



**Oregon Zoo Bond  
Citizens' Oversight Committee**  
Conservation Hall, Education Center, Oregon Zoo  
Wednesday, Sept. 12, 2018  
3 to 5 p.m.

Oregon Zoo Bond  
Citizens' Oversight  
Committee Meeting  
Sept. 12, 2018  
Agenda

**AGENDA**

ITEM	ACTION	ANNUAL REPORT	LEAD	TIME
<b>A. Welcome / Introductions</b> <ul style="list-style-type: none"> <li>• Agenda overview</li> <li>• Introductions</li> </ul>	Review		Susan Hartnett	3:00
<b>B. Minutes of May 9, 2018, Committee meeting</b>	Approve		Susan Hartnett	3:05
<b>C. Monthly Project Status Reports</b> 1. Education Center – No report 2. Polar Passage/Primate Forest/Rhino a. Final design and site layout b. Construction phasing 3. Interpretive Experience – No report 4. Percent-for-Art 5. Electrical Infrastructure • Lower Service Road Generator Replacement 6. Close-out project: Tree mitigation – No written report	Discuss	Page 20, 24, 28, 45, 48, 50	Heidi Rahn, Jim Mitchell	3:10
<b>D. Program Status and Financial Information</b> <ul style="list-style-type: none"> <li>• Program Budget Options</li> <li>• Administrative overhead cost allocation updated forecast</li> <li>• Budget options for Polar Passage/Primate Forest</li> </ul>	Discuss	Page 45, 48, 49	Heidi Rahn, Caleb Ford, Jim Mitchell	3:35
<b>E. Program and Projects Schedule</b>	Discuss		Heidi Rahn	4:15
<b>F. Zoo and Oregon Zoo Foundation Updates</b>	Update		Don Moore, Julie Fitzgerald	4:20
<b>G. Open Discussion/Questions</b>	Discuss		Susan Hartnett	4:35

**Upcoming 2018 and 2019 meeting dates –Wednesdays, 3 to 5 p.m.:**

Nov. 14, 2018 Conservation Hall, Education Center, Oregon Zoo (note new room location)

Feb. 13, 2019 Conservation Hall, Education Center, Oregon Zoo

May 8, 2019 Conservation Hall, Education Center, Oregon Zoo

Sept. 11, 2019 Conservation Hall, Education Center, Oregon Zoo

Nov. 13, 2019 Conservation Hall, Education Center, Oregon Zoo





## Oregon Zoo Bond Citizens' Oversight Committee

Oregon Zoo – Skyline Room  
Wednesday, May 9, 2018  
3 to 5 p.m.

Oregon Zoo Bond  
Citizens' Oversight  
Committee Meeting

Sept. 12, 2018

Agenda item B

### MINUTES

#### MEMBERS PRESENT

Susan Hartnett, Chair  
Dan Aja  
Heidi Goertzen  
Mickey Lee  
Robyn K. Pierce  
Katherine A. Porras  
Kevin Spellman  
Dick Stenson  
Christi L. Taylor  
Karen Weylandt

#### AFFILIATION

Spectator Venues Program, City of Portland  
Banfield Pet Hospital  
Ferguson Wellman Capital Management  
Northwest Natural  
Pierce, Bonyhadi & Associates  
Meyer Memorial Trust  
Spellman Consulting, Inc.  
Retired healthcare executive; community volunteer  
Miller Nash Graham & Dunn  
Retired from Providence Health & Services

#### MEMBERS ABSENT

Noah Bishop  
Deborah Herron  
Jill Mellen  
Daniel Morris  
Ruth Shelly

#### AFFILIATION

Bishop Bankruptcy Law, LLC  
Walmart  
Research Biologist  
Our Oregon  
Portland Children's Museum

#### GUESTS (New Members as of 5/10/18)

Laurel Brown  
Daniel Hauser  
Kate Jones  
Javier Mena  
Chin See Ming  
Emma Stocker

#### AFFILIATION

Facilities and Property Management, Portland State University  
Oregon Center for Public Policy  
Morley Capital Management  
Portland Housing Bureau, City of Portland  
Smith Freed & Eberhard  
Emergency Management, Portland State University

#### ELECTED OFFICIALS AND STAFF

Scott Cruickshank  
Julie Fitzgerald  
Kate Giraud  
Sharon Glaeser  
Jim Mitchell  
Don Moore  
Joel Morton  
Linnea Nelson  
Heidi Rahn  
Marcia Sinclair  
Cary Stacey  
Nadja Wielebnowski

