the Zoo and at comparable zoos; the current plan for the exhibit, the plan for the Zoo's herd, and whether the plans for the exhibit and herd meet American Zoo and Aquarium Association (AZA) standards; the feasibility and cost of any alternative exhibit plans; and the possible consequences of a decision to maintain, expand, or eliminate the elephant exhibit. Also reviewed were health and behavioral problems that elephants may face in captivity; the causes of these problems and possible remedies; and the basis for decisions by zoos that have eliminated or expanded their exhibits.

The history of elephants at the Los Angeles Zoo has not been without incident. When applicable, the Zoo has changed its practices and updated its procedures manual for its elephant management program to prevent further incidents and to improve the quality of care for the elephants. In addition to its management program, the Zoo follows the laws and regulations of the state and federal governments regarding the care and treatment of animals. As a member of, and as a facility accredited by, the AZA, the Zoo must follow AZA standards for animal care and welfare, which include guidelines for elephant handling, herd size, diet, medical care, exhibit form and staffing.

As part of the evaluation of the current health of Los Angeles' elephants, this Office contracted with an independent veterinarian to evaluate the health and well-being of each elephant. The veterinarian found Billy and Ruby to be healthy. Gita, who has a chronic foot infection and a chronic arthritic

condition, was described as appearing to be doing well. In addition, she describes Billy's well-being and Ruby's well-being as "good" and Gita's well-being as "moderate to good." This independent veterinarian found that the care and management of elephants currently provided by the Zoo are of a high standard. The veterinarian found that the Los Angeles Zoo Elephant Management Program was thorough and meets or exceeds all points of the AZA Standards for Elephant Management and Care, which outlines keeper training, use of equipment, and the care and management of elephants. She further found that the Elephant Management Program was being taken seriously and followed closely by staff.

The Los Angeles Zoo currently spends about \$114,000 on each of the three elephants annually for operational costs associated with their general care. When compared to other zoos with three elephants, the City's costs are on the high end, with staffing costs being the greatest expense. Not included in the estimate is medication for Gita, which has been averaging \$8,000 per month for treatment of foot abscesses and arthritis. The Zoo Department expects that the course of her treatment will continue through the end of this fiscal year.

As a member of the AZA, the Los Angeles Zoo is required to participate in the Elephant Species Survival Plan (SSP), either as a breeding or holding institution. The Zoo may indicate its preference, but AZA approval is necessary, as the ability to breed or hold animals is dependent upon the Zoo's space and resources and the needs of the SSP program. The current plan for the elephant exhibit has been designed for flexibility to accommodate different herd structures. Any discussion about changes to the size or composition of the herd would need to be considered by the Mayor and Council in the context of the exhibit size, fiscal implications and other policy considerations.

The AZA standards require that elephant exhibits provide about .08 acres, at a minimum, of outdoor yard space for three elephants. The prior elephant exhibit, which was demolished as part of the ongoing capital improvement program at the Zoo, exceeded these minimum standards at 0.57 acres. The original plan for the new exhibit for the three existing elephants would have provided yard space of 1.06 acres total. A recommendation has been made to the Mayor and Council to provide funds (\$3.9 million) for construction to expand the yard by 0.78 acres for a new yard of 1.84 acres.

While professional zoo standards are met at the Los Angeles Zoo, there is longstanding public debate on whether these standards are adequate to address the elephants' health and behavioral needs. Opinions from members of the zoo, veterinarian, academic and humane communities indicate that, generally, elephants in zoos can suffer from problems that are unique to captivity. A high occurrence of foot ailments and arthritis is blamed on the hard substrates, like concrete, used in zoo exhibits. Small enclosures were also cited as a source of health problems for elephants, but to a lesser extent. The most common behavioral problem cited was the exhibition of stereotypic behavior, such as head bobbing, swaying, and pacing, which was blamed on an impoverished environment. To mitigate these health and behavior problems, some experts have advocated changes to the design of zoo exhibits. Some of these changes include softer substrates, larger exhibit yards, and increased opportunities for enrichment in the exhibit. Zoo exhibits are increasingly incorporating these changes to better accommodate the needs of elephants.

As designed, the new Pachyderm Forest ("Elephants of Surin" exhibit) would include an immersion pond, interlocking yards, and rock formations. The independent veterinarian indicated that the proposed new exhibit, with a variety of furnishings and greater space (a 1.84 acre yard) should be adequate for the current three elephants, and will contribute positively to their well-being.

Five options have been examined for cost and feasibility with regard to the Zoo's planned elephant exhibit: (1) proceed with the original planned elephant exhibit with a yard of 1.06 acres; (2) proceed with an expanded exhibit with a yard of 1.84 acres; (3) proceed with an even larger exhibit with a yard of approximately 3.0 acres or more in the planned location; (4) abandon the current location and identify a larger exhibit space within the Zoo; or (5) eliminate the exhibit entirely.

