600 NE Grand Ave.
Portland, OR 97232-2736

Metro | *Agenda*

Meeting:	Metro Council Work Session
Date:	Tuesday, February 1, 2011
Time:	1 p.m.
Place:	Council Chambers

CALL TO ORDER AND ROLL CALL

1 PM	**1.**	**ADMINISTRATIVE/CHIEF OPERATING OFFICER COMMUNICATIONS**	
1:15 PM	**2.**	**OREGON ZOO REMOTE ELEPHANT CENTER – INFORMATION / DISCUSSION**	**Robinson Smith Keele**
2 PM	**3.**	**FOLLOW-UP TO OREGON ZOO COMPREHENSIVE CAPITAL MASTER PLAN – INTERIM REPORT #2 – INFORMATION / DISCUSSION**	**Smith Stroud**
2:45 PM	**4.**	**BREAK**	
2:50 PM	**5.**	**BUDGET BRIEFING – INFORMATION**	**Jordan Norton Rutkowski**
3:50 PM	**6.**	**COUNCIL BRIEFINGS/COMMUNICATION**	

ADJOURN

Agenda Item Number 2.0

OREGON ZOO REMOTE ELEPHANT CENTER

Metro Council Work Session
Tuesday, Feb. 1, 2011
Metro Council Chambers

METRO COUNCIL

Work Session Worksheet

Presentation Date: **February 1, 2011** Time: **1:15** Length: **45 minutes**

Presentation Title: **Oregon Zoo Remote Elephant Center**

Service, Office, or Center: **Oregon Zoo**

Presenters (include phone number/extension and alternative contact information):

Scott Robinson, Deputy Chief Operating Officer, 797-1605,
scott.robinson@oregonmetro.gov
Kim Smith, Zoo Director, 220-2450, kim.smith@oregonzoo.org
Mike Keele, Director of Elephant Habitats, 220-2445, mike.keele@oregonzoo.org

ISSUE & BACKGROUND

In May of 2008, voters approved Ballot Measure 26-96 (the "Oregon Zoo Bond Measure 26-96") to effect several improvements to the physical environment and operation of the Oregon Zoo. The measure specifically listed projects that Metro would pursue. The project titled "More Humane Conditions for Elephants" explicitly set forth the needs of the zoo herd at the zoo and the concept of an off-site facility to further improve the health and well-being of the animals and to expand the elephant program.

In 2009, a panel of elephant experts took part in a workshop to identify the requirements for an offsite breeding, training and management facility and develop criteria for the selection of an appropriate site. The workshop facilitators, CLR Design Inc. and Shultz &Williams, created a report to guide site assessment titled, "Oregon Zoo Off-Site Elephant Facility Workshop – November 9 and 10, 2009." Subsequently, zoo staff prepared a program development and business plan for the potential off-site facility that included infrastructure needs, staffing and other related services. Collectively, these studies have guided Metro in looking for a location that would fit certain selection criteria identified in the studies.

Staff has been evaluating sites of at least 200 acres within the three county area that satisfy the selection criteria and are ideally located within an hour's travel distance to meet animal care needs. Once a property meets those guidelines, additional considerations include, but are not limited to, availability of the property, real estate value, zoning and land use restrictions, adequate roadways to the site, the character of adjacent properties, topography, soil classifications needed for optimal elephant foot health, and availability of needed infrastructure.

Staff concludes that there are very few properties that may meet the site requirements and that it is desirable to secure the right to acquire such property when found. An option to acquire real property would secure the necessary rights for Metro, and allow adequate time to conduct site-specific studies and create plans to successfully implement the remote elephant center facility concept. Because the process to determine the suitability of the site for the stated purpose and the subsequent financial and planning work will most likely be a multi-year process, it is necessary to have assurance that the property will be available to Metro if the Council ultimately directs staff to purchase the property.

Staff is requesting Metro Council authorization to enter into real estate options (the "option") to purchase real property satisfying the selection criteria. The options would provide for the future

acquisition of property from willing sellers only and said acquisition would be subject to the approval of the Metro Council prior to closing.

OPTIONS AVAILABLE

Metro Council authorization to enter into real estate options to purchase real property will enable staff to conduct site-specific studies and create operations and fund-raising plans to successfully implement the remote elephant center facility concept.

Without a real estate option(s), program and business plan development for a remote elephant center will be contingent on the hypothetical. It will be difficult to engage in much deeper analysis without specific site(s) in mind affecting studies of land use, financial feasibility and initiating a fund-raising campaign.

IMPLICATIONS AND SUGGESTIONS

Optioning property will allow Metro to secure site-control and thereafter research conformance to secondary site requirements, continue financial feasibility planning and initiate a fundraising campaign for capital costs and operating expenses. More than one option contract may be necessary if an assemblage of properties from separate landowners is necessary to create a sufficient acreage for the facility.

Any option fee required by owners will be applied to the purchase price if Metro exercises the option and acquires the property, but will be forfeited if Metro elects not to acquire the property.

QUESTION(S) PRESENTED FOR CONSIDERATION

Having generally completed feasibility study of a remote elephant center, shall Metro continue to develop fund-raising plan, and engage in deeper analysis of potential sites, land use and operations plan?

Given the work completed to assess the feasibility of a remote elephant center to date, shall Metro proceed with securing real estate option(s) to purchase real property for a remote elephant center?

LEGISLATION WOULD BE REQUIRED FOR COUNCIL ACTION __Yes _X_ No
DRAFT IS ATTACHED ___Yes _X_ No

Oregon Zoo Remote Elephant Center Proposed Business Plan, Jan. 25, 2011

Project Purpose

Metro Council Resolution 08-3945 submitted to voters of the Metro Area the question of contracting a General Obligation Bond Indebtedness to fund a series of capital improvement projects at the Oregon Zoo to protect animal health and safety, conserve and recycle water, and improve access to conservation education as generally described in Exhibit A, which was attached to the Resolution. Exhibit A described the capital projects in some detail and included information about the project to improve the Elephant Exhibit. In the description it recognized that the zoo was exploring the feasibility of providing an off-site area for elephants and that funds were set aside for potential capital needs of off-site space. The voters of the Metro Area approved the Bond measure in November of 2008.

The zoo defined and codified a vision for its elephant care program in the summer of 2010 to use as a guide to assist with developing renovated and expanded facilities on the zoo campus as well as to study how an off-site facility would support the vision.

Multigenerational herd at Oregon Zoo 1983

Oregon Zoo Elephant Program Vision

> "We are privileged and honored to care for endangered elephants at the Oregon Zoo, where we inspire our community to care about these magnificent animals and to take action to keep them in

the world's future. We pioneer world-class elephant care focused on individual elephant's choices and needs – meeting elephants' social, behavioral, physical and psychological needs. We share our vast knowledge and expertise in elephant care with the community and others through education, research, training and public outreach – raising the standards of care for elephants globally."

At the same time, the zoo defined guiding principles to help develop programming aspects for both the zoo exhibit and the off-site facility:

Guiding Principles:

Our excellent elephant habitats and leading conservation/education programs will:

- Demonstrate our deep commitment to elephant well-being and to the conservation of endangered Asian elephants.
- Pioneer and lead global efforts to ensure the highest welfare standards for animals.
- Enrich the lives of elephants through creating innovative habitat and environmental designs.
- Support multigenerational, matriarchal elephant social groups.
- Ensure social networking of male elephants with matriarchal groups.
- Foster a broad range of elephant-specific life experiences.
- Promote social relationships and natural elephant behaviors.
- Facilitate exemplary welfare-based care (husbandry, veterinary care, behavioral training).
- Inspire our community to feel a connection to elephants and to promote and engage in environmental stewardship that helps all wildlife.

The zoo's vision and guiding principles will help to establish multigenerational, matriarchal, breeding herds of Asian elephants that will be sustainable for exhibit and program purposes for generations to come. Multigenerational matriarchal herds provide a social framework for herd members to learn behaviors from the life experiences of individuals as well as from the herd which help them become socially and psychologically competent. The matriarchal elephant herd provides a family environment that nurtures, learns, plays, grieves and experiences life together. This family structure is critical to the well-being of elephants, and the zoo is committed to keeping females and their female offspring together throughout their lives as part of these herds. The zoo would meet this commitment by housing family groups at the zoo and only transferring small family groups to other zoos when the zoo's family group increases beyond the zoo's elephant housing capacity.

The vision is to establish a matriarchal herd in the new six-acre zoo facility and to establish an additional herd at a Remote Elephant Center (REC). Establishing these herds would provide the zoo the ability to support a robust and world class elephant program. In addition, the elephant program would be able to provide quality space and social networking for bull elephants born into these herds. Animal experts have historically categorized bull elephants as solitary and zoos have experienced difficulty managing bulls.

The Oregon Zoo has had great success managing bull elephants and currently houses four bulls including the two-year old calf, Samudra, and our patriarch and most famous resident, Packy. Emerging research is showing that bull elephants are far more social than originally realized and the zoo is planning to use both facilities to manage bull elephants more effectively and conduct research on their social interactions within matriarchal herds and among themselves as bulls interact within the matriarchal groups and in bachelor relationships.