General Manager, Metro Visitor Venues  
Oregon Zoo Foundation Executive Director  
Oregon Zoo Bond Project Manager  
PSU PhD student, zoo Conservation Research  
Oregon Zoo Bond Construction Manager  
Oregon Zoo Director  
Metro Senior Attorney  
Oregon Zoo Bond Program Coordinator  
Oregon Zoo Bond Program Director  
Oregon Zoo Marketing  
Metro Special Projects Coordinator, Office of the COO  
Oregon Zoo Conservation and Research Manager

## **A. Welcome / Introduction**

Susan Hartnett, Chair of the Oregon Zoo Bond Citizens' Oversight Committee ("Oversight Committee" or "the Committee"), opened the meeting at 3:03 p.m. Ms. Hartnett was appointed chair by the Metro Council on April 12, 2018, and became effective April 13, 2018. This is her first meeting to serve as chair. She was willing to accept the role because of the great support provided by staff and the interesting and meaningful work to benefit the zoo.

Heidi Rahn indicated that four members have served more than four years (two two-year terms) since January 2014, and this is their last meeting as members: Noah Bishop, Deborah Herron, Daniel Morris, and the only one in attendance, Mickey Lee. Ms. Rahn thanked them for their more than four years of service and for their diligence and dedication to the Committee. Ms. Rahn noted that Ms. Lee pushed the zoo bond program to be better at every meeting. She asked for more detailed COBID reporting, and then pushed for more reporting on workforce diversity. Her efforts helped move Metro to launch its Construction Careers Pathways Project. Ms. Rahn thanked her for being a huge initiator for equity and diversity, not just for the zoo bond program, but for the Metro agency as a whole. The zoo bond Equity in Contracting Quarterly Report is also a result of her efforts. Ms. Lee credited Metro for being receptive to her requests.

Mr. Bishop could not attend today, but sent an email thanking and acknowledging the bond team for its hard work and ingenuity to run a successful public works project, and the Committee for its successful oversight.

Everyone present introduced themselves: Members; new members appointed by the Metro Council on April 12, 2018, and effective May 10, 2018; and staff. Ms. Hartnett said she was impressed with the quality of persons on the Committee. Staff has done a great job thinking of the importance of this committee, and that it provides assurance for the public to know its dollars are wisely spent. She thanked members for committing their time, indicating that serving on the Committee is fun and provides so many opportunities for learning, especially about wildlife conservation.

Scott Cruickshank announced that following an audit of the zoo bond program years ago, Metro built a strategic capital asset plan for the agency as a whole, and developed an asset management and capital planning program. Recently Heidi Rahn was selected to head up that program to develop consistency in how Metro handles its capital assets, starting June 1, 2018. The good news is that Ms. Rahn will continue to oversee the zoo bond program, and Metro is excited to create efficiencies across the agency, so it knows the condition of its assets. Ms. Rahn can help take the policy and systems to the next level. She will work on a transition plan, to backfill some of her reduced zoo bond position. She will still attend Oversight meetings. Chair Hartnett congratulated Heidi, Scott and Metro, and said the Committee is very pleased for Ms. Rahn.

## **B. Annual Report**

Ruth Shelly, Chair of the Committee at the time, presented the Committee's annual report to the Metro Council on April 12, 2018. She did a great job, reporting with passion and hitting all salient points of the recommendations. All councilors expressed appreciation for the Committee and its role in assuring that the public's dollars are well-spent. The annual report is the biggest task for the Committee, and all members should feel very proud of their work. The Committee meeting agenda has reference to the annual report pages where the agenda items are referenced in the report recommendations. Chair Hartnett encouraged members to bring their copy of the annual report to the meetings.

**C. Approval of Feb. 14, 2018, Oversight Committee meeting minutes**

Members approved the minutes of the Feb. 14, 2018, Oregon Zoo Bond Citizens' Oversight Committee ("Oversight Committee" or "the Committee") meeting.

**D. Monthly Project Updates**

**1. Education Center** – Contractors are completing the solar controls and energy dashboard. The zoo will start tracking for net-zero energy operations when the controls are finalized. The project is \$200,000 under budget.