The first three options provide incrementally larger exhibit space, up to 3.0 acres or more, at an increasing cost. These three options fit within the Zoo's master plan as they maintain the exhibit within the Zoo's Asian Forest section. The 1.84-acre exhibit would require the relocation of the existing reptile house, which is already part of the capital program. The City can house an exhibit larger than 1.84 acres at this present location in the Asian Forest, but that would require the relocation of additional exhibits and pedestrian pathways.

To attain an exhibit significantly greater than 3.0 acres, the exhibit would need to be relocated to another site within the Zoo. The service yard and the parking lot were identified as possible locations, but both proved to be undesirable due to their exorbitant cost and the significant deviation from the master plan. To eliminate the exhibit, the Zoo's herd would need to be sent to another zoo or to a sanctuary. It should be noted that under AZA guidelines, the Zoo cannot unilaterally send its elephants to a sanctuary without making a good faith effort to place them in AZA accredited facilities first. (Sanctuaries are not AZA accredited.) The cost of relocating the herd to a sanctuary may be as high as \$2.14 million. Furthermore, the elimination of the exhibit may result in the loss of \$12.0 million in Los Angeles County funding designated for the capital program, with a cost of \$3.0 million to repay the County for those funds already spent. Use of the \$12.0 million for another qualifying project within the Zoo's capital program must be approved by the County Board of Supervisors, and there is no guarantee that approval would be granted.

In Los Angeles, the elephants are an important aspect of the social and educational value of the Zoo. As noted by the independent veterinarian, with completion of the new expanded exhibit, "it is unlikely that any other staff or facility could offer a better level of care and management than the elephants receive at the Los Angeles Zoo." Elimination of the elephant exhibit is not, therefore, recommended. It is unclear that the three elephants could remain together at a new location and their separation could be detrimental to their social well-being. As stated above, the City could not unilaterally send the elephants to sanctuaries. Their relocation would have to be performed in accordance with AZA guidelines in order to avoid a possible adverse impact on the Zoo's accreditation. Further, the City would likely have to repay Los Angeles County \$3.0 million for costs already expended on the elephant exhibit, and funding of \$12.0 million could be jeopardized. The City would be faced with incurring additional costs to construct an alternative exhibit at the location currently designated for the elephants. The City could also incur costs to relocate the elephants, and depending upon the destination, possible annual on-going costs for care.

At this time, we support the continued presence of elephants in the Los Angeles Zoo in a larger exhibit, with a yard larger than the 1.84 acres currently proposed. Depending on the eventual size of the yard, additional costs, ranging from \$7.7 million for a yard of 2.5 acres to \$13.9 million for a yard of approximately 3.0 acres, could be incurred. Costs would increase with an increase in the size of the yard. Enlarging the exhibit space would allow the Zoo to better address the needs of its herd by providing more opportunities for exercise and greater variation in the environment, and utilizing natural substrates to help alleviate foot problems and arthritis.

In conjunction with a larger exhibit, the Zoo should be given the resources to continue to provide high quality husbandry, including veterinary care, by ensuring that its animal care programs are adequately staffed. To this end, the Zoo should receive authority on an interim basis to hire additional Veterinary Technicians to care for the elephants and funds (\$50,000) to cover as-needed salary costs for the balance of the fiscal year. To ensure that the interests of the Zoo's elephants are being addressed, the Zoo Department should make periodic reports to the Mayor and Council to keep it apprised of the staffing of its animal care providers and the health and well-being of the Zoo's elephants.

Most of the points that have been made against having elephants at zoos could similarly be made about other species. In effect, they can be construed as arguments against the existence of zoos. That question, whether zoos should continue to exist or be closed, is beyond the scope of this analysis. However, it is a question that should be addressed directly, if it is addressed at all, and not one that should be addressed on a piecemeal basis, species by species.

RECOMMENDATIONS

That the Council, subject to the approval of the Mayor:

1. Determine that elephants should remain on exhibit at the Los Angeles Zoo;
2. Approve an enlarged elephant exhibit with yard space ranging from 2.5 acres to approximately 3.0 acres or more at estimated costs ranging from \$7.7 million to \$13.9 million;
3. Authorize the issuance of up to \$13.9 million in MICLA funds to finance the expanded exhibit;
4. Instruct the Bureau of Engineering to report to the Zoo Capital Projects Oversight Committee with a detailed project scope, including utilization of a softer substrate, schedule and cost estimate for the enlarged exhibit;
5. Authorize by resolution, on an interim basis, four part-time Veterinary Technicians, Class Code 2369, for the period of January 1, 2006 through June 30, 2006 for the Los Angeles Zoo;
6. Transfer \$50,000 from the Reserve Fund to the Unappropriated Balance and appropriate that amount therefrom to the Zoo Department, Fund 100/87, Salaries As-Needed Account No. 1070;
7. Instruct the City Administrative Officer to work with the Los Angeles Zoo to include funding and as-needed position authority for Veterinary Technicians in the 2006-07 Proposed Budget; and
8. Instruct the Zoo Department to report to the Mayor and Council on:
 - A. All animal care vacancies, and on any actions required to fill those vacancies

- B. Any changes being considered to the size or composition of the elephant herd along with a discussion of implications for the exhibit size, fiscal implications and other policy considerations of such a change.
- C. A biannual basis regarding the health and well-being of the Zoo's elephants.