This is a game-changing frontier that will provide great welfare benefits to elephants in zoos, advance elephant management for facilities around the world, and assist wildlife biologists with critical information regarding the complex social behaviors of Asian elephants. Approximately 50 percent of

elephant offspring born in zoos are male and there is great need to learn and plan more effectively for their care, well-being and housing. In addition to this research, the zoo would like to have the ability to house bull elephants born at the zoo until they are of breeding age and can be used at another zoo. The zoo would also like to be able to maintain bull elephants that are not needed by other zoos in a socially and environmentally enriching environment, such as the REC.

The zoo's ability to maintain multigenerational herds has been hampered by lack of space in two ways.

1) Adult males are not permanent members of matriarchal herds. The majority of the time spent with the matriarchal herd is for courtship and breeding. In the absence of receptive females, the bulls often distance themselves from or leave the herd altogether. Young males that have grown up in matriarchal herds with the experience of the visiting adult males will often, but not always, form loose bonds with older males after they have been forcibly ejected from the matriarchal herd. Because of this social dynamic, the zoo needs to provide appropriate space for the matriarchal herd and visiting males, as well as separate spaces for the matriarchal herd and each adult male. Currently the zoo houses three adult males and each individual is managed as a "group." Given the existing matriarchal herd, the zoo has facilities for these four distinct groups to spend part of each day outdoors.

2) Until 1980, the zoo housed as many as 12 elephants in a third the space of the current elephant facility. During that time, foot disease was a prevalent and chronic medical issue. The zoo made many changes to its husbandry and veterinary management to address these medical issues, including reducing the number of elephants. This was accomplished through attrition and slowing reproduction.

The zoo currently participates in Species Survival Programs (SSPs) through the Association of Zoos and Aquariums (AZA). These programs strive to manage and conserve threatened or endangered species through nationally and internationally coordinated and cooperative breeding programs. The goal of an SSP is to ensure the sustainability of a healthy, genetically diverse and demographically varied population of zoo animals. A recent report from the AZA Task Force on the Sustainability of Zoo-based Populations confirmed that several SSPs, including the Asian Elephant SSP, are not sustainable, raising concerns about the availability of these animals in the future. The task force concluded that the declining sustainability of zoo animal populations likely results from a variety of factors, including insufficient animal holding and breeding space. The report further stated that lack of space is the number-one factor affecting zoos' ability to make species sustainable for the long term. Based on the report, the AZA Board of Directors adopted the task force recommendation to develop a variety of approaches to increase breeding and holding spaces in order to grow managed animal populations.

The Oregon Zoo's vision for its elephant program will position it as a leader and contributor to the collaborative effort to develop a sustainable population of Asian elephants in North America.

The construction and operation of the REC would be consistent with several of Metro's goals, including:

- **Goal 2: Provide great cultural and recreational activities.**
  - As the region's most-visited, paid attraction, and with annual attendance over 1.6 million, the zoo is a great cultural and recreational asset. The REC's role in executing the Oregon Zoo's pioneering elephant vision will provide visitors opportunities to be inspired by elephants in natural groupings displaying natural behavior through scheduled programmed activities as well as remote access via the internet.
- **Goal 6: Support the development of a sustainable economy.**
  - The REC provides long-term employment opportunity to add staff, in animal keeping, security and facilities, as additional staff will be required to maintain the site.

- **Goal 7: Use best business practices to operate Metro sustainably, effectively and efficiently.**
    - The REC will be operated under the auspices of Metro's sustainability goals.

Asian Elephant Reproduction Plan

To develop budgets for this business plan, the zoo developed an optimal elephant breeding program model to illustrate dynamics of population growth and how the REC supports the development of multigenerational matriarchal herds. The model assumes a robust reproductive rate with births occurring every four years per reproductively viable female. First breeding for females begins at age eight[1]. Gestation is approximately 22 months for elephants. Births are predicted at 50 percent male and 50 percent female offspring[2]. The complete assumption set and breeding strategy is contained in Appendix 1. Using a best-case breeding strategy, which assumes zero attrition, establishes a not-to-exceed budget that represents the unlikely maximum costs the facility could incur during annual operation. Zoo staff believe actual operating expenses would be less.

Using this strategy and breeding model, in five years the zoo facility could house one adult male, one sub-adult male, three adult females, two calves, and one newly acquired female for a total of eight elephants. In addition, two of the adult females would be pregnant, one due in 2016, the other in 2017. The REC would house two males and be preparing to receive two breeding-age females in 2017.

By ten years, the zoo facility would hold one adult male, four adult females, three male calves and three female calves for a total population of 11 elephants. The REC would house three adult males, three adult females, a male and a female calf for a total population of eight elephants. One of the three adult males at the REC would be Samudra, moving from the zoo's elephant facility when he turns nine or ten years of age. Typically at that age, young males may be forcibly removed from the matriarchal society. Having socialized with his father Tusko during his reproductive visits, Samudra would join him for companionship at the REC.

Remote Elephant Center Construction

The REC planning team worked to determine core program assumptions for facility operations:

- The current matriarchal herd and offspring, plus two bulls, will reside in the zoo's elephant exhibit.
- Female elephants from the matriarchal herd and bulls will transfer between the zoo and the REC to support the goals of the program in alignment with the program vision.
- The REC should be capable of housing four bulls and planned to initially house two bulls. Samudra may benefit from remote elephant center space by 2018. A cow group of six to12 individuals will have space allocated to support the expanding multigenerational herd (s) housed at the zoo.
- Additional breeding cows will need to be acquired to establish the herd at the REC and to assist with establishing a second herd. This will enable the zoo to increase breeding opportunities and to continue to provide social interactions for the bulls housed at the REC.
- The entire REC facility will be "bull capable" and designed for maximum flexibility so bulls can go anywhere within the facility.
- Security of the REC will include on-site staffing 24/7, provided with trained staff living on the property, 16 hours per day security patrols, and other security measures.
- The zoo is committed to participate with AZA's Elephant Species Survival Program recommendations.
- The REC will have the ability to be open to the public at least twice a year to showcase the work and to allow the community to interact with the zoo's elephant program vision.

[1] 2008 AZA Complete Analysis and Breeding Plan for Asian Elephants.
[2] Consistent with the 181 births recorded in the Asian Elephant Studbook – North American Region since 1880.

- The REC will have the ability to be used for educational tours and classes for all ages, visiting colleagues and other special guests.
- Research on matriarchal herds and bull social interactions will be conducted at both the zoo facility and the REC. Additional research on animal behavior and reproduction will be performed.

Based on these core program assumptions, the developed REC facility program requirements are:

- A 33,900-square foot barn, with interconnected stalls
- Four 5-acre outdoor yards, interconnected
- Two 40-plus-acre outdoor yards with covered sheltered areas, wallows, and varying terrain
- 6,550 square feet of service buildings for feed storage, food preparation areas, mechanical, facilities, storage, keeper work and break room space
- Veterinary work space and storage
- A caretaker's house for 24/7 live-in facility management
- Delivery area and staff/visitor parking
- Service vehicle parking/storage, sand storage and compost bins
- Secure perimeter fence with gates and screening
- Public amenity for donor tours, camps, etc.

Operations and Maintenance

The REC would be built to house up to 12 females and four bulls in the very long term. At or soon after the REC is complete, the zoo would acquire four to six females of breeding age to create a second matriarchal herd and to enhance the age structure of the zoo herd. The site would also be built to house up to four bulls that may travel between the zoo and REC for breeding and socialization. This movement mirrors how bull elephants' would socialize and behave in the wild.

The zoo will provide care for the animals that focuses on meeting their social, behavioral, physical and psychological needs. Routine animal behavior training will ensure consistent behavior responses to facilitate husbandry, veterinary care, and other needs required by the AZA Standards for Elephant Management and Care and recommendations from the AZA Elephant Taxon Advisory Group. The elephants will be brought into their indoor habitats daily to facilitate husbandry, but will spend the majority of their time exploring their outdoor habitats. Adequate heat sources and wind breaks will allow the animals to remain comfortably outside, except in extreme weather conditions. Habitats would have a functional design that utilizes staffing efficiently. Daily servicing of the animal habitats will be performed by the animal care staff and would include manure removal, pool cleaning and general exhibit repair. The site would be designed to maximize mental stimulation and provide activity and social choices for the animals. Transitional spaces would be provided to give the elephant herd the opportunity to choose their location, including access to weather.

One senior keeper and two animal keepers would be required to provide two qualified handlers, eight hours a day, seven days a week. With each additional elephant, a part-time groom would be added to the staff. The groom would handle the cleaning, food prep, exhibit maintenance and hay transportation duties at the REC. This would allow handlers to devote more of their time to animal husbandry and reduce the number of handlers required as additional animals are added to the facility. This position would also provide a training ground for new employees that could build experience toward becoming an elephant handler (animal keeper).

The "groom" position would require the creation of a new job classification that would not require the same qualifications as animal keeper, which would lower staffing costs.