**2. Polar Passage/Primate Forest/Rhino (PPR)** – The project is in the design phase at 25 percent construction documents. In 2017 the projects were combined for design and cost efficiencies. The team worked to bring them into budget, and the project is now very close to budget. Also in 2017, the Committee recommended and the Metro Council approved a scope change, which was originally in Phase II of the zoo Master Plan, to take down the old primates building and build a new one. The existing chimp outdoor habitat will remain with some improvements. A new meshed chimpanzee habitat will be added and include a stream, climbing structures, a sun room, and other features. It will provide a naturalistic habitat to support chimp social behavior.

Value engineering made some project areas simpler, which may allow the viewing structures to be built with cross-laminated timber (a sustainable product). A restroom costing \$650,000 that was not in a great location or required for the project was cut from the design. Another efficiency was to keep existing habitat soil, rather than removing it and filling with new. The value engineering also took out a storage building, but staff want to keep it in as an add alternate, in case funding becomes available.

Don Moore explained that polar bear habitat in the wild is decreasing quickly, and because so many polar bears will be in trouble and need homes, staff does not anticipate that a maternity den will be needed. Removing the maternity den from the design saved \$1.5 million. The space for it and an outdoor maternity yard will remain in the design, in case the zoo wants to build it in the future. Polar Passage will have capacity for five or six bears.

Ms. Rahn clarified that whenever the program does value engineering, the team goes back to the promises of the bond measure to make sure they are fulfilled first, and defers until later some items that are not essential. These new habitats will be amazing.

Lease Crutcher Lewis, the construction management/general contractor, just bid out the early work package and was pleased to receive three bids on the civil and demolition work. They received one bid on the electrical and one bid on the mechanical, which is indicative of the current construction market conditions. LCL will break down some scopes for the early work amendment and package them to direct-award to COBID firms. It is an interesting climate to bid, with a wide range in some bids. LCL has been using very conservative estimates for the project given the market, and on the early work package is under budget by \$300,000 to \$400,000. .

The project schedule is showing "caution," mostly because of possible permitting delays. Staff is getting mixed information indicating a possible delay of seven to nine months. The schedule is now showing for five months, and staff is working closely with the City of Portland. The City is also

requiring an amendment to the zoo's land use permit, which will not hold up the early work package, but it could hold up the main PPR construction.

LCL's Diversity in Workforce and Contracting Plan is included with the meeting packet. They have done extensive outreach to COBID-certified firms, including attending more than 30 events in the last year. They made the PPR early work package plans available at 15 locations around town, plus at LCL. The company has been good at mentoring COBID firms and hiring minority and women apprentices, as was the case with the Elephant Lands project. Sarah Jimenez, who worked on Elephant Lands as an LCL intern, will be on the PPR project as a project engineer. Lauren Holmes will be on site as a project manager, and is committed to supporting women and minorities on the job site. LCL has a high level of professionalism.

Javier Mena said he would like to see LCL go beyond the 15 percent COBID utilization goal. Mickey Lee commented that on other bond projects, the contractor has exceeded the 15 percent goal, such as the Education Center that had 30 percent COBID utilization. She feels it will be a challenge to meet the goal in these last few years of the program, due to the limited availability of COBID firms and market conditions.

Chair Hartnett noticed that in its Diversity Plan, LCL has some categories at 100 percent COBID utilization, but if don't get that, then they will miss the mark overall. She encourages LCL to look at targeting COBID firms in other categories as well. Mr. Mitchell cautioned that the PPR project is not typical construction, since it has lots of specialized work. For example, it has very little dry wall, and little repetitive-type construction that might be found in an office or apartment construction. To make some scopes more accessible to COBID firms, the project team will determine if some scopes can be broken down into smaller packages. Bond staff will have selected bidders provide information on diversity within their workforce, and Mr. Mena recommended especially the big bids.

The zoo and Metro have hired women-owned firms to lead the generator replacement as part of the Electrical Infrastructure project, manage the land use amendment, and conduct an analysis of the mitigation plantings with three previous construction projects.

Scott Cruickshank noted that Mr. Mitchell was being a bit humble in talking about the value engineering process. The project was 15 to 20 percent over budget, and Mr. Mitchell led the team in finding ways to bring it into budget without interrupting significantly the quality of the project. That is a big feat, and he thanked Mr. Mitchell for the significant accomplishment.