FISCAL IMPACT STATEMENT

Adoption of the above recommendations would result in the issuance of up to \$13.9 million in additional MICLA funds for the construction of an enlarged elephant exhibit that would provide a yard size ranging between 2.5 acres and approximately 3.0 acres or more. This action would impose an obligation on the General Fund as MICLA debt service is paid from the General Fund and would commit the General Fund to payment of about \$1.12 million in annual debt service, for about \$22.4 million total, over 20 years. These recommendations would also authorize an appropriation of \$50,000 to the Zoo for as-needed salaries to enable to Zoo to hire additional Veterinary Technicians. Additional appropriations to the Zoo Department from the General Fund may be required to fund additional animal care staffing and to fund the relocation of any exhibits that would need to be removed for the expansion. Operating costs are not expected to increase significantly.

FINDINGS

1. BASIS FOR REPORT

On August 12, 2005, the Mayor asked that this Office conduct an analysis of the housing and health needs for elephants at the Los Angeles Zoo. According to the letter from the Mayor, questions have been raised about the appropriate amount of space required to house elephants in captivity. Subsequently, the Mayor provided a list of key questions to be addressed in the report. Both the Mayor's request and the list of questions are attached. (Attachments I and 2.)

2. LOS ANGELES ZOO CONSTRUCTION PROGRAM BACKGROUND

The Los Angeles Zoo, which opened in its present location in Griffith Park in 1966, receives about 1.4 million visitors annually. The Zoo is home to 1,200 animals, including three elephants: Ruby, a 44-year old female African elephant; Gita, a 47-year old female Asian elephant; and Billy, a 20-year old male Asian elephant.

In 1998, the Zoo began an extensive capital improvement program for the construction of seven exhibits, an animal health center, two artwork projects, and other infrastructure improvements. The bulk of the \$117.7 million in funding is provided by the 1998 Proposition CC bond issuance for \$57.8 million. Other funding includes County Proposition A (\$29.2 million) and City Proposition K (\$11.0 million) assessment funds, Greater Los Angeles Zoo Association (GLAZA) funds (\$10.6 million), Municipal Improvement Corporation of Los Angeles (MICLA) funds (\$2.2 million), Zoo Enterprise Trust Funds (\$1.0 million), and, for certain special purposes, County Proposition C sales tax funds, and other special funds through the Department of Water and Power and the Sewer Construction and Maintenance Fund.

Major projects completed to date include the Animal Health and Conservation Center, the Children's Discovery Center, the Front Entry Complex, the Orangutan Exhibit, the Sea Lion Exhibit, and the Winnick Children's Zoo. The current program calls for the construction of the "Middle Zoo Project", which consists of the Gorilla Exhibit, the Golden Monkey Exhibit, and the Pachyderm Forest. Future construction projects include the Rainforest of the Americas Exhibit and the Reptile and Insect Center Exhibit.

3. PACHYDERM FOREST PROJECT BACKGROUND

The Pachyderm Forest project provides for the reconstruction and expansion of the Zoo's elephant exhibit. In 1996, Los Angeles County voters approved Proposition A, a property tax assessment to be used for parks, open spaces and beaches, which set aside \$12.0 million for the development, improvement and rehabilitation of the Zoo in accordance with the Zoo's Master Plan. In 1998, the Los Angeles County Board of Supervisors approved an agreement between the County Regional Park and Open Space District and the City that designated the \$12.0 million for the Pachyderm Forest project. The Zoo, via fundraising by GLAZA, has received \$1.0 million in donations to fund the Thai viewing structure that was to accompany the construction of the new elephant exhibit.

The committee overseeing the capital improvement program at the Los Angeles Zoo has recommended expanding a planned elephant exhibit ("Elephants of Surin") from 1.06 to 1.84 acres (yard space), and has requested additional funding for it and other projects in a June 22, 2005 report presented to the Budget and Finance Committee.

The specialized nature of zoo exhibit construction, combined with construction delays and an escalation in construction costs, has added approximately \$9.4 million to the project cost, increasing the budget from the original estimate of \$12.0 million in 1996 to \$21.4 million in 2005. Further, the proposed expansion to 1.84 acres would require an additional \$3.9 million, for a new total estimated project cost of \$25.3 million. Approval of the June 22, 2005 report would authorize the additional funding. It should be noted, however, that the Bureau of Engineering (BOE) has advised that construction costs could increase with each month that construction is delayed.

