

REID PARK ZOO
ELEPHANT MANAGEMENT PROTOCOL
Updated December 2008

Reid Park Zoo's Elephant Management Goals

Reid Park Zoo's elephant program will continue to manage elephants in a way that promotes their well-being, provides for the safety of animals and zoo staff, and is consistent with the regulations of the USDA Animal Welfare Act and the management guidelines of the Association of Zoos and Aquarium. We will strive to create an elephant exhibit and program that inspires excitement and passion about elephants and elephant conservation in our zoo visitors.

Protected Contact

Reid Park Zoo currently manages elephants in a manner termed protected contact. Protected contact is the management of elephants in a way in which keepers and elephants do not share the same unrestricted space, but still allows close relationships and the ability to provide the best possible care for the elephants. This involves using a variety of barriers and an Elephant Restraint Device (ERD).

Reid Park Zoo Elephant History

Reid Park Zoo, owned and operated by the City of Tucson, began exhibiting elephants in 1968. Originally called the Randolph Children Zoo, it purchased two Asian elephants, a three year-old bull "Sabu" and a one year-old cow "Connie" from a small traveling petting zoo. They shared a small pipe enclosure on the northwest side of the zoo until 1974 when they were both moved to a new spacious centrally located elephant exhibit. In 1981 due to a progressive debilitating hip ailment, Sabu, then seventeen was euthanized. With this passing the zoo purchased a two year-old female African elephant from the Catskill Game Farm. Cared for and housed at the North Carolina Zoo until she completed her free contact training, "Shaba" came to RPZ in 1982 and still remains the loyal companion to the zoo's lone female Asian elephant. In 1994 the management of the RPZ elephants under a free contact system had ended. RPZ entered a new era that incorporated progressive concepts in developing sound management skills to further its goal of elephant management.

Reid Park Zoo Elephant Management Committee (EMC)

Susan Basford, Zoo Administrator	Gale Ferrick, Zoo Keeper *
Scott Barton, General Curator	Peter Hnath, Zoo Keeper *
Bruce Eneboe, Zoo Area Supervisor *	Cassie Rogge, Zoo Keeper *
Leslie Waters, Zoo Area Supervisor	Susan Adler, Zoo Keeper

* Have attended AZA's Principles of Elephant Management Course

Reid Park Zoo Elephant Safety Committee (ESC)

AZA recommends and the EMC endorses the need to organize an Elephant Safety Committee of elephant care staff. The ESC will convene to review and discuss operating procedures, investigate safety violations and establish routines that will emphasize safety as the number one priority when working in the elephant building. In the event of a safety violation occurring at the elephant facility the ESC will adhere to departmental safety and disciplinary guidelines for infractions of safety violations A.D. 2.03-4, 2.02-5.

Personnel

Elephant Keeper

Authorized by zoo management, keepers who have had prior experience or gained experience working with the zoo's elephants, who have demonstrated competence with elephant control and technique and have attained a proficient level of competence to the EMC.

Elephant Keeper Trainee

A zookeeper who wishes to become an elephant keeper must first be authorized by the EMC. Within a six-month period, the elephant keeper trainee must learn the basics of the protected/confined contact elephant management system through observation and then gain working elephant experience with the assistance of an elephant handler.

Elephant Keeper Helper

Zookeepers will be allowed to assist an elephant keeper in a limited capacity. In an extreme case when there is only one elephant keeper available, a zookeeper under the direct supervision on the elephant handler will be allowed to operate gate controls located in the elephant building to move the elephants from barn to paddock to exhibit and return.

Keeper Development

Keeper development is greatly supported by administration and is largely funded by donations and revenue generated from our Giraffe Encounter. Every year Reid Park Zoo provides opportunities for all staff members who are interested to attend classes, workshops and conferences such as Principles of Elephant Management, the Elephant Managers Association workshop the Animal Behavior Management Association conference, the Rhino workshop and any other educational opportunities that become available. Keeper development is also enhanced by the hiring of consulting behaviorists. They assist our staff in developing training programs, enrichment programs, and keep our staff apprised of the latest in new techniques in the zoo profession.