Last month Ms. Rahn sent a memo to the Committee regarding funding for rhino project, indicating that the external bond council would not sign off on the sale of the bonds with the rhino project included because it was not listed in the original bond measure. After the passage of the bond measure, the zoo did a master plan and realized that hippos did not fit the zoo's plans for species conservation or energy sustainability. So the rhino project was substituted for the hippo pool filtration after extensive public engagement/polling to assess community support. Fortunately the bond program has a strong partner in the Oregon Zoo Foundation, and appreciates the quick response and support from OZF to fund the rhino construction in total. Julie Fitzgerald acknowledged that it actually gave OZF a greater opportunity to fund raise for that project.

### **3. Interpretive Experience – No report.**

**4. Percent-for-Art** – Staff are receiving videos and photos of the commissioned artists’ fabrication of the *Melting Ice Bear* sculpture and two polar bear benches, which is proceeding well. Staff hopes to later share that fabrication process with members and the public. The team is reviewing the designs for safety (the openings in the sculpture). The artwork is expected to be completed and shipped in 2019. The zoo is working on finding storage for the sculptures until 2020.

**5. Electrical Infrastructure** – The firm hired for the generator replacement, Highpoint Construction, is a women-owned business, with a contract for \$812,112.

**6. Close-out fund** – This fund is for addressing items that arise from closed bond projects. As a requirement of its land use permits, the zoo owes the city three reports on mitigation plantings. The bond program hired a team of wildlife biologists from a women-owned and emerging small business to monitor the plants and report on what is working. Metro changed its procurement process and increased the threshold for direct-awarding to COBID firms, which enabled the bond team to direct-award the contract to a COBID-certified firm.

#### **E. Program Status and Financial Information at a Glance**

On May 1, 2018, Metro sold \$10 million worth of zoo bonds, packaged with the Metro Natural Areas bond and in concert with a Full Faith and Credit issuance for Metro Regional Center work, and the sale resulted in a premium of approximately \$1.5 million for the zoo bond program. Fourteen bidders participated in the sale. The premium was due to Metro’s AAA rating and a favorable interest rate. Metro will put the premium money into unallocated contingency for now. Staff is working to keep the Polar Passage/Primate Forest/Rhino project within its current budget. One consideration may be to use some of the premium dollars to fund some of the project add alternates, such as storage, and stormwater management in the event space. The bond premiums have really helped with addressing the recent market cost escalations. True interest cost to the taxpayers is only 2.25 percent, and debt service equates to only \$0.01/\$1,000 of assessed value. The bonds will mature in 2028. The premium will show on the zoo bond financial report under unallocated contingency, for the finances in May.

#### **F. Program Schedules**

The Polar Passage/Primate Forest/Rhino project is showing caution on the schedule, mostly due to uncertainties regarding permitting from the City of Portland. For now, the project is moving along as scheduled, with construction planned to go until 2020.

#### **G. Elephant Welfare Study results – How Elephant Lands enhances elephant welfare**

Nadja Wielebnowski, Oregon Zoo Conservation Research Manager, and Sharon Glaeser, Portland State University Ph.D. student, reported on the results of a four-year study evaluating the effectiveness of Elephant Lands and the effect on elephant welfare (presentation is included with the record. Their report to the Committee and an executive summary were included with the meeting packet. The study ran from September 2012 through December 2016, and monitored the elephant herd in the old habitat prior to construction (baseline), during construction, and the move to the new habitat and through one year after opening.

Elephant Lands was designed to encourage activity, promote a diverse range of natural behaviors, offer increased opportunities for choice and social interaction, and provide biologically meaningful challenges for Asian elephants at the Oregon Zoo. Results of this welfare study show that the zoo has achieved its goals with Elephant Lands. The elephants are expressing a diverse range of species-typical behaviors and demonstrating social dynamics of a healthy herd. They are walking further and

foraging and exploring more, and using the entire habitat and its resources. They are exhibiting more choice and self-determination, have biologically meaningful challenges, and show adaptive and normal adrenal responses to change and challenge.

This study was in addition to the elephant monitoring the zoo has been doing since 1979. The researchers will do more analysis of the large volume of data and produce several publications, as well as present their findings at the annual conference of the Association of Zoos and Aquariums. The Oregon Zoo will keep monitoring the elephants in perpetuity, and will start monitoring other species for the upcoming Polar Passage/Primate Forest/Rhino project construction. They plan to add monitoring of sound.