Work has already begun on the Pachyderm Forest project. The demolition of existing exhibit space has required that the Zoo's elephants be separated in two yards. Billy, the Asian bull, remains on exhibit in the remains of the old yard, while Gita and Ruby are housed in another yard outside the exhibit area. Plans exist for the new 1.84 acre exhibit, which would allow them to be housed in one facility. Bid and award has been postponed pending determination by the Mayor and Council whether or not to proceed with the project and on what basis. Should the Mayor and Council determine that the Zoo should continue to have an elephant exhibit, and should that exhibit be larger than currently proposed, additional costs would likely be incurred for the expansion of that exhibit as discussed below.

4. METHODOLOGY AND APPROACH

As noted in Attachment 2, this Office has been requested to consider questions regarding "costs", "issues and plans", and "health" to determine: 1) whether elephants should remain on exhibit at the Los Angeles Zoo; 2) if yes, the size of and elements in such an exhibit; 3) if no, the options available for placing the elephants elsewhere; and, 4) any temporary measures that should be implemented until action can be taken.

All of the questions were evaluated to determine which sources would be best able to respond and were broken down into smaller component parts to assure that respondents provided comparable data to the greatest extent feasible.

- The Los Angeles Zoo addressed the cost of maintaining elephants and maintaining their exhibit, the history and current health of the elephants and its plans for its herd.
- BOE addressed current exhibit plans and feasibility and the costs of any alternative exhibit plans.
- GLAZA and the Zoo Board of Commissioners addressed possible outcomes of a decision to maintain, expand, or eliminate the elephant exhibit.
- Sanctuaries and other zoos that keep elephants addressed questions regarding the care, health, and behavioral issues of their elephants. In addition, "comparable" zoos (urban zoos with three elephants) addressed the operating costs of supporting their elephant exhibits, and the size and

design features of their exhibit. Those zoos that had eliminated or expanded their exhibits addressed questions as to the reasons for their actions.

- “Experts,” consisting of members of the humane community, veterinarians, and researchers, and others able to comment upon elephants, addressed elephant care, behavior, health, and habitat.
- The American Zoo and Aquarium Association (AZA) website was reviewed for standards regarding elephant exhibits. Questions regarding AZA policy and procedures were addressed to the Interim Executive Director of AZA.
- An independent veterinarian addressed the health and well-being of the zoo’s three elephants.
- This Office addressed the funding of the planned elephant exhibit.

To assist in the analysis, the Mayor’s Office provided a list of 27 individuals who could provide input in answering the Mayor’s questions. The Zoo provided names of five other individuals to be contacted. (Attachment 3 lists the contributors.) In addition, the Board of Zoo Commissioners held a meeting on September 20, 2005 to consider the elephant exhibit and to receive expert testimony and public comment on all sides of the question of whether elephants should remain on exhibit at the Los Angeles Zoo.

Due to the short timeframe, individuals contributing to the analysis were interviewed by telephone; email was used when time difference proved to be an obstacle. Written questions were made available to those who requested them. Participants were invited to make additional comments and to contact this Office with any additional information they wished to provide.

5. ELEPHANT CARE AND MANAGEMENT AT THE LOS ANGELES ZOO

The Los Angeles Zoo must follow laws and regulations of the state and federal government regarding the care and treatment of animals. The U.S. Department of Agriculture is the federal regulatory body that inspects zoos to ensure compliance with the Animal Welfare Act. The California State Penal Code specifically prohibits the abuse of elephants. Moreover, as a member of the AZA, a non-profit organization that serves as the accrediting institution for zoos and aquariums, the Zoo must follow the professional standards put forth by the AZA, including its standards for animal care and welfare. Additionally, the Zoo’s procedure manual for its elephant management program outlines procedures for training keepers, using equipment, and handling elephants to ensure the safety of the elephants and Zoo staff (Attachment 4, Procedures Manual for the Los Angeles Zoo Elephant Management Program).

The Zoo has had elephants on exhibit since it opened in 1966. The history of elephants at the Los Angeles Zoo has not been without incident. A brief history is attached. (See Attachment 5.) Accordingly, as part of our analysis, an independent veterinarian was retained to provide an independent assessment of the health and status of the three Los Angeles elephants based on direct observation plus an up-to-date review of veterinary records.

The process used to select the veterinarian was intended to identify an independent, objective expert in elephant care. An independent, qualified veterinarian was selected by two other qualified veterinarians, who represented the diverse interests of the humane and zoo communities.

This independent veterinarian found that the care and management of elephants currently provided by the Zoo are of a high standard. The veterinarian found Billy and Ruby to be healthy. Gita, who has a chronic foot infection and a chronic arthritic condition, was described as appearing to be doing well. As indicated in her report, well-being is a complex concept that considers numerous factors in attempting to determine the level of overall health, comfort and "happiness." She describes Billy's well-being and Ruby's well-being as "good" and Gita's well-being as "moderate to good." The veterinarian found that the Los Angeles Zoo Elephant Management Program was thorough and meets or exceeds all points of the AZA Standards for Elephant Management and Care, which outlines keeper training, use of equipment, and the care and management of elephants. She further found that the standards were being taken seriously and followed closely by staff. As noted by the independent veterinarian, with completion of the new expanded exhibit, it is unlikely that any other staff or facility could offer a better level of care and management than the elephants receive at the Los Angeles Zoo. (See Attachment 6 for report and recommendations.)