Veterinarian

The veterinarian will schedule frequent visits to the elephant facility to familiarize himself with the elephants. If the veterinarian needs to examine an elephant he must be accompanied by a minimum of two elephant care staff. If an elephant warrants medical attention then the veterinarian will adhere to the following policy.

1. RPZ management will be informed in advance of any medical procedure.
2. Medical procedures will be scheduled during the zoo workweek (Monday through Friday).
3. Elephants will be in the ERD when being examined by medical personnel whenever possible. If necessary their movements will be restricted with the use of restraints in accordance with a protected/confined management system. On occasion an elephant might be better observed and treated from the confines of the pipe corral.

Maintenance Staff

Zoo maintenance staff, City maintenance personnel, or general contractors from the private sector who need to work at the elephant building will check in at the zoo administration office prior to proceeding to the work site. If work is necessary inside the elephant building then it will be coordinated with the assistance of an elephant keeper.

Tour Groups

Authorized groups cleared through the education department, zoo management, or area supervisors will be allowed to tour the elephant facility as long as prior arrangements have been made with the elephant care staff. All visitors are under the strict supervision and the discretion of the elephant care staff who in turn will conduct a safe, informative visit to the elephant building.

Protocol for the Elephant Building

When entering the elephant barn area let the elephants know your exact position, be alert, and aware. Always give the elephants your undivided attention. For added protection the elephant building keeper aisle and paddock area have had additional safety improvements made to them with the installation of security bars. Be sure to use the barrier bars when observing the elephants in close proximity and refrain from extending extremities beyond the plane of the bars to touch the elephant.

In the barn observe the physical appearance of each elephant. Check for stool consistency, the amounts of food and water consumed from previous night's ration and note the general condition of the barn. Barn temperatures will be thermostatically controlled when temperatures drop below fifty-five degrees.

After the initial entry into the barn is completed, proceed to the exhibit area with the necessary cleanup tools. The exhibit area will be cleaned on a daily basis unless noted. All dung, debris,

Protocol for the Elephant Building: *continued*

grass stems will be removed. Exhibit pool turned on. Later, after the elephants have vacated the barn, the barn will be picked up and hosed down. Cleaning can be done with vehicle or wheelbarrow. The elephant restraining chute slab will be maintained in a like fashion and when the elephants are not on exhibit the concrete drainage moat should be cleaned regularly to prevent buildup of mud.

Exhibit pool cleaning will be done as needed. Pool cleaning and barn disinfecting chemicals will be stored at the designated storage shed on the zoo grounds and not at the elephant facility. After cleaning the exhibit, the African elephant, with two elephant keepers present and/or a trainee (observations) will conduct a protected/confined contact session with her.

The protected/confined contact session with the elephants will begin while both elephants are still in the barn. The African elephant will be the first elephant to start the session. One elephant keeper will position himself at the controls to an opened north ERC door while the other elephant keeper is stationed at the exterior controls to both barn doors and chute gates. A paddock cable barrier guide is stretched between the ERD and the barn for the African elephant only.

Once the keepers are in place (chute, barn) the elephant keeper will position the African elephant to stand steady in the barn while he/she opens the door to the elephant barn. After opening the barn door the keeper stationed at the barn controls to the building/chute gives the command "move up," the African elephant moves forward, is targeted in the ERC by the chute keeper and the chute gate is closed by the barn controller. The paddock cable wire guide is taken down and both handlers begin their morning maintenance session (foot cleaning, body wash). When finished with the session the African elephant is released from the ERC into the exhibit and is called to the north side of the elephant building and made to steady. At this time, with the elephant in this position, the keeper with the African elephant gives the command "clear" loud enough for the keeper at the chute to hear it. He continues to steady the elephant while the handler at the ERC stretches a cable wire between two columns under the shade ramada. Once the cable is attached to the columns under the shade ramada the command "clear" is given by the chute handler and the African elephant released. This cable stretching prevents the African elephant from joining the maintenance session being held with the Asian elephant in the ERC and disrupting the procedure.