Members asked about the changes in food delivery to the elephants and whether that had caused them to become more detached from their keepers. Keepers are not at the zoo at all hours, and the zoo wants the elephants to be able to have their own natural behaviors. The elephants continue to have a good relationship with their keepers, but now they have more choice when the keepers are not present. But it does not change the underlying bond with the keepers. With the randomly timed feeders, Chendra, the smaller adult elephant, is not getting displaced from feeding as much as before, because she can easily walk to another feeder to find food on her own.

Members also asked if the study showed any unexpected changes. Staff will look at the more detailed data for specific time frames and see what they find. Since Elephant Lands opened, the keepers changed the feeder schedules and also put some browse in a common place to give the herd a chance to feed together. The keepers know the animals and what they need – they didn't need the data to see that. The science further supported Elephant Lands' design. The study did not measure elephant vocalizations, but the keepers have observed that the elephants are vocalizing much more in the new habitat, possibly because the elephants have chosen to be more spread out than before.

When asked if the research found something staff wish they had done, staff said they could use another freezer for fecal samples, but that it is such a well-designed facility, that it accommodates the research well. It provides flexibility for enrichment for the animals, and allows for adding elements over time. The data shows that the animals are using all of the resources provided, and that it was all money well-spent. (The water canon did not show up in the data because it is not a regular event; the elephants definitely use – and seem to enjoy – it when it is turned on.) The new habitat sets up certain scenarios so that the animals have choices, including big logs and hanging feeders. If a hanging feeder is placed just out of reach overhead, they have found that the elephants may move a log to reach the feeder.

Members asked how the results for distances elephants walked compare with other zoos that have made habitat changes. The researchers cautioned that due to using different evaluation methodologies and technologies, they have to be careful about making comparisons. For example, the Dallas zoo used Fitbits for its study, which is a different technology than used at the Oregon Zoo. Ms. Glaeser will delve into the details of such studies when she prepares to publish. If a new habitat is just providing space, it is not enough; the habitat must provide a reason, an incentive to get the animals to move. The maps of the movements of the herd, which now includes six elephants with the new bull Samson, are fascinating to see how the animals walk and explore the resources throughout the habitat. There is not as much info on the daily movements of elephants in the wild.

Don Moore praised Ms. Wielebnowski and noted that she is internationally recognized for her work. He also noted that Asian and African elephants are very different and inhabit very different environments, and thus have different movement patterns. Also, most studies of elephants do not use 24-hour data, such as was used in the Elephant Lands study.

#### **H. Elephant Lands operating outcomes report**

The Committee has been interested in how the zoo evaluates its actual operations against the operational plans. Don Moore spoke about the Elephant Lands year one operating results, which included contributions from many staff. Overall, the new space works well. Following an initial steep learning curve and supported by training, staff learned to effectively manage the new facilities and to leverage more creative education and food service opportunities. There has been a small staffing increase to manage the new mechanical and electrical systems. The zoo has achieved significant reductions in water consumption, which was a major goal of the bond program. Some features that achieve water conservation require significant energy to operate. It is also important to fully consider the functional operation of new systems to make sure they will meet energy goals and are a good fit with the needs of the zoo. New systems may need additional or different staffing. The bond program is helping the zoo by providing more efficient facilities, but with new sophisticated technical systems, they require more technical expertise to operate.

Early in the bond program there may have been an internal staff conversation (not a promise to voters in the bond measure) that the bond investments would not cause an increase in staffing, but zoo operations have found that the larger spaces with fewer management options allow elephants choice and also require more staff time.

One major lesson-learned is a recognition that leadership, animal populations, priorities, needs and standards for best practices can all change over time, so it is important to design for flexibility. The Association of Zoos and Aquariums is constantly trying to elevate its standards, so the zoo needs to be able to react to those changes or be proactive in anticipating them.

Going forward, the zoo needs to make sure its team has the capacity to keep up with the speed of the bond design process, to be able to fully understand blueprints, consider all the ramifications of operating new systems, and fully vet different perspectives of the multidisciplinary team.

Dr. Moore noted that zoo North America curator Amy Cutting learned that when a project design needs to be brought into budget, it is better to not cut lots of little items, but better to cut large items.

A recent Metro report looked at energy usage and found that because the zoo made a choice with its bond program to invest in solar panels and its operations to purchase 100 percent renewable power, the zoo is at net-zero energy use.

#### **I. Zoo and Oregon Zoo Foundation update**

A memo to the Committee in April from Ms. Rahn explained that the funding source for the rhino habitat project had been shifted to the Oregon Zoo Foundation. Julie Fitzgerald reported that the OZF board liked the opportunity to change its fundraising goal and take responsibility to fully fund the rhino habitat project. The OZF board now has a sense of ownership of the project. She thanked staff for making sure the zoo will have such a great product.