After a matriarchal herd, or a total of four bulls, are added to the REC, an additional full-time elephant handler would be added to the staff. Elephant keeper staff from the zoo would also be cross-trained to allow for coverage of vacations and sick leave.

The REC would require 0.5 FTE maintenance staff to establish and perform facility operation protocols, develop and implement a preventative maintenance program for all buildings, structures, fixtures, equipment, tools and vehicles. Under certain conditions, maintenance staff would also provide support to keepers, horticulturists and security.

Though the REC site would be designed for low landscape maintenance, 0.5 FTE horticulture staff would be available to assist REC staff (keepers, grooms, security, maintenance) in managing and harvesting browse (fresh tree and plant cuttings) for the elephants, managing elephant waste and organic composting program, monitoring and clearing the perimeter fence line, planting and maintaining animal enclosure landscaping, servicing any needed irrigation and providing routine landscape maintenance complex-wide.

In addition, due to the potential for danger associated with a remote site containing elephants, as well as providing a secure environment for elephants, the REC would have a human presence on site 24 hours a day, seven days a week, through a dedicated security staff and on-site care taker. This represents an increase of 2.8 FTE.

Additional support from Living Collection, Conservation, Finance, Marketing and other zoo divisions and Metro services and centers will be needed and are expected to be provided by existing resources. As the REC program grows, these resources will need to be re-evaluated to assure consistent and adequate support.

Benefits to the Community

Zoos with diverse collections that represent animals from all over the world are obligated to invest in conservation projects globally. Elephants represent a priority conservation commitment for the Oregon Zoo. As conservation ambassadors, elephants can help to tell the stories of pressure to survive such as habitat encroachment and human/wildlife conflicts. These are themes that are easily generalized and relevant to local and regional conservation issues.

In tandem with the zoo's elephant facility, the REC would help realize the complete vision of the zoo's elephant program and help ensure a sustainable, multi-generational, matriarchal herd living with bulls in naturalistic habitats, displaying natural behaviors and social interactions.

The World Association of Zoos and Aquariums, of which the zoo is a member, states in its Conservation Strategy that a zoo's conservation education role "is to interpret living collections to attract, inspire and enable people from all walks of life to act positively for conservation." Studies continue to confirm the popularity of charismatic mega-vertebrates with zoo visitors. The emotional affinity an individual has with a zoo animal can promote learning through the interpretation of the species. African lions, polar bears, and chimpanzees are all popular zoo animals that generate personal interest with visitors. The zoo's Asian elephants are unquestionably the most popular animal with not only visitors, but also among the metro region where community pride and support has been overwhelming.

Encountering living elephants is inspiring and can help with awareness initiatives aimed at helping visitors understand how their actions as consumers has an effect on elephants in range countries. Exhibit interpretation at the zoo's Red Ape Reserve raises visitor awareness about common consumer products that use palm oil from plantations that encroach on orangutan habitat. The interpretive messages are intended to affect positive change for all wildlife and help visitors realize how their consumer choices made in the Portland metro region affects local wildlife as well as wildlife in far-off lands. As the zoo has begun to do at Red Ape Reserve – and could continue to do in a more aggressive manner going forward –

exhibits and charismatic animals like elephants could inspire meaningful change at home that not only benefits local wildlife but, through a global economy, benefits wildlife around the world.

Conservation Education
The zoo believes there is potential for focused, programmed activities for the public. Possibilities include:

- Public viewing arcade – This would be a viewing deck inside the facility of simple construction that provides shelter from the weather. Informational graphics would be installed to highlight the zoo's elephant program vision, conservation of elephants, and changes visitors can make that affect wildlife. A map that tracks elephant movement through Global Positioning System could play on a video monitor. Viewing scopes could provide enhanced viewing of the elephants. This arcade would not require but could accommodate staffed interpretation.

- Web cam viewing – Web cameras at both the REC and at the zoo could help tell the story of how the two facilities work together to achieve the zoo's elephant vision. The web cam could play on its own domain and allow visitors access to a wealth of information about elephants. The web cam could be designed as a smart phone application for streaming to individual mobile phones.

- VIP Reception/Programming space – A space that allows for comfortable viewing of the elephants for VIPs. The space can also be used to host small receptions along with interpretive presentations. The space would allow the use of biofacts like an elephant skull or artifacts from the current elephant museum. Messages could focus on how the zoo manages elephants and why this is such a special facility and/or focus on human-elephant relationships. These messages would be consistent with those that are used at the zoo's elephant facility.

- Camp use – The site could help support the zoo's Urban Nature Overnight camp program, ZooSnoozes, and new camp programming with a specific focus on elephant conservation. The site would need to accommodate about 40 youth. It could be constructed as a tented camp – tents above ground on wooden platforms. Compost toilets, covered picnic area, picnic tables, potable water, and utilities would be necessary.

- Biannual community open house – Scheduled reception for the REC neighbors and other stakeholders, to showcase our work at the REC, to promote the importance of the contribution the REC makes to the zoo's elephant vision, and to keep neighbors and stakeholders connected and supportive.

Sustainability
In 2003, the Metro Council adopted a resolution that directed Metro to develop a sustainable business model for internal government operations, and set an ambitious target for those operations to be sustainable within one generation, by 2025. Five target areas were identified: greenhouse gas emissions, toxics, waste, water, and habitat. These goals were refined during the course of creating a sustainability plan for Metro operations in 2010.

The planning horizon for these goals is 2025, with the exception of greenhouse gas emissions, for which a target is set for 2050. The zoo has shown strong commitment to these goals. For example, the zoo's recycling recovery of waste exceeds 70 percent, the highest among Metro's departments, and the Oregon Zoo's implementation plan for the improvements funded by the 2008 general obligation bond includes an emphasis on sustainability.

Staff developing the remote elephant center program have a portfolio of strategies to address Metro's sustainability goals at the REC. It is not known which strategies will be used until a site is selected and acquired. They will be responsive to the site's location and natural assets.

Economics
The zoo contracted with consultants from CLR Design, Inc. and Schultz and Williams to assist in developing a site assessment tool for evaluating property that could be acquired for a remote elephant facility. A site selection matrix was developed that included both qualitative and quantitative ratings for criteria including:

- Acquisition costs
- Ease of access for staff
- Adjacent land uses
- Utilities/infrastructure
- Travel time
- Elephant transport
- Land use classifications
- Varied habitat and terrain
- Acreage
- Drainage/topography
- Permit approval
- Subsurface conditions

The report, Oregon Zoo Off-Site Elephant Facility Workshop, prepared by CLR Design Inc. and Schultz & Williams is contained in Appendix 2.

Staff has been actively seeking a site of at least 200 acres within the three county area that satisfies the selection criteria and is located ideally within an hour's travel distance to meet animal care needs. Once a property meets those guidelines, additional considerations include, but are not limited to, availability of the property, real estate value, zoning and land use restrictions, adequate roadways to the site, the character of adjacent properties, topography, soil classifications needed for optimal elephant foot health, and availability of needed infrastructure.

The cost to build and commission the remote elephant facility is estimated at $17.3 million. An additional $1.5 million would be required to acquire three reproductively viable female elephants in the third year of operation. Annual operational estimates based on the animal management model outlined above are just over $1 million for the first two years of operation. The annual operational costs would increase to $1.3 million when three reproductively viable females are acquired and transferred to the facility. A budget summary is contained in Appendix 3.

Zoo and Metro leadership have been in informal discussion with The Oregon Zoo Foundation (OZF) about fundraising to support REC costs. Anecdotally, there is a lot of interest and potential support for the Oregon Zoo's elephant vision. Zoo visitors and metro-area residents take great pride in the zoo's elephant program. In 2007, opinion research revealed that across the region, citizens strongly support elephant breeding and research.

If the Metro Council were to approve of the Remote Elephant Center concept plan, Metro staff and OZF would proceed to formalize a fundraising plan. This campaign will raise funds for an operations cost endowment, as well as capital outlay. In addition to strong regional support, national and even international opportunities to help fulfill the Oregon Zoo's pioneering elephant vision may be available.

Community Partnerships
It is believed that once a site is selected for the REC there would be opportunities unique to that site, and its community, to engage in partnerships. Certainly there are opportunities for engagement throughout the region including, but not limited to:

- Youth programming opportunities at schools, local leadership groups, etc.

- Habitat sustainability – Partner with local groups for invasive species removal, native plantings, soils retention and habitat improvements for wildlife on the REC property.

- Wildlife corridors and habitat – Many acres of the site will be "wild" open space, habitat for elephants as well as local wildlife, and many acres of buffer between the elephant yards and the property's perimeter may serve the purpose of linking native habitat to other tracts of open space.

- In addition to the site stewardship, there are opportunities for expanded university involvement as faculty and students engage in long-term behavior studies overseen by the zoo's research staff.

- Depending on the suitability of the property, some parts of the site may be used for raising native plants, an extension of Metro's Native Plant Center, to raise native plant species for use in landscape around the region

Other Opportunities

Further research and investigation is needed to determine the possibility and practicality of the following opportunities:

- The REC could be used to augment elephant handler training provided by AZA's Principles of Elephant Management, by providing real-time experiences different from the classroom offering.