6. CURRENT AZA ELEPHANT MANAGEMENT STANDARDS

With respect to the care of elephants, the AZA has developed standards for the husbandry and management of elephants (Attachment 7, AZA Standards for Elephant Care and Management). These standards cover a broad array of matters, such as the elephants' herd structure, housing, training, diet, medical care, and reproductive care, as well as the Zoo's staff organization and training. Originally adopted in 2001, member institutions have until May 2006 to comply with or seek a waiver from the requirements. In August, the AZA began its multi-step process for revising its elephant management standards. Given the extensive internal and external review and approval process followed by the AZA, there is currently no expected date by which the revised standards will be released.

Based upon the current standards for outdoor space, the original 1.06-acre planned exhibit meets the AZA standards of a 0.08-acre, at a minimum, outdoor yard for three elephants. The standards also require that elephants be given the opportunity to exercise and interact with other elephants. The Zoo must be able to separate the elephants, if necessary; this would be facilitated by three separate, interlocking yards. In compliance with the standards, the Zoo has eliminated the dry moats, which may cause injury.

These standards also require that the Zoo maintain a herd of three female elephants. With the passing of Tara in December 2004, the Zoo's current herd stands at two females (one Asian and one African) and one Asian male. The standard that all elephants be within the same subspecies only applies to newly formed herds. To date, the Zoo has not undertaken any steps to increase its herd or to request a variance in herd size while the elephant exhibit is under renovation. The Zoo has not sought any other variances from the AZA Elephant Management Standards.

As a member of the AZA, the Los Angeles Zoo is required to participate in the Elephant Species Survival Plan (SSP), either as a breeding or holding institution. The Zoo may indicate its preference, but AZA approval is necessary, as the ability to breed or hold animals is dependent upon the Zoo's

space and resources and the needs of the SSP program. The current plan for the elephant exhibit has been designed for flexibility to accommodate different herd structures.

The Zoo has indicated that it would like to establish an Asian breeding herd of one bull and three cows. This would require obtaining either through loan or importation at least one female Asian elephant. The AZA Elephant SSP would provide assistance in locating elephants available for loan. Another option would be to import elephants; however this action would be controversial, as humane treatment of animals cannot be assured during capture and transit. As such, there has been no attempt to identify importation costs. The Zoo estimates that the primary cost associated with securing additional elephants would be for transport, which could range from \$10,000 to \$18,000, depending upon the point of origin. This estimate is consistent with estimates provided by other zoos.

The Zoo anticipates that Gita and Billy would remain at the Zoo as part of the Asian herd. No decision has been made to move Ruby. Nothing in the standards precludes the Zoo from continuing to house Ruby. Alternatively she could be transferred to another institution that houses African elephants. In this case the AZA's African Elephant SSP would be consulted to identify an acceptable institution.

Any discussion about changes to the size or composition of the herd would need to be considered by the Mayor and Council in the context of the exhibit size, fiscal implications and other policy considerations.

Once the future of the exhibit is determined, the Zoo will have several courses of action available. The Zoo may maintain the herd structure as is and seek a variance from the AZA on the herd size standards. If it wished to comply with existing standards, the Zoo may procure an additional female elephant. If the Zoo chooses to adopt the standards for new herds, the Zoo may seek to procure two additional Asian female elephants and transfer the Zoo's African elephant (Ruby) to another facility with African elephants. The proposed options on the size of the elephant exhibit do not preclude the City from pursuing any of these courses of action.

7. OPERATIONAL COSTS OF ELEPHANT EXHIBITS

To determine the cost of maintaining an elephant exhibit, expenditures on food, exhibit maintenance, medical care, and keeper costs were examined. The Los Angeles Zoo estimates that it spends approximately \$113,890 on each of its three elephants annually. This is based on estimated expenditures for food (\$109,725), staffing (\$201,946), veterinarian expenses (\$20,000) and exhibit maintenance (\$10,000). Not included in the estimate is medication for Gita, which has been averaging \$8,000 per month for treatment of foot abscesses and arthritis. The Zoo Department expects that the course of her treatment will continue through the end of this fiscal year.

Comparable zoos, defined as zoos with three elephants, were able to provide some data for cost comparison. Average expenditure per elephant ranged between \$60,000 and \$106,000. A direct comparison of individual cost categories was not possible as few zoo's track food and veterinarian costs by individual species. Variations in expenditures were seen in maintenance and staffing costs. Zoos in colder climates spend more on heating than those in warmer climates. Some zoos have

assigned keeper staff to work multiple exhibits. Staffing is consistently the highest cost of operating an elephant exhibit at all zoos. Those zoos at the upper expenditure limit had higher staffing costs, including the Los Angeles Zoo.