Don Moore reported that Portland Parks and Recreation has announced the final draft master plan for Washington Park, which includes looking at transportation access. The zoo is hosting a Primate Happy Hour this evening, and members are invited to stay. Such adults-only activities at zoo have been well-received. Zoo staff are continuing to work on construction pro-activity, or preparation (the Committee was briefed at its last meeting). The giraffe feeding deck for visitors is being built, and the zoo is working to enhance other options for visitors, to have the lowest possible impact on the visitor experience during construction. The zoo is planning a ground-breaking event for Polar Passage/Primate Forest/Rhino project later this year, and invitations will be sent to Committee members. The zoo has 19 concerts this summer. Stay tuned for one more big-name concert announcement soon. The zoo is also offering three Twilight Tuesdays on the third Tuesdays this summer. The partnerships developed as part of the Education Center have been the key to activate the Twilight Tuesday and special weekend events. They feature lots of happy families and partner tents with many activities, and visitors more activated than ever.

Members asked about the introduction of Samson, the new bull elephant. Quarantine requirements for 30 days have been modified and now only require three clean fecal samples. So Samson is in with the other elephants, is doing fine, and being monitored by observers. The zoo utilized the “howdy system” built in to Elephant Lands that allows the animals to have visual access before actually being in the same physical space together. Chendra, the smallest female elephant, wanted to get in with Samson, which seemed to indicate a friendly introduction.

**J. Adjournment**

Chair Hartnett adjourned the meeting at 4:59 p.m.

**Upcoming 2018 and 2019 meeting dates –Wednesdays, 3 to 5 p.m.:**

Sept. 12, 2018 Conservation Hall, Education Center, Oregon Zoo

Nov. 14, 2018 Conservation Hall, Education Center, Oregon Zoo (note new room location)

Feb. 13, 2019 Conservation Hall, Education Center, Oregon Zoo

May 8, 2019 Conservation Hall, Education Center, Oregon Zoo

Sept. 11, 2019 Conservation Hall, Education Center, Oregon Zoo

Nov. 13, 2019 Conservation Hall, Education Center, Oregon Zoo



Oregon Zoo Bond  
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Committee Meeting  
Sept. 12, 2018  
Agenda item C

**Oregon Zoo Bond Citizens' Oversight Committee meeting**

**Sept. 12, 2018**

**Agenda Item C. Monthly Project Status Reports**

1. Education Center – No report
2. Polar Passage/Primate Forest/Rhino
3. Interpretive Experience – No report
4. Percent-for-Art
5. Electrical Infrastructure
6. Close-out project: Tree mitigation – No report





## Oregon Zoo Bond Project Status Report Polar Passage/Primate Forest/Rhino

Oregon Zoo Bond  
Citizens' Oversight  
Committee Meeting  
  
Sept. 12, 2018  
Agenda item C-2

<b>Project Title:</b> Polar Passage/Primate Forest/Rhino	<b>Project Manager:</b> Jim Mitchell
<b>Reporting Period #032/Status Date:</b> August 30, 2018	<b>Project Manager Phone:</b> 503-914-6025
<b>Architect/Engineering Design Consultant:</b> CLR Design	<b>Construction Manager/General Contractor:</b> Lease Crutcher Lewis (LCL)
<p><b>Polar Passage Project Description:</b> The new polar bear habitat is needed to increase access to natural substrate; increase the efficiency of the water-filtration system; reduce temperatures; chill the pool water; and increase both land and pool space. Construct modern natural holding areas with better lighting and ventilation, allowing better care for the animals. Space requirements, water quality and housing conditions will meet or exceed the Manitoba Protocols established for zoo polar bears. New utilities will complete the system upgrade installed with previous bond-funded projects. Guest services will be enhanced at the new central plaza.</p>	
<p><b>Primate Forest/Rhino Project Description:</b> The current schematic design demolishes the existing building (except for the newer Red Ape Reserve) and rebuilds on the current primate site for chimpanzees. Orangutans will live in the existing Red Ape Reserve. The Metro Council approved the project scope modifications on March 16, 2017. Rhino habitat: Remove the hippo dump-and-fill pool, remove the barrier between the rhino/hippo habitats and re-grade both habitats for rhino use only.</p>	

### Status at a Glance

Status Item	On Track	Caution	Off-track
Budget		X	
Schedule and signoffs		X	
Deliverables	X		

#### LEGEND:

	Moving along nicely, no significant concerns at this time.
	Must be addressed or may be escalated to off-track mode.
	Causing significant impact to the project.