- Independent of AZA, the REC could provide tuition-based, hands-on elephant care training courses and/or workshops once each year.

- There is potential for research that would attract local, national and international scientists that are studying elephants.

- Fee-based tours and classes for the public also could be possible once the REC is fully operational.

- Depending on the suitability of the property, it could be used to generate browse for zoo animals or to grow and harvest Timothy hay for the elephants.

- Depending on space availability, the site could support a small holding facility to help with regional wildlife issues. Confiscated or orphaned wildlife could be housed for a temporary period pending placement or release.

Next Steps

Near Term

- Metro Council approval to move forward on concept
- Approval to purchase land acquisition option
- Fund raising plan coordinated with OZF

Longer Term

- Present fund raising plan to Metro Council for approval
- Land acquisition
- Submit RFP for design of facility
- Build facility
- Acquire and move elephants

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APPENDIX 1: *Oregon Zoo Optimal Elephant Breeding Model*

The optimal breeding model does not experience mortality though the life expectancy for Asian elephants is 44.8 years and the infant mortality rate is near 34 percent. Each natural breeding with Tusko, the zoo's breeding bull, and unrelated females requires him to be transferred from the remote elephant center to the zoo's elephant facilities. Female offspring of Tusko that are bred in this REC model are results of artificial insemination or natural breeding from unrelated bulls brought to the zoo, and these individuals have not been included in the total population. The zoo's elephant facility is envisioned to permanently house two adult males and up to two visiting adult males.

At this time, the zoo houses one reproductively viable female (Rose Tu) and one reproductively viable male (Tusko). The model assumes offspring from Rose Tu every four years and the same for Chendra who has been bred by Tusko, but has not yet conceived. To augment age structure in the zoo's female group and to develop an unrelated multigenerational matriarchal herd at the remote elephant center, the zoo plans to acquire four unrelated females. One will reside at the zoo while the other three will consort with bulls at the remote elephant facility. The zoo anticipates acquiring one of these females as early as 2013 for the zoo facility and the other three in 2017. The zoo suggests that the remote elephant facility be completed by 2015. This would allow the zoo to commission, operate and resolve any facility or site issues while only housing two bulls.

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APPENDIX 2: *Oregon Zoo Off-Site Elephant Facility Workshop – November 9 and 10, 2009, submitted by CLR Design Inc. and Schultz and Williams, Revised January 18, 2011*

Please see the following pages for the workshop report.

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Oregon Zoo

Off-Site Elephant Facility Workshop - November 9 and 10, 2009
Submitted by: CLR Design Inc. and Schultz & Williams
Revised January 18, 2011

Report Organization

1. Workshop Scope and Agenda

2. Facility Concept Programming

3. Site Selection Matrix

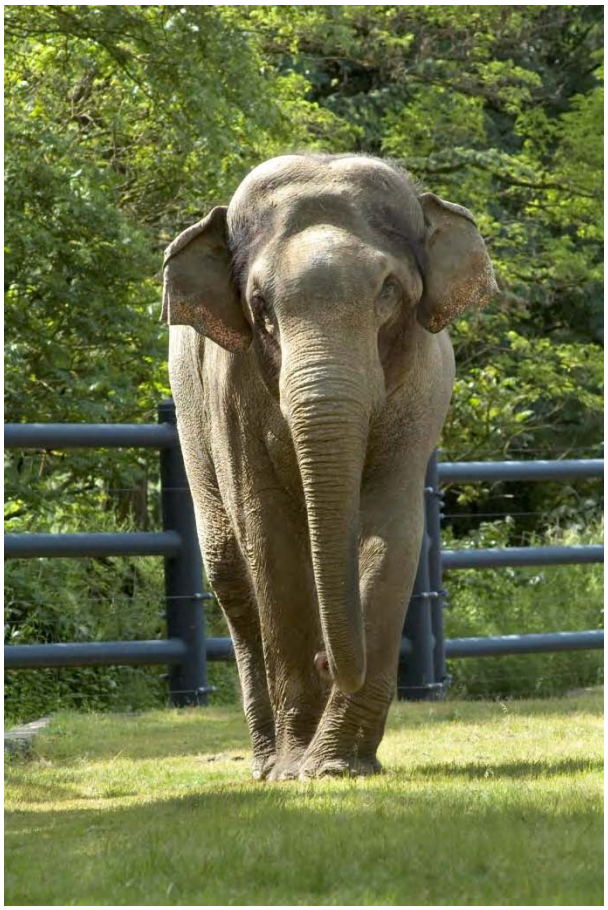
4. Staff Brain-Writing

5. Estimated Development & Operating Costs

6. Site Visits
   Weber Farm
   Roslyn Lake

7. Next Steps

Appendix A



1. Workshop Scope:

On November 9 and 10, 2009, CLR Design Inc. and Schultz & Williams were asked to lead a two-day workshop with Oregon Zoo staff to assist in facilitating a base program concept for an off-site elephant breeding, training and management facility. Additionally, they were asked to assist in developing a Site Decision Matrix for use in present and future site selection efforts. CLR and S & W accompanied staff on a one-day trip to two potential sites. CLR and S & W assisted in the review of the potential sites and their feasibility as an off-site facility.

2-day Agenda

OREGON ZOO

OFF-SITE ELEPHANT FACILITY STUDY AGENDA

Monday, November 9, 2009

Elephant Facility Workshop #1

9:00AM–10:00AM Session 1: Kick-off Meeting
a. Introductions
b. Project Objectives & To-Date Programming Review
c. Program Drivers – Animals, Staff, Visitors, Funding/Budget
d. Elephant Trends – Review of Current State of Elephant Facilities

Location: Cascade Grill Sunset Room

10:00AM–12:00PM Session 2: Brainwriting Session
Potential Topics:
a. Draft Site Selection Criteria
   1. Location, amenities, land-use, access, etc.
   2. Current Site Options
b. Animal Conservation, Research & Breeding Goals
c. Animal Management & Training Goals
d. Visitor and Education Goals
e. Operating Plan Assumptions
f. Financial Goals/Assumptions and Opportunities & Constraints
g. Other

12:00PM – 1:00PM Lunch

1:00PM – 4:00PM Criteria Checklist Development
a. Integrate morning's discussion into checklist
b. Address other factors

Location: Cascade Grill Sunset Room

4:00PM – 5:00PM Wrap-up and Next Steps
a. Review deliverables & timeline

Location: Boardroom

Tuesday, November 10, 2009

8:30AM – 4:15PM Site Visits
a. Webber Dairy Farm Property
b. Roslyn Lake Property

Location: Off-Site

4:15PM – 5:00PM Project Wrap-up and Next Steps

2. Concept Programming

The base program assumptions and considerations were discussed and include the following:

Base Program Assumptions

- 20,000 sq.ft. barn complex
- 5,000 sq. ft. support building
- 4 – 5-acre yards
- 2 – 40-acre habitats
- 4 male and 3 female animals
- 5 groups of animals
- Elephant supervisor on-site staffing at 1 FTE
- Keeper on-site staffing at 16 hours per day, 365 days per year; representing 2.9 FTE.
- Maintenance worker at .5 FTE
- Facility will not be open to the public, but will host donors and other visitors

Additional Program Assumptions and Considerations

1. Facility Test Budget - $12 million including any land acquisition, construction, soft costs and building or exhibit fit-out. All capital investment costs to have turnkey operations. Would prefer to have the land donated or leased to Metro as part of long-term partnership with private land owner or as part of Metro's existing land inventory.
2. Elephant Barrier Fencing is assumed to be cable barrier around the larger habitats at an approximate cost of $300-$400 per lineal foot. Elephant Barrier Fencing inside the barn and adjacent to the barn is assumed to be rigid steel bollards or rail and picket fence at an approximate cost of $400-$500 per lineal foot.
3. Elephant barn core and shell construction costs will vary from $100 per square foot for an agricultural type metal building to $400 per square foot for a cast in place or masonry shell with light frame roof structure. Estimated capital costs assume agricultural type metal building.
4. Need to exceed Association of Zoos & Aquariums Standards for Elephant Management and Care.
5. Need to plan and program the entire facility to safely and securely house adult bull elephants.
6. Animal behavior training will be conducted in both a free and protected contact environment in all animal areas of the facility.
7. For the keepers, enrichment, training and exercise opportunities for the elephants are a critical program element that must be developed into the facility planning concept.
8. Management plan and strategies for the facility need to be flexible so animals can be moved within the facility.
9. Develop a highly sustainable model of site development and on-going operations that aligns with Metro's sustainability goals.
10. Education, Conservation and Research Programs will play critical roles in furthering the zoo's mission.
11. Climatic impact on animals must be recognized and addressed through facility design. Options include shelters, heated slabs and indoor/outdoor management options.
12. Quarantine/isolation facilities for incoming new elephants or elephants with infectious diseases should be included in the design.

13. Plan for some kind of link from the facility to the zoo during the transition period (live video link to big screen TV outside of construction zone).