8. HEALTH AND BEHAVIOR OF ELEPHANTS IN ZOOS

The Mayor's letter requested that the views of experts be solicited on the health and behavioral differences between elephants in captivity and those in free roaming herds. Zoo professionals, veterinarians, researchers, and members of the humane community were contacted and asked to identify health and behavioral problems seen in zoos, in sanctuaries, in the wild, and across the entire population. They were also asked to identify the causes for such differences.

Zoo elephants are prone to developing foot ailments and arthritis. Cited to a lesser degree were weight problems, reproductive problems, cardiovascular problems, colic, tuberculosis, and other diseases. The high occurrence of foot problems and arthritis was blamed on the hard substrates typically found in zoos, namely concrete. Small enclosures were also cited as a health concern, but to a lesser extent. Weight problems and associated diseases resulted from a combination of a steady diet and lack of exercise available in small enclosures.

Behavioral issues cited include the exhibition of stereotypic behavior, such as head bobbing, swaying, and pacing. Other behavioral issues that were mentioned included aggression towards other elephants and people, self-injury (associated with stereotypic behavior), infanticide, and other behavior that experts indicated may signify boredom, stress, depression, or trauma. An impoverished environment was blamed for the stereotypic behavior; the elephants adopt the behavior as a form of self-stimulation. The lack of a social herd structure and past or present trauma were cited as sources of aggression.

Similar health and behavioral problems were identified in elephants in sanctuaries; however, these facilities typically accept elephants from zoos and circuses after onset of problems. The conditions found at circuses and zoos (e.g., hard surfaces, impoverished environments) were cited as the cause. Anecdotal evidence from sanctuary operators and other observers reported improvement in the physical condition of elephants with foot and joint problems and a decrease in stereotypic behavior.

Non-captive elephants experience different threats to their health, such as habitat destruction, injury, predators, poor nutrition, and disease. Experts generally agree that stereotypic behavior is not prevalent, if it exists at all. Behavior problems such as aggression and infanticide may be seen in elephants that have experienced trauma from hunting and culling to control the elephant population.

9. EXHIBIT DESIGN

Zoo exhibits are increasingly being designed to mitigate the health problems cited above. Whether this mitigation is sufficient is a dividing point among those interviewed. To address the foot and joint problems, the common solution would be the utilization of a softer substrate such as sand, soil, loam, or grass to alleviate the stress placed on the foot and joints. In conjunction with the softer substrate,

many of those consulted argued for a larger enclosure to provide adequate exercise. However, there was no consensus on the minimum size for an exhibit. Responses for an optimum exhibit space ranged from one-half an acre to one square kilometer (~247 acres) for one elephant. Those that felt that smaller exhibits were possible stated that there must be complexity in the use of space and encouragement of movement around the space.

Most of those interviewed agreed that behavioral problems such as stereotypic movements are addressed by increasing the stimulus of the environment that the elephants inhabit. The solution can be split into two camps. The first, mostly zoo professionals, argues that stimulus can be provided by creating opportunities for enrichment in their enclosure by varying their daily routine. The second argues that stimulus is best achieved in a larger enclosure where elephants are able to seek out new stimulus on their own.

With regard to the Zoo's elephants, several options are available for addressing their health or behavioral needs. The options that exist are: proceed with the original 1.06-acre planned elephant exhibit without the expansion, proceed with the revised 1.84-acre expanded exhibit; proceed with the exhibit in its current location and increase the size by encroaching on adjacent exhibits; abandon the current location and identify a larger exhibit space within the Zoo; or eliminate the elephant exhibit entirely. Quick action is required as the previous elephant exhibit was demolished in anticipation of construction of the new exhibit and the current accommodations are insufficient to house them over the long term.

Exhibit Option One: Construct Original Exhibit (1.06 acres)

The original planned Pachyderm Forest project was to be built in two phases. Phase I, funded by \$12.0 million in County Proposition A funds, included an elephant and hippopotamus exhibit of 1.06 usable acres. The hippopotamus exhibit was eliminated in 2004 through value engineering, and its space allocated to the elephant exhibit. (See Figure 1.) Phase II of the project consisted of a rhinoceros exhibit. Phase II was not funded and was eliminated from the capital program in 2001.

Exhibit Option Two: Construct Original Exhibit with Expanded Yard (1.84 acres)

An expanded exhibit has been recommended to the Mayor and Council and would provide a yard of 1.84 usable acres. (See Figure 2.) The expanded exhibit would provide more opportunities for exercise and enrichment. Current plans seek to provide a naturalistic environment, with the use of soil or sand to alleviate existing foot problems and prevent the onset of problems in healthy elephants. Three interconnecting yards of approximately 0.09 acres, 0.25 acres, and 1.5 acres in size, would allow the zoo to move the elephants through multiple yards. Each yard would be constructed to house bull elephants to allow for the greatest flexibility in use of space. The current planned exhibit includes one immersion pond in the smaller 0.2 acre yard, as well as additional wading pond, rock formations, and other opportunities for enrichment. With funding provided by GLAZA, the Zoo hopes to include a waterfall and an additional bull barn. The independent veterinarian found that an exhibit of this size (1.84 acre yard) with a variety of furnishings should be adequate for the current three elephants and would contribute positively to their well-being.