### Design and Construction Schedule

START DATE		COMPLETION DATE	
ESTIMATED	CONTRACT	ESTIMATED	SUBSTANTIAL COMPLETION
05/2016	6/2016	06/2020	TBD

### Project Budget and Expenditures

ORIGINAL BASELINE	REVISED BASELINE	COSTS TO DATE OF STATUS	ESTIMATE AT COMPLETION	ESTIMATED BUDGET VARIANCE
\$34,348,074	\$43,802,256*	\$3,553,933	\$43,802,256	\$0

\*On Feb. 4, 2016, the Metro Council approved the bond team's recommendation to increase the Polar Passage project budget by \$2.6 million to cover escalation costs exceeding the original estimated escalation.

On March 16, 2017, the Metro Council approved additional bond fund resources increasing the Polar Passage project budget by \$3,248,334 (\$2,200,000 from OZF and 1,048,334 from the program contingency) and increased the Primate Forest/Rhino project budget by \$2,605,848 to offset escalation costs.

On April 6, 2017, the Metro Council approved an exemption to competitive procurement by combining Polar Passage and Primate/Rhino projects under the existing design and Construction Management/General Contractor contracts to save an estimated \$1.3 million in construction costs. Project budgets and schedules have been combined.

In August 2017, the Nancy Parr estate donation of \$237,333 for Primate Forest was added to the project budget.

On October 5, 2017, OZF approved \$750,000 (including the \$237,333 Nancy Parr estate donation) for Primate Forest and \$250,000 for Rhino.

On April 5, 2018, OZF approved redirecting \$500,000 previously committed for Polar Passage maternity den (which will not be built in this phase) to fund the rhino habitat project in total, \$750,000. Bond funds previously allocated for the rhino project will be redirected to the Polar Passage project.

### Critical Issues

Schedule: The construction schedule in Status at a Glance is showing a “caution” due to the following:

- Unknown timeline related to permit review on the main project. Recent estimates are six to seven months; the construction schedule is showing five months.
- Schedule delays due to the estimates coming in over budget, efforts and timeline to reconcile the estimates and value engineering process.
- The budget continues to challenge the team, and staff may be seeking approval to utilize a portion of the program contingency funds to cover the apparent deficit.

### Summary Status

Milestones/deliverables/information items for this reporting period:

- The 50 percent construction document estimates have been reconciled between the general contractor and design team cost estimators to within 3.3 percent, which is an acceptable variance.
- After additional value engineering, the project cost estimate is currently \$2.3 million over the current budget.
- The teams continue to value engineer the project as design is proceeding to 100 percent construction documents.

Construction progress:

- Construction crews are working on installing new utility connections to the Red Ape Reserve building in preparation for severing it from the Primate building.
- Demolition crews are removing the wild pig building.

Planned milestones/deliverables/information for the next reporting period:

- Design Workshop #14 is scheduled for September 11-13, and will be the final design workshop.
- The overall project schedule is being reviewed, and the Substantial Completion date may be extended.
- Submit the Type II Amendment to the Conditional Use Master Plan to the City for review.
- Finalize plans for permit submission to the City on September 27.
- The main project bid package is scheduled for late October.
- A demolition party is scheduled for Tuesday, Oct. 16 to celebrate the start of construction.



## Oregon Zoo Bond Project Status Report Percent-for-Art

Oregon Zoo Bond  
Citizens' Oversight  
Committee Meeting  
  
Sept. 12, 2018  
  
Agenda item C-4

<b>Project Title:</b> Percent-for-Art	<b>Project Manager:</b> Kate Giraud
<b>Reporting Period #79/Status Date:</b> August 31, 2018	<b>Project Manager Phone:</b> 503-548-2677
<b>Project Description:</b> Metro Council Resolution 11-4282 approved the recommendation to use the Percent-for-Art funds for zoo bond program programmatically rather than on a project-by-project basis. This enables a more strategic approach to the selection and installation of public art at the zoo and leverages the monies to greater effect for the public and the campus.	