The Asian elephant is moved to the ERC in the same manner as the African elephant. After it is secured in the ERC, the keeper at the barn controls will join the keeper at the ERC. After completing the maintenance procedure on the Asian elephant but before she can be released to the exhibit the African elephant is again steadied at the north side corner cable position by one handler. The cable wire between the shade ramada columns is taken down by the chute keeper, gives the command "clear" and the African elephant is released from the barn position. Both elephant keepers join up at the ERC to release the Asian elephant from the chute. At this time both elephants will receive their morning ration of grain/hay on exhibit. When working in the elephant building the entry gate to the facility will be locked with a PSDK 20 to prevent unauthorized persons from entering.

Protocol for the Elephant Building: *continued*

Barn cleaning can be done at this time or one team member can do it after the morning break. Once the elephant barn has been cleaned the elephant handler will resume working on the remaining team exhibits.

In the afternoon the evening's hay and pellet ration is placed in each elephant's barn stall with an assortment of enrichment food items. A vegetable bucket with vitamin supplements is added to each of the evening food sites before the elephants are allowed access to the barn. At the end of each day, the elephants, one at a time, will walk through the ERD. They will return to the barn in the same manner as they did going on exhibit in the morning but without the paddock cable wire being stretched between the paddock poles. One elephant keeper will operate gate controls at the chute and command the elephant while the other handler will operate the barn doors. After the elephants have been secured in the elephant building the exhibit pool water is turned off. All elephant barn doors are locked including the facility gate behind the elephant building with a PSDK 20 key lock.

Elephant Restraining Device (ERD)

The ERD is a management tool used to safely manage elephants in a confined contact space. When opening or closing the ERD, the elephant handler commanding the elephant to the elephant operating the doors will use the command "clear." Under no circumstances will an elephant be physically disciplined while in the ERC. Disciplinary action toward an elephant will be administered in accordance with training theory, defined under a protected contact system of elephant management and would usually involve a time-out period for the elephant.

Elephant Foot Restraints

Reid Park Zoo does not advocate using ankle restraints for long periods or overnight. It may occasionally be necessary to restrict an elephant's movements for the safety of the elephant and staff. When necessary, ankle restraints will be used to restrict body movement. The elephants will be desensitized to restraints until they are familiar with the procedure. Elephant restraints and their fastening hooks shall be maintained in good condition and operable at all times.

Elephant Facility Tools

Only those tools necessary to clean the exhibit and maintain the elephants will be allowed at the facility. There will be no collection of unusable tools or unusual items kept at the elephant building without prior approval of the elephant supervisor. Medicines used to treat the elephants will not be stored in the elephant barn without prior approval. Unused amounts of medicines will be returned to the Animal Health Center for disposal once treatments have been discontinued.

Elephant Nutrition

Dr. Howard Fredericks is Reid Park Zoo's consulting nutritionist. Adequate amounts of good quality hay, pellets, and grain with vitamin supplements as an ingredient will be provided for the elephants on a daily basis. Fresh water will be available to both elephants on and off exhibit. Browse will be made available to them as part of their nutritional supplement when available.

Trainee Keeper Training

The elephant handler trainee will begin the training procedure through a gradual sequence of events beginning with quiet observation of the elephant. The trainee will observe the elephant conditioning procedure until he/she is found to be proficient enough to proceed to the next level of elephant contact. The trainee will begin training with the African elephant. Working on its rear feet first and avoiding the head and trunk the trainee will eventually progress to other parts of the elephant's anatomy. Before any formal training can begin with the Asian elephant the trainee must have completely satisfied the elephant handlers of his/her training abilities.