This expansion utilizes the area occupied by the existing reptile house and the zoo meadows. Construction of a new reptile house is included within the Zoo's capital improvement program. The

cost of this 0.78-acre expansion is estimated to be an additional \$3.9 million. This option is ready for the bid and award process pending Mayor and Council approval of this funding.

Exhibit Option Three: Larger Exhibit within Planned Area (2.5 acre – 3.0 acre yard)

In consultation with BOE and the Zoo, options for further enlarging the exhibit within the planned location were identified and evaluated for cost, feasibility, advantages and disadvantages. For the purpose of this evaluation, usable space, not total exhibit size, was considered.

A 2.5 acre to 3.0 acre or more footprint may be identified within the developed acreage of the Zoo that fits within the scope of the Zoo's master plan (See Figure 3). According to preliminary BOE estimates, the cost of enlarging yard space up to 2.5 acres total would add approximately \$7.7 million to the project estimate, and the cost of enlarging the yard space to approximately 3.0 acres or more would add approximately \$13.9 million to the project estimate. The expansion would also require the removal and relocation of additional exhibits, potentially affecting four bird displays, a keeper area, and exhibits for a tapir, a wolf and a pacarana, in addition to the reptile house and the zoo meadows. In addition, several pathways across the middle of the Zoo would be eliminated, possibly inconveniencing zoo visitors. The Zoo would need to identify new locations for the exhibits and identify funding for construction of those new exhibits. This option, like the previous two, fits within the Zoo's master plan. If Mayor and Council were to approve this option, BOE, in conjunction with the Zoo, would need to define the exhibit boundaries, identify operational and cost implications of relocating affected exhibits, and prepare plans for the development of the site. Unless the work can be done in phases, bid and award of the construction project would be delayed. The additional delay would also result in a likely increase in the costs of construction. Notwithstanding the steps and funding required, this option could provide the most feasible approach and the greatest amount of yard space for the elephants.

Exhibit Option Four: Identify New Location for Exhibit within the Zoo

To attain a larger exhibit area, the elephants would need to be relocated to another site within the Zoo's boundaries or outside the developed acreage. An exhibit of 4.0 acres or larger within the Zoo's developed footprint poses significant challenges due to the Zoo's topography and existing Zoo facilities. For an exhibit between 4.0 to 6.0 acres, the only option would be to locate the exhibit within the existing parking lot. A 6.0-acre exhibit would cost approximately \$57.5 million. Lost parking space would require the construction of a parking garage, which would add an estimated \$19.3 million to the cost of building the exhibit. Aside from the high cost, this solution poses other problems. The location along the Zoo's exterior places the elephants in proximity to noise from the road, freeway and parking lot. Also problematic is the required deviation from the Zoo's master plan.

Exhibit Option Five: Eliminate Exhibit and Relocate Elephants to another Facility

Another option is the elimination of the elephant exhibit. The Detroit Zoo, Lincoln Park Zoo (Illinois), and San Francisco Zoo have closed their exhibits citing a variety of reasons, including: limited space, cold climate, illness or death of elephants, deteriorating facilities, lack of enrichment of the exhibit, and political decisions.

Closing the exhibit would require relocating the elephants to another zoo or sanctuary. If eliminating the exhibit is meant to prevent the health and behavioral problems seen in zoos, the destination zoo

may not be an improvement. Sanctuaries may be an alternative. However, if the elephant exhibit were eliminated, there are detailed AZA policies and procedures that must be followed in an attempt to relocate the elephants to an AZA accredited facility. (See Attachment 8, Full Participation in the Species Survival Plan Partnership and Process.) Even though a sanctuary may be accredited by The Association of Sanctuaries, sanctuaries are not AZA accredited. Thus, the City cannot unilaterally place the elephants in a sanctuary. While AZA policies may allow the elephants to be placed in non-accredited facilities under certain circumstances, an attempt to circumvent AZA procedures may have undesirable consequences, including a possible adverse impact on the Zoo's accreditation. As part of the AZA Elephant SSP, the AZA would likely make a recommendation on which participating institutions should receive the Zoo's elephants.

The cost of relocating the Zoo's elephants to another location is dependent upon the receiving institution. If the herd were to be relocated to another zoo, this cost would be minimal as the receiving institution would be responsible for transporting and housing the elephants.

Should the elephants be relocated to a sanctuary in California operated by the Performing Animal Welfare Society (PAWS), the City may need to provide \$2.14 million in capital improvements and \$234,000 in recurring annual costs. (See Attachment 9.) Not included is the cost for transferring the elephants to the sanctuary, as PAWS does not provide such services. However, the facility would be able to provide a trailer for transport of the animals. Some cost savings could be achieved by sending the herd to separate sanctuaries.