Operational Criteria

1. Once completed, the facility may be utilized to house and maintain the zoo's existing group of elephants while its current elephant exhibit is under renovation. The renovation and construction is estimated to take 1.5 years (known as the "transition years") once the elephants move off-site from the zoo. Once the transition years are completed, the on-site facility will be fully operational.
2. During the transition years, existing elephant staff will manage and provide care for the existing group of elephants. Personnel related costs to the elephant keepers assigned to the facility, including related animal management expenses for animal food and veterinary care and utilities, will be incurred within the zoo's current operating budget.
3. Based on the number of elephants maintained at the facility, the zoo's existing elephant management protocols will determine staffing levels at the facility.
4. Facility will be managed by an elephant supervisor, who lives on-site, with high-tech security, remote access and monitoring systems to effectively manage the collection of animals on a 24/7 basis. System back-ups will be maintained.
5. In addition to the on-site elephant manager, and assuming that the facility houses between one and seven elephants, the facility will maintain a minimum of two qualified elephant handler/keeper positions per day. Additional keepers may be utilized depending on the actual number of elephants located at the facility or if the number of elephants exceeds seven elephants.
6. Veterinary services will be provided by the zoo's veterinarians and veterinary techs, and may require additional resources.
7. Adjacent land to the facility may be utilized to produce hay, browse (freshly cut plant material for animal feed) and enrichment elements.
8. Without incurring substantial new costs, some donor cultivation amenities (event space, kitchen and viewing) will be incorporated into the initial phase of development. Amenities are to be kept rustic and animal-focused. Future phases of development could include overnight lodging and amenities.
9. Hands-on training courses and workshops could be offered at the facility which supports the Principles of Elephant Management II programs.
10. The facility will purchase as part of its capital investment costs a transportation trailer, not a tractor, for moving elephants to/from the facility. Any transportation costs including renting a tractor for the trailer will be expensed or incurred by others.

Financial Criteria

1. Once "operational," the facility will operate at breakeven or with net operating reserves through new incremental revenues supporting the facility's operating expenses.
2. Earned revenue fees will be primarily through boarding fees from the care and housing of elephants from outside the zoo's collection.
3. The primary operating revenue sources for the facility will be generated from contributions, endowments income and partnership fees.
4. The facility will have a dynamic web-based portal, integrated with the zoo's website, which builds awareness of the facility's and zoo's elephant management and care initiatives.
5. The facility's annual operating expenses are allocated into two categories:

a. Fixed expenses: personnel costs related to the 1 FTE on-site supervisor, 2.9 FTE elephant keepers, and .5 FTE maintenance worker; utilities; maintenance; insurance and overhead support. Fringe benefits for FTE positions are projected at 48% of salaries. Note: two keepers per day is the baseline; may increase depending on the number of elephants actually on site.
b. Variable expenses driven by the number of elephants at the facility: animal feed; part-time keepers; vet services.

Potential Revenue Sources and Partnerships

We would anticipate that the facility will generate over 95 percent of its annual operating revenues from contributions, donations, gifts and grants. The establishment of a major gift program for the sustainability of the facility through endowment gifts, planned giving opportunities and restricted major gifts is a critical strategy for insuring the facility's long-term financial viability. The Oregon Zoo Foundation, the zoo's fund-raising foundation, could begin to test donor interest in these programs once the concept plans are better defined.

In addition, we envision that the facility, in partnership with The Oregon Zoo Foundation, could generate revenues from the following funding sources:

- Boarding Fees: $0 – to be conservative
- Training/Workshop Fees: $5,000 (annual net)
- Grants & Major Gift Contributions
- Online Contributions (website links)
- Value-added Contributions from zoo Visitors (supporting mission-based programs)
- Endow Elephant Keeper Positions (through planned giving program)
- Partner Contributions (see below)

Partner contributions could be a long-term funding source for the facility. Specifically, the Roslyn Lake site offers opportunities to partner with Portland General Electric (PGE) as the current owners of this site. Partnerships with leading regional and national corporations in supporting mission-based initiatives has become a consistent source of capital and operating funding for zoos and other cultural institutions. Two recent examples:

- Waste Management has a corporate partnership with The National Elephant Center under a long-term land lease at its location in Okeechobee Florida. Waste Management is providing capital, operating and facility support.
- Florida Power & Light (FPL) has a partnership with The National Elephant Center and The Manatee Observation and Education Center in Fort Pierce, Florida. FPL provides in-kind and/or operating support to both facilities.

Additional opportunities will become available with the right partner. PGE could support the facility through a long-term land lease, grant contributions and awareness building through its unique network of corporate partners.

3. Site Selection Matrix

Site Criteria Matrix

In assessing each of the identified proposed sites, we have developed the following site criteria matrix "template" which includes both qualitative and quantitative ratings based on the site criteria definitions outlined below: Qualitative and quantitative criteria is rated low (1) to high (3), with (2) a mid-point, in terms of its "priority" in developing the zoo's off-site elephant facility.

Acquisition Cost: **Qualitative = 3**

Quantitative:

3 = Metro ownership.

1 = Long-term lease.

(A site is not desirable if Metro doesn't own or have long-term property agreement).

Travel Time: **Qualitative = 3**

Quantitative:

3 = 0 – 60 minutes from zoo.

2 = 60 – 90 minutes from zoo.

1 = 90 – 120 minutes from zoo.

Acreage: **Qualitative = 3**

Quantitative:

3 = 140-150 acres that can be developed for elephants, with additional acreage that could easily support buffer zone operations.

2 = 140 – 150 acres that can be developed for elephants, with additional acreage that would be challenging to develop for buffer zone operations.

1 = 140 – 150 acres that would require additional resources to make usable for elephants, remaining acreage may not support buffer zone operations.

Ease of access for the staff and elephant transport: **Qualitative = 3**

Quantitative:

3 = 18 wheeler compatible, fire equipment, highway access, existing infrastructure.

2 = some existing infrastructure, wouldn't support 18 wheeler, would have to crane from a flatbed.

1 = would have to build adequate access.

Well draining site and topography: **Qualitative = 3**

Quantitative:

3 = majority of usable elephant space is well drained with a minimal amount of standing water.

2 = some areas with standing water will require modification to result in well drained areas for elephants.

1 = substantial areas with standing water will require modification to result in well drained areas for elephants.

Adjacent land uses: **Qualitative = 3**

Quantitative:

3 = entirely complimentary uses such as agriculture and timber. Low human activity.

2 = mostly complimentary uses such as agriculture and timber. Low human activity.

1 = uses have significant impact to program activities, animal welfare, and security concerns

Land use classifications/permit approvals: **Qualitative = 2**

Quantitative:

3 = elephants outright allowed use in zoning

2 = zoning requires conditional use application, desired outcome viewed favorably

1 = zoning requires conditional use application, desired outcome viewed poorly

Utilities and other infrastructure amenities: **Qualitative = 2**

Quantitative:

3 = existing, adequate utilities and infrastructure.

2 = some/limited utilities and infrastructure would require additional resources

1 = no existing utilities or infrastructure.

Varied habitat and terrain: **Qualitative = 2**

Quantitative:

3 – site holds a variety of suitable habitat and terrain.

2 = some variability and potential to easily alter terrain for suitable terrain.

1 = conditions would require substantial resources to terrain suitable.

Subsurface conditions: **Qualitative = 2**

Quantitative:

3 = all positive subsurface conditions

2 = some positive subsurface conditions

1 = clearly negative subsurface conditions

Once the criteria have been evaluated, the quantitative ratings are multiplied with the qualitative ratings to produce a total score. The highest possible score is 78. The highest scores present the likely best sites for developing the off-site elephant facility.

LOCATION:

Site Criteria	Qualitative Rating	Quantitative Rating			Total
		Excellent (3)	Good (2)	Poor (1)	
Acquisition costs	3				
Travel time	3				
Acreage	3				
Ease of access for staff & transport	3				
Well draining site & topography	3				
Adjacent land uses	3				
Land use classifications/permit approvals	2				
Utilities & other infrastructure amenities	2				
Varied habitat & terrain	2				
Subsurface conditions	2				
Totals for Proposed Site Location					

4. Staff Brain-Writing

Workshop participants spent one-half hour generating lists of ideas and considerations that primarily consisted of the following topics: Budget, Revenue, Staffing, Land Use, Animals, General Programming, Community, Site Facility, and Building Facility

This report drew information from that list of ideas. The complete list is available in Appendix A.