Elephant Training

Reid Park Zoo follows protected contact protocol. Operant conditioning through positive reinforcement is the preferred method for training RPZ's two elephants. Positive reinforcement for correct response to an Discriminative Stimulus (SD), or cue, will be immediate and consistent and be in the form of food or secondary reinforcers. Undesired behavior will be addressed by a Least Reinforcing Stimulus (LRS) or occasionally a time out. Before any training session the elephant keepers will meet and discuss precisely what they intend to accomplish. During the session the handlers will focus on the tasks at hand and avoid distractions or discussion unrelated to the training goals. After the session is over the handlers shall meet and discuss its success. Progress or any regression on behaviors will be documented on the dry erase board as well as the permanent record book.

In the event an elephant, for whatever reason, becomes incapacitated while on exhibit or in the night house, elephant care staff will get assistance before they initiate any rescue attempt that could jeopardize their safety. Each elephant situation will be evaluated and acted upon, but under no circumstance will an elephant handler expose themselves to direct confrontation and contact with the elephant. Only after discussion with supervisory personnel and formulation of a plan will the elephant handler be allowed to approach the elephant to rectify the situation. The elephant handler will then make every effort to calm the elephant by their mere presence and tone until such a time when the elephant is responsive and under control.

Any injuries received from an elephant in the elephant facility will be reported immediately and an incident form completed to ensure prompt resolution to the situation. Any elephant keeper can be removed from that status if he/she does not comply with the elephant protocol or if it becomes evident that the elephant will not accept him/her as part of the social group.

Reid Park Zoo Behavioral and Enrichment Protocol

Objective

To further the zoo's management of elephants it is our mission to provide a higher quality of care that will not only stimulate the elephants' interest but will provide an educational and recreational experience for the zoo patrons. It will benefit the elephants by decreasing abnormal and undesirable behavior. The elephant keepers will provide the elephants with environmental enrichment and training for husbandry, veterinary procedures, foot care, and to improve on their mental and physical stimulation. Special attempts will be made to elicit natural behaviors.

Physical enrichment includes:

- Hiding spots for fruit, vegetables and scents in and around rocks
- Log bramble pile
- Dirt piles
- A variety of logs to push and move around, as well as hanging logs
- A variety of substrate, mud wallows, pool
- Hills in yard to rest/sleep
- Portions of daily diet spread throughout the yard during the day.
- Browse: mesquite, mulberry, palm leaves are favorites
- Novelty items; pumpkin, Christmas trees, watermelon, applesauce, cereal, onions, popcorn
- Auditory stimuli: keyboard, harmonica, radio
- Olfactory stimuli: spices, perfumes vinegar, different animal feces, juices, jellies
- Tactile stimuli: ice blocks, frozen pumpkins filled with ice and fruit, etc
- Opportunities for manipulating objects: plastic barrels with grain, logs with holes drilled in them then hung high, etc.
- Human interaction-Time spent interacting with elephant (training) Bathing and just hanging out.
- Training novel behaviors: positive reinforcement as an enrichment strategy.

Items will be reviewed on a continuous basis by docents, keepers or interns then recorded into the master catalog.

Enrichment Procedures

All potential enrichment items are to be submitted on a form, which includes the item, description of the item, use intended, cost, and location of items in exhibit. The form will be reviewed by the EMC and approved before being tried.

Once the enrichment item has been evaluated and accepted as part of the program, it is catalogued and placed in a master file which includes all enrichment items that are safe and able to be used by the elephants.

Enrichment Procedures: *continued*

As part of the enrichment process a daily log is kept at the elephant building for recording observed behaviors of the elephants. As stated earlier, the goal of the elephant keeper is to not only encourage exercise but mental, physical, and sensory stimulation as well.