It should be noted that eliminating the elephant exhibit does not alleviate the funding problem under the Zoo's capital program. As the previous elephant exhibit has been demolished, the Zoo would still have a 2.0-acre site that would need to be developed. BOE believes that cost figures for construction of a new exhibit would be comparable to estimates for the elephant exhibit. Moreover, additional funding must be provided for a new design.

There may be a fiscal impact to the City in the elimination of the exhibit from the potential loss of \$12.0 million in County funding and the need to repay \$3.0 million of that funding already spent. In 1998, the Los Angeles County Regional Park and Open Space District (the District) granted \$12.0 million to the City for the development of the Pachyderm Forest. Under the project agreement between the City and the District, the City would likely be obligated to repay the District for any expenditures funded by Proposition A if the project is terminated. To date, the District has reimbursed approximately \$3.0 million in expenditures for demolition of the previous exhibit and design of the new exhibit. Project termination also means that the City would forfeit the remaining \$9.0 million in Proposition A funds.

The District has indicated that the City may apply to utilize the \$12.0 million for another qualifying project within the Zoo's capital program. Before seeking approval from the County Board of Supervisors (the Board), arrangements must be made with the District to repay the \$3.0 million. Board approval may take three to four months and is not guaranteed.

As discussed previously, GLAZA has raised \$1.0 million in donations for the elephant exhibit. The organization has expressed its concerns regarding the elimination of the exhibit, including a decline

in philanthropic giving. GLAZA foresees that large private donors may be reluctant to make large donations if significant exhibits such as this one are not realized.

10. CONCLUSION AND RECOMMENDATIONS

Whether elephants should remain on exhibit at the Los Angeles Zoo is ultimately a policy question that must be addressed by the Mayor and City Council. The ethics of keeping animals in captivity and the social and educational value of zoos is a long-standing debate with competing viewpoints for which there is no clear answer. Debate goes beyond the cost, health, behavior and care issues discussed in this report, to the ethics of keeping animals in captivity and the value of zoos to our residents and society in general.

In Los Angeles, the elephants are an important aspect of the social and educational value of the Zoo. As noted by the independent veterinarian, with completion of the new expanded exhibit, "it is unlikely that any other staff or facility could offer a better level of care and management than the elephants receive at the Los Angeles Zoo." Elimination of the elephant exhibit, therefore, is not recommended. At this time, we support the continued presence of elephants in the Los Angeles Zoo. The first action we would recommend would be to provide elephants with access to a yard larger than the 1.84 acres currently proposed. Other zoos have made similar efforts out of the belief that a larger exhibit will present more opportunities for exercise and greater variation in their environment. Enlarging the exhibit space to a size between 2.5 acres and approximately 3.0 acres or more would allow the Zoo to design a high quality exhibit that provides enhanced opportunities for enrichment. Interlocking yards would allow the Zoo to limit the elephants to an exhibit yard during the zoo hours and expand the exhibit after hours to provide a larger roaming area. The ability to separate yards can provide for the separation of elephants if aggression is a problem, thereby preventing injury from other elephants while still allowing elephants to see, hear, touch, and smell each other. In conjunction with the larger yard, natural substrates should be utilized to alleviate foot problems and arthritis. The additional cost associated with a larger exhibit could range from \$7.7 million for 2.5 acres to \$13.9 million for approximately 3.0 acres. The costs would increase with an increase in the size of the yard.

It is unclear that the three elephants could remain together at a new location, and their separation could be detrimental to their social well-being. The City could not unilaterally send the elephants to sanctuaries. Their relocation would have to be performed in accordance with AZA guidelines in order to avoid a possible adverse impact on the Zoo's accreditation. Further, the City would likely have to repay Los Angeles County \$3.0 million for costs already expended on the elephant exhibit, and funding of \$12.0 million would be jeopardized. The City would be faced with incurring additional costs to construct an alternative exhibit at the location currently designated for the elephants, along with relocation costs, and depending upon the destination, possible annual on-going costs for care.

In conjunction with a larger exhibit, the Zoo should be given the resources to continue to provide high quality husbandry, including veterinary care, by ensuring that its animal care programs are adequately staffed. To this end, the Zoo should receive authority on an interim basis to hire additional Veterinary Technicians to care for the elephants and funds (\$50,000) to cover as-needed salary costs for the balance of the fiscal year. To ensure that the interests of the Zoo's elephants are being addressed, the Zoo Department should make periodic reports to the Mayor and Council to

keep it apprised of the staffing of its animal care providers and the health and well-being of the Zoo's elephants.

Most of the points that have been made against having elephants at zoos could similarly be made about other species. In effect, they can be construed as arguments against the existence of Zoos. That question, whether zoos should continue to exist or be closed, is beyond the scope of this analysis. However, it is a question that should be addressed directly, if it is addressed at all, and not one that should be addressed on a piecemeal basis, species by species.