5. Estimated Development & Operating Costs

Estimated Capital Costs

Capital Costs: Oregon Elephant (2010 Dollars)	*Test Budget*
Site Prep (utilities, earthwork, roads)	*$685,000*
Barn Shell (1@ 20K sq/ft)	*$2,000,000*
Caging Fitout	*$1,260,000*
Support Building (1@ 5K sq/ft)	*$1,000,000*
4x 5 Acres - cable barrier	*$2,680,000*
Exterior Misc. Chutes	*$300,000*
2x 40 Acres - cable barrier	*$3,200,000*
Habitat ethology/activity amenities	*$850,000*
Perimeter Fence - 25% of total	*$250,000*
Elephant Transport Trailer	*$75,000*
Donor Cultivation Amenity-Overlook Tower	*$300,000*
Subtotal	*$12,600,000*
Soft Costs & Contingencies	*2,000,000*
Total	*$14,600,000*

Estimated Annual Operating Costs

For the purposes of this initial operating cost projection, we have utilized the following assumptions:

Operational

- Projections reflect that the facility is "operational" and completed with the transition phase.
- Assumes that the facility houses a minimum of one elephant and a maximum of five elephant groups. (An adult bull represents one "group." An adult bull with a compatible post-reproductive cow would also be considered one "group." A cow/calf group (similar to what we currently house) would also be considered one "group.").
- The facility is not open to the public; limited access to donors
- Facility interior build-out is 20,000 sq/ft barn with 5,000 sq/ft building containing space for offices, residence, and events
- Facility exterior yards includes four (4) five-acre yards (assumed to be bull-proof)
- Future build-out includes two (2) 40-acre habitats (these are included in capital costs shown above)

Financial

- Assumes the facility will not initially house elephants that are paying a boarding fee; for future planning, boarding fees would be projected at $2,500 per month per elephant, plus any associated vet services
- Hands-on training courses and/or workshops will be offered once a year with up to ten participants per program; net fee of $500 per participant
- Employee fringe benefits are 48% of total salaries
- The Oregon Zoo Foundation will provide fund-raising services including donor cultivation, prospect identification, grant-writing and event coordination.

Fixed Expenses (based on 20,000 sq/ft facility plan)

- Personnel: 3.9 FTE supporting up to five elephant groups.
- Personnel: .5 FTE supporting maintenance
- Utilities: projected at $4.75 sq/ft
    - electric, natural gas, telephone, water
- Insurance: projected at $0.95 sq/ft
- Maintenance: projected at $1.95 sq/ft (interior)
- Maintenance Exterior Yards: $6,500 per acre
- Security and Technology: $3,500 per month
- Event Services: $2,000 per month
- Administrative Services (supplies, printing: $1,500 per month)
- Overhead Allocation: $3,000 per month

Variable Expenses (assumes 7 elephants)

- Part-time keepers from zoo: 20% utilization of full-time keepers
- Animal Feed: $5,000 per elephant with browse (freshly cut plant material for animal feed) on-site
- Veterinary Services: $10,000 per elephant

Estimated Annual Operating Expense Projections

Utilizing the planning assumptions and industry cost factors outlined above, we have developed the baseline annual operating expenses for the facility:

Operating Expenses:						Baseline
Fixed Expenses:	Salaries & Benefits					$333,000
			FTE	Salary	Total	
		On-Site Supervisor	1	$55,000	$55,000	
		Elephant Keepers	2.9	$50,000	$145,000	
		Facility Maintenance	0.5	$50,000	$25,000	
		Benefits at 48%			$108,000	
	Utilities	$4.75				$118,750
	Insurance (Facility)	$0.95				$23,750
	Maintenance: interior	$1.95				$48,750
	Maintenance: exterior	$6,500/acre				$130,000
	Security & Technology	$3,500				$42,000
	Event Services	$2,000				$24,000
	Administrative Services	$1,500				$18,000
	Overhead Allocations	$3,000				$36,000
	Subtotal					$774,250
Variable Expenses:	Salaries & Benefits	20% of keepers				$29,000
	Animal Feed	$5,000/elephant				$35,000
	Vet Services	$10,000/elephant				$70,000
	Elephant Transport	lump sum allocation				$10,000
	Subtotal					$144,000
Total Operating Expenses						$918,250

6. Site Visits

Weber Farm

Site is located in Clackamas County and is approximately a 30- minute drive from the Oregon Zoo. It is comprised of approximately 150 acres adjacent to the Willamette River. There is considerable elevation change across the site with an upper table currently used for farming as well as a lower table close to river elevation that is also currently farmed. The site is/was primarily a mix of oak savanna, conifer forest and open prairie grassland. The site is owned and managed by Metro.

Constraints

- Slower secondary road access
- Non-contiguous development areas
- Flood prone
- Very wet soil conditions
- 'Greenway' easement restrictions
- Under 200 acres

Opportunities

- 2 residences on site
- Partnership with Metro
- Close proximity to Oregon Zoo
- Cost of Site???


Site Boundary
~40 Acre Habitat
Future Expansion
~15 Acre Habitat
5 Acre Yard
5 Acre Yard
5 Acre Yard
5 Acre Yard
Entry
Barn @ 20K SF
Existing House & New Staff /Visitor Facility
Existing House
~25 Acre Habitat
1 Acre
1733 ft
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Image © 2009 Metro, Portland Oregon
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Roslyn Lake

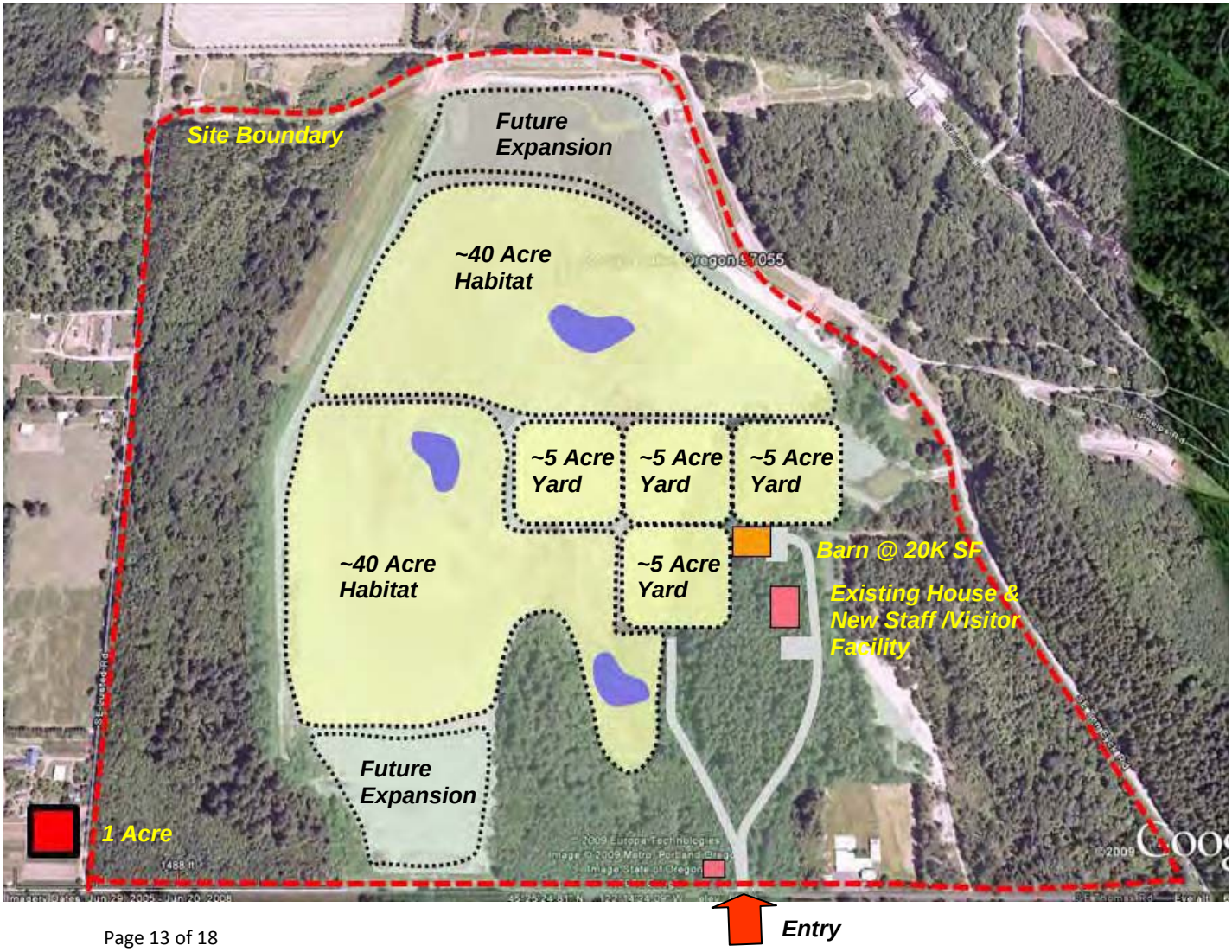
Site is located in Clackamas County, Oregon, and is approximately a 50-minute drive from the Oregon Zoo. It is comprised of approximately 350 acres in the vicinity of Mount Hood, adjacent to the Little Sandy and Bull Run rivers. The site has moderate elevation change across it and is currently undergoing natural changes as a result of the decommissioning of the Marmot Dam and subsequent drying up of Lake Roslyn. The site, as a former swimming, boating, and picnicking recreational site, has many guest amenities – parking, restrooms, shelters and electric hook-ups. The site is owned by Portland General Electric. The site is/was primarily a mix of oak savanna, conifer forest, open prairie and some possible wetlands.