Physical environment of the exhibit affords many hiding places for various food items. Scents can be easily dispensed around the rock, dirt, and bramble piles. Wallow, pool, and shaded area allow the elephant additional places for their use. Diet items are placed throughout exhibit during the day. Browse and novelty items are used when available. Items for sensory, olfactory, and touch are given quite regularly. Manipulation items such as plastic barrels, logs with holes drilled in them for food are hung under the shade ramada for trunk exercises. Elephant handler interaction with the elephants occurs throughout the day using positive reinforcement as an enrichment strategy.

Behavior Enrichment

Operant conditioning with a strong emphasis on positive reinforcement is used to condition the elephants to perform selected tasks on command. The interaction with the handlers appears to be reinforcing to the elephants and reduces the occurrence of stereotypical behaviors. All training sessions are on a volunteer basis. Behavior selected for training will be for husbandry care usually blood draws, tusk trim, foot care, and TB testing.

Enrichment and Exercise Schedule

6:30 a.m.	Clean exhibit, set up enrichment (scents, spices, and browse when available) Place hay and grain on exhibit in different locations (elevated feeder, hay barrels)
9:00 – 10:30 a.m.	Elephants brought into ERD one at a time for daily check-up. Bathe when weather permits. Foot care and foot soaking when necessary.
11:30 a.m.	½ hour exercise/training session using operant conditioning
12:00 a.m.	Hose elephants when weather permitting. Set yard with more hay and browse.
2:30 p.m.	Afternoon training session. Mud bath. Bring elephants in. Set hay/enrichment in yard. Release elephants back out to exhibit leaving them access to indoor holding, weather permitting.

Barn setup for evening

- Each elephant will receive hay scattered in different area in barn
- Browse hung from chain in barn
- Pellets put in barrel, in log pile, or scattered in hay
- Produce scattered throughout stall
- On occasion sand bucket put in barn

Elephant Discriminative Stimuli (S_D's) and Behaviors

S _D	Behavior
Target	To have elephant touch extended target with forehead
Come	Used to have elephant approach handler
Foot	To have elephant pick up a foot
Foot back	To have elephant present the bottom of foot to the rear
Ear	Used to have elephant present ear for blood draw or examination
Turn in	Elephant turns to the left
Turn out	Elephant turns to the right
Come around	Elephant head is stationary while body turns either right or left
Come in line	Elephant lines up directly in front of handler
Drop it	Elephant releases object
Fetch	Elephant retrieves object and returns it to handler
Give it to me	Elephant hands object to handler with trunk
Move up	Elephant moves forward
Move Over	Used to have elephant side step
Trunk Down	Used to have elephant lower trunk
Pick it up	Elephant picks up designated object
Pole	Elephant rests end of trunk on low object or horizontal pole (ERD)
Wrap	Elephant rests end of trunk on high horizontal pole (ERD)
Steady	To have elephant stand still or to stop any motion that the elephant is making
Trunk	To have elephant place trunk on top of its head
Kneel	Elephant bends at knees with rear upright
Catch	Elephant catches stick with trunk
Blow	Elephant blows air from trunk (used during trunk washes, TB testing)
Go	Release from a session or to send elephant to another keeper
Lean in	To present side of body to handler
On Mark	Used to have elephant move to and stand on a given spot
Open	To present open mouth for exam
Head down	Elephant drops head for eye exam
Slow Down	Used to slow walking pace
Stretch	Used to have stretch on its sternum
Come Up	Used as release command to allow elephant to get up from a stretch position
In bucket	Elephant places designated foot in bucket of solution to soak
Switch	Elephant lifts front and rear alternate feet on both sides
Move over	Elephant moves sideways with handler at head
Wave	To have elephant wave tip of trunk in trunk position
Bow	Elephant will do one-legged front knee bend while raising trunk over head
On Rock	Used to have elephant put both front feet on large exhibit rock, salute and present ears
On Beam	Used to have elephant walk on cement apron around exhibit pool
In Pool	Used to have elephant enter pool