Constraints

- Potential wetland issues
- Former school building and its future use
- Cost of site???

Opportunities

- Existing park infrastructure
- PGE partnership
- Contiguous development areas
- Some existing buildings
- Over 200-acre criteria
- Well-drained terrain



Site Selection Matrices for Weber Farm & Roslyn Lake

LOCATION: Weber Farm

Site Criteria	Qualitative Rating	Quantitative Rating			Total
		Excellent (3)	Good (2)	Poor (1)	
Acquisition costs	3	3			9
Travel time	3	3			9
Acreage	3		2		6
Ease of access for staff & transport	3		2		6
Well draining site & topography	3			1	3
Adjacent land uses	3		2		6
Land use classifications/permit approvals	2		2		4
Utilities & other infrastructure amenities	2		2		4
Varied habitat & terrain	2			1	2
Subsurface conditions	2		2		4
Totals for Proposed Site Location					53

LOCATION: Roslyn Lake

Site Criteria	Qualitative Rating	Quantitative Rating			Total
		Excellent (3)	Good (2)	Poor (1)	
Acquisition costs	3		2		6
Travel time	3	3			9
Acreage	3	3			9
Ease of access for staff & transport	3	3			9
Well draining site & topography	3	3			9
Adjacent land uses	3	3			9
Land use classifications/permit approvals	2		2		4
Utilities & other infrastructure amenities	2	3			6
Varied habitat & terrain	2		2		4
Subsurface conditions	2		2		4
Totals for Proposed Site Location					69

7. Next Steps:

1. Gain a better understanding of the potential partnerships with PGE at the Roslyn site.

2. Identify, search and evaluate other potential sites that support the site criteria – regardless of current ownership.

3. Develop a preliminary “case for support” for the facility; test case with potential donors.

4. Better define future programming.

Appendix A – Brainwriting Exercise List of Ideas

Ideas

- Keeper/elephant interaction requirements or restrictions may change over the years. We will continue with free protected contact technique as long as is allowed but it could change.
- Animal care student facilities could expand for principles of elephant management and other elephant courses.
- Artificial insemination development could expand, with possible personnel training on semen collection.
- Connect the site to our public programs in controlled ways such as visits, tours, camps, classes.
- Possible revenue source as a day lodge or overnight location.
- Grow browse on the land. Discussion continued that this area may be good to grow the large amount of needed browse, and that surrounding land could be leased to farmers who could include hay for the elephants in return for use of the land. Other Metro land closer to the zoo may be better suited for growing zoo-destined browse.
- An arena could be built so that elephants have greater exercise opportunity during winter weather.
- Facility could be built for temporary housing of habilitating/confiscated/transitioning animals.
- Facility could be built for zoo animals in case of catastrophic event.
- Manage paddocks for browse recovery and develop motivation for animal movement and exercise.

Considerations

- Make sure the soil is well drained, with wet and dry zones for good elephant foot health.
- Include a non-animal buffer zone.
- Look for as much existing infrastructure as possible to alleviate the heavy cost of surveying, permitting, and bringing in utilities, roads, buildings, etc.
- The greater the distance from the zoo, the greater the impact will be to staff and costs.
- The denser the neighboring population, the greater the need will be to heighten security.
- All elephants should have outdoor access depending on the weather.
- Check microclimate and history of floods and wildfire at, or on the way to, the facility.
- Terrain should include slopes and uneven ground to fully develop elephant muscle and balance.
- Consider local permitting costs – can vary considerably by county/city.
- Consider future zoning/neighborhood/future urban density along route.
- Consider neighbors: minimize access, cultivate acceptance and support.

- Keep the facility as self-sustainable as possible.
- Consider ease and speed of site preparation – the sooner the elephants are moved, the sooner the zoo habitat can be enlarged (this assumption may be incorrect).
- Maximize sustainability.

Budget & Revenue

- Can the zoo afford the ongoing operating costs
- Cost beyond the Bond; operating costs for the facility
- Inadequate funding to support operations
- Assess staffing needs – how best to leverage
- Operating costs for transporting staff to the off-site facility – additional operating costs
- Fundraising opportunities for programs and services…what are they?
- Operating costs of facility could negatively impact the Zoo's operating expenses
- How to position site as a fundraising opportunity for donors?
- Phase construction to leverage investment
- Can the facility generate revenues from "boarding" elephants from other zoos

Staffing

- Over-extending vet staff
- Unable to find qualified staff
- More keeper and vet staff
- Consider staffing needs for 24/7 operations: keeper/security
- Management oversight/accountability
- Use of volunteers at the facility…how best to train and recruit
- Staffing on-site: maintenance and facility needs
- How well to supervise separate facilities – lessons from condors?
- Adequate staffing with knowledge of PC and free contact

Land Use

- Political opposition to use of bond money
- Time and cost of land use approval process
- Engagement of political leadership in the approval process
- Cumbersome process for land use ….how to minimize and maximize process
- Another potential site is the Oregon Wildlife Foundation in Sheridan
- Grow feed and browse as agricultural entity
- Impact on potential wildlife on site and opportunities to improve
- Structure agreement for acquisition of site upon approval of land use permits
- Rural residential permits are very restrictive; assess farm land permitting as less limitations

Animals

- Dry space for the elephants in the winter

- Providing shelter from the weather; dry feet
- Risk of flood and fire and moving animals away
- The weather issue and how it restricts use of the site
- Consider animal population and its mix…what is the right population mix to build towards?

Programming

- Assist the sustainability of the elephant population
- Become a research and reproduction facility
- Offsite breeding of E&T species; local species; exotic species
- Mix species like rhinos; interest and support
- Space for other animals and enrich habitat
- Expands the Zoo's animal habitats
- Provide hay and browse for the zoo
- Chance to do more with the elephants; multiple feeding stations
- Support cougar management programs
- Open house one time a year for the community
- Ability to house researchers and staff for births
- Opportunity to grow a real herd – mom and calves
- Opportunity to expand the zoo's conservation initiatives
- Consider size vs need…..what is the facility's program?
- Do we need a vet facility? X-ray and equipment from zoo – do not duplicate
- Adequate storage facilities
- Remote access…video feed to the zoo
- Locker rooms for staff
- Provide elephant handing training for colleagues – AZA principles of elephant management
- Conservation programs – camping
- Tented camp experience like Safari West – revenue programs
- Fee-based camps
- Teen camp/overnights
- Keep conservation and education in fore-front with camps and education programs
- Provide elephant handling training for colleagues – AZA Principles of Mangmt.

Community

- Neighbor opposition
- Neighbor relations – who is in charge
- IDA and PETA – risk
- Prepare for disaster
- Environmental impact from the operations
- Anticipate neighbor concerns during assessment phase

Site Facility

- Access – regional transportation network
- Physical access onsite- roads
- Distance from vet care
- Location away from highways are best…more remote
- Habitat – is it suitability for elephants
- Expandability
- Distance from zoo
- Open water from ponds or pools
- Will counties compete to attract the facility
- Shade structures
- Can be give elephants access to a river
- Infrastructure – do we expect staff to live there?
- Provide facilities to support disaster planning
- Conservation practices off-grid; self-sufficiency
- Consider pre-existing amenities
- Habitat variability – trees and hills
- East of I5 better suited for the facility for climate
- Close attention to environment resources will be important – erosion control
- Water quality and sensitivity needs
- Free site vs paid site….just because it is free does not make it right or good
- Accessibility of large trucks to move animals
- Best practices – demonstration programs – LEED programs
- Consider moat system as containment

Building Facility

- New feeding troughs in barns
- Barn floors as they relate to concrete and sand to minimize foot issues
- Self sustaining barns: environmentally friendly
- Rain water
- Static shouts in outside yards
- Limiting repairs of doors and gates
- Dry hay and sand storage
- Adequate water pressure
- D-rings through barns
- Heated floors with ability to make any stall a sand stall
- Everyone outside at the same time
- Large arena for winter activities
- Camera set-ups

-End-

APPENDIX 3: *Annual Operations and Capital Costs - Summary*

ANNUAL OPERATIONS COSTS	**2015**	**2017**
Personnel Services - LC	$334,771	$ 559,592
Personnel Services - FM	82,136	318,484
Personnel Services - Other	186,143	197,480
M & S - LC	54,828	100,434
M & S - FM	350,356	371,693
M & S - Other	2,513	2,666
TOTAL Annual Operations Costs	**$1,010,747**	**$1,314,973**

CAPITAL OUTLAY COSTS	**2015**	**2017**
Land Acquisition	TBD	
Site Prep (utilities, earthwork, roads)	$ 685,000	
Barn Shell (33,900 sq ft @ $100 / sq ft)	3,390,000	
Caging Fit-out	1,260,000	
Support Building(s)	1,000,000	
Four qty. 5-acre cable barrier	2,680,000	
Exterior Misc. Chutes	300,000	
Two qty. 40+-acre cable barrier	3,200,000	
Habitat ethology/activity amenities	850,000	
Perimeter fence	250,000	
Public Amenity (donors, camps, tours)	300,000	
SUBTOTAL	**$13,915,000**	
Soft Costs (design, consultants, permits)	$1,670,000	
Contingency–10% of direct construction	1,392,000	
TOTAL Capital Outlay Costs	**$16,977,000**	**$1,500,000**[3]
START-UP CAPITAL COSTS		
Office Supplies	$2,750	
Operating Supplies	37,770	
Office Furniture & Equipment	75,000	
Vehicles	205,500	
TOTAL Start-up Capital Costs	**$321,020**	
TOTAL Capital Outlay Costs	**$17,296,020**	**$1,500,000**

[3] Estimated cost to acquire and transport three reproductively viable female elephants to REC

Agenda Item Number 3.0

FOLLOW-UP TO OREGON ZOO COMPREHENSIVE CAPITAL MASTER PLAN – INTERIM REPORT #2

Metro Council Work Session
Tuesday, Feb. 1, 2011
Metro Council Chambers

METRO COUNCIL

Work Session Worksheet

Presentation Date: Feb. 1, 2011 Time: 2 pm Length: 45 min.

Presentation Title: Follow-up to Oregon Zoo Comprehensive Capital Master Plan – Interim Report #2

Service, Office, or Center: A Better Zoo program

Presenters (include phone number/extension and alternative contact information):
Kim Smith, 503 220-2450
Craig Stroud, 503 220-2451

ISSUE & BACKGROUND

The Comprehensive Capital Master Plan consultant team presented Interim Report #2 to the Metro Council on Feb. 13 at a Council meeting. The presentation included much information about the zoo campus, including:

- Proposed circulation and site organization along the "Spine"
- Concepts for stormwater capture and usage
- Possible development impacts to the zoo train
- Elephant exhibit concepts
- Other bond exhibit concepts
- Conservation Discovery Zone siting and schematic concepts

The program team would like to further explore the report's information, in general, and seek Metro Council feedback and direction on key issues that need direction from Council to keep the overall master plan project moving forward. In addition, direction is required to keep the elephant exhibit project design advancing and to allow application for necessary land use approvals from the city ahead of the overall master plan approval and updated Conditional Use Master Plan application to the city. Specific direction is sought for:

- Elephant exhibit expansion
- Zoo train campus loop rerouting
- Development of a perimeter service road

The following section summarizes key issues and ideas generated by the master planning project for specific topics.

Elephant Exhibit

The zoo bond language discusses the elephant exhibit expansion from 1.5 acres to 6 acres. Options to increase the exhibit's size are limited given existing campus development and lack of usable land. The most promising expansion concept involves a small increase of area to the south of the current elephant yard and a major expansion to the northwest where the Elk Meadow is located. This expansion directly impacts the train

campus loop and requires train rerouting and relocation of a train maintenance and storage building.

The master plan team and zoo staff explored other options for increasing the exhibit's size, such as expansion into the concert lawn. These options create impacts to other campus development and programs that are undesirable or expensive and inefficient to relocate.

Zoo Train

The zoo train will be directly impacted by at least two upcoming bond exhibit renovations, elephants and polar bears. The campus train loop borders the back edge of the existing elephant exhibit and is built onto a trestle adjoined and supported by the polar bear exhibit building. In addition, the current campus route crosses a major visitor pathway near the Family Farm exhibit and has several other guest or vehicle crossings. These crossings pose significant guest and staff safety considerations.

Zoo guests love riding the train, particularly the Washington Park Rose Garden route, but much of the current campus route runs along the undeveloped edge of the zoo or provides back of house views of staging and support areas. The master plan team has put much effort and creativity into concepts that maintain the train ride to the Washington Park Rose Garden with a new campus loop route. The Washington Park Rose Garden route supports the majority of guest rides and generates the majority of train revenues. The campus loop during ZooLights is particularly cherished. A rerouted train ride designed to provide unique exhibit views and to support the ZooLights program could provide a much more engaging guest experience.

Several options for a new train loop have been considered and the most pragmatic short-term option is to rebuild an abandoned trestle in the wooded area in front of the Living Collections administrative offices at Gate J and construct a second set of tracks between that location and the current main loading station. While details have yet to be resolved, this is the current preferred option to allow construction of the elephants and polar bears exhibits, construction of the perimeter service road, as well as to minimize operating impacts to the train.

Perimeter Service Road

Zoo campus vehicle access and circulation has evolved over the years as part of previous zoo expansion phases. The campus is currently bifurcated into north and south halves, with the train trestle near the Family Farm exhibit preventing heavy construction or emergency vehicles from moving between halves. In addition, all service roads either share or cross guest circulation paths creating negative guest experiences, safety considerations, construction inefficiencies, and challenges to campus support activities.

The master plan team was asked to explore and present options to remedy service road access issues. After reviewing options, the team proposed a new perimeter road section that joins the lower service road behind the Predators of the Serengeti exhibit with the Gate J service road running in front of the new Veterinary Medical Center. The road would occupy the train track route behind the elephant exhibit. Several sections of this proposed road are challenging due to soil stability, topography, and environmental zoning

considerations. Due to these reasons, generally staying within the current train track alignment is desirable.

Land Use Approvals

To implement most, if not all, of the master plan and bond project improvements, Metro must seek and obtain land use approvals from the city. The Zoo is currently zoned as open space and operates under a Conditional Use Master Plan (CUMS) that expires in 2013. Discussions with city staff confirmed that the most cost effective and time certain option for zoo campus land use approval is to create a new CUMS to address upcoming zoo development.

Because the program would like to proceed with the elephant exhibit without waiting for the entire master plan and new CUMS to be approved, Metro staff proposed amending the zoo's current CUMS to allow construction of the renovated elephant exhibit, new train route and perimeter service road. This action allows the bond program to maintain momentum on bond project planning and construction activities as the major construction on the Veterinary Medical Center and Penguin Filtrations projects wrap-up. City bureau staff was receptive to this proposal and the bond program team would like to develop the materials to begin the CUMS amendment process.

OPTIONS AVAILABLE

Given the zoo bond language to expand the elephant exhibit from 1.5 acres to 6 acres, few pragmatic options exist given campus development and lack of usable land. The master plan team has studied the campus attributes and current configuration, reviewed the bond project commitments, and explored concepts to balance all competing needs. The master plan team and zoo staff believes the concepts presented provide the best balance and that other concepts create subsequent challenges and problems.

If Council feedback and direction requires modifications to the options presented, the program team will submit that information into the master planning process and seek the development of alternatives.

IMPLICATIONS AND SUGGESTIONS

If the Metro Council affirms the concepts and proposals presented in Interim Report #2 and the work session materials, program staff will direct the master plan team to develop schematic designs and plans to the detail necessary for submittal to the city for land use review and approval. This includes finalizing the location and schematic designs for the elephant exhibit, train reroute, and perimeter service road.

Affirmation of these concepts also provides program staff the go-ahead to involve various stakeholders and the public in the planning process to seek appropriate input as the plans evolve and finalize.

In addition, these concepts are important to affirm so that planning and design work can proceed on other adjacent exhibits and campus areas.

Significant changes in direction that require the development of alternatives not presented will require time for the master plan consultant team to incorporate and develop. These changes would likely impact the overall project schedule and may result in the consultant team requesting additional fees to off-set the time to develop additional options.

QUESTION(S) PRESENTED FOR CONSIDERATION

The bond program team would like Council's feedback and direction to Interim Report #2's information and concepts.

In addition, the bond program team would like affirmation or direction to finalize location and to further develop specific plans for the elephant exhibit expansion, the train campus loop rerouting, and the development of a perimeter service road. This work would be followed by submittal of an application to the city for land use approvals to construct these improvements under an amendment to the zoo's existing CUMS.

LEGISLATION WOULD BE REQUIRED FOR COUNCIL ACTION - NO
DRAFT IS ATTACHED - NO

Agenda Item Number 5.0

BUDGET BRIEFING

Metro Council Work Session
Tuesday, Feb. 1, 2011
Metro Council Chambers

METRO COUNCIL

Work Session Worksheet

Presentation Date: February 1, 2011 Time: 2:50 pm Length: 60 mins

Presentation Title: Budget Briefing

Service, Office, or Center: COO and FRS

Presenters (include phone number/extension and alternative contact information):

Michael Jordan, COO and Budget Officer (x1541)
Margo Norton, Finance and Regulatory Services Director (x1934)
Kathy Rutkowski, Budget Coordinator (x 1630)

I. Overview of Work Session

II. Budget Strategy

The proposed budget will look at not only FY 2011-12 but also at the structural challenges for the next five years.

To address these challenges, the Senior Leadership Team has been looking at three areas that affect the Metro budget:

- Agency footprint (policies and programs)
- Employee compact (total compensation for employees)
- Resources (financial and non-financial)

In addition, the Metro Council in October indicated areas for maintaining, scaling back and dialing up.

III. Budget Balancing Options

Upcoming dates

End -March	Proposed budget available for individual Councilor review
April 7	Public release of budget, including proposed Solid Waste rates

Desired outcome: understanding of current budget challenges and sensitivities to balancing the budget