### Status at a Glance

Status Item	On Track	Caution	Off-track
Budget	X		
Schedule and signoffs	X		
Deliverables	X		

#### LEGEND:

	Moving along nicely, no significant concerns at this time.
	Must be addressed or may be escalated to off-track mode.
	Causing significant impact to the project.

### Project Schedule

START DATE		COMPLETION DATE	
BASELINE	REVISED	BASELINE	REVISED
n/a	10/1/09	n/a	6/25/20

### Project Budget and Expenditures

BUDGET BASELINE	COSTS TO DATE OF STATUS	ESTIMATE AT COMPLETION	ESTIMATED BUDGET VARIANCE
\$843,154*	\$737,297	\$843,154	\$0

\*Budget baseline includes \$20,000 from an Oregon Cultural Trust grant and \$30,000 donated by the Oregon Zoo Foundation to help fund the Willard Martin Mosaic restoration and reinstallation efforts.

### Critical Issues

None at this time.

### Summary Status

Milestones/deliverables/information for this reporting period:

- The restoration of the "Survival" totem pole has been completed by artist Ray Losey.
- Edwin and Veronica Dam de Nogales, the commissioned artist team for Polar Passage, will complete the aluminum casting through September and ship the pieces to the Oregon Zoo.
- Zoo staff is continuing to identify a location to reinstall the final Warren Iliff sculpture garden elephant piece on zoo grounds.

Planned milestones/deliverables for the next reporting period:

- The percent-for-art monthly reporting will be suspended until there is an update to provide.



## Oregon Zoo Bond Project Status Report Electrical Infrastructure

Oregon Zoo Bond  
Citizens' Oversight  
Committee Meeting  
  
Sept. 12, 2018  
  
Agenda item C-5

<b>Project Title:</b> Zoo Electrical Infrastructure	<b>Project Manager:</b> Jim Mitchell						
<b>Reporting Period #15/Status Date:</b> August 31, 2018	<b>Project Manager Phone:</b> 503-914-6025						
<b>Architect/Engineering Design Consultant:</b> Sazan Group Engineering	<b>Construction Manager/General Contractor:</b> High Point Construction, Tice Electric						
<p><b>Project Description:</b> The Electrical Infrastructure project replaces two outdated emergency power generators and associated electrical infrastructure critical to servicing animal areas and supporting animal and guest safety. It includes six subprojects – each with its own scope, schedule and budget – that are being managed by zoo Facilities Management and paid with zoo bond funds, per a signed Memorandum of Understanding with the zoo bond program. The final two projects are being overseen by the zoo bond construction manager, due to their complexity and scale:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1. Lower Service Road Feeders</td> <td style="width: 50%;">4. Animal Nutrition Center Panel Replacement</td> </tr> <tr> <td>2. Roundhouse Automatic Transfer Switch</td> <td>5. Middle Service Road Feeders</td> </tr> <tr> <td>3. AfriCafé Panel Replacement</td> <td>6. Generator Replacement</td> </tr> </table> <p>This project was added to the bond program by the Metro Council on March 16, 2017.</p>		1. Lower Service Road Feeders	4. Animal Nutrition Center Panel Replacement	2. Roundhouse Automatic Transfer Switch	5. Middle Service Road Feeders	3. AfriCafé Panel Replacement	6. Generator Replacement
1. Lower Service Road Feeders	4. Animal Nutrition Center Panel Replacement						
2. Roundhouse Automatic Transfer Switch	5. Middle Service Road Feeders						
3. AfriCafé Panel Replacement	6. Generator Replacement						

### Status at a Glance

Status Item	On Track	Caution	Off-track
Budget		X	
Schedule and signoffs		X	
Deliverables	X		

#### LEGEND:

	Moving along nicely, no significant concerns at this time.
	Must be addressed or may be escalated to off-track mode.
	Causing significant impact to the project.

### Design and Construction Schedule

START DATE		COMPLETION DATE	
ESTIMATED	CONTRACT	ESTIMATED	CONTRACT
9/1/16	various	12/17/18	10/31/18

### Project Budget and Expenditures

ORIGINAL BASELINE	REVISED BASELINE	COSTS TO DATE OF STATUS	ESTIMATE AT COMPLETION	ESTIMATED BUDGET VARIANCE
\$1,500,000	\$1,500,000*	\$616,995	\$1,500,000	\$0

\*In March 2018, the project budget and estimate at completion were updated to reflect the removal of \$576,600 in resources from Portland General Electric; this amount was previously added to fund upgrades to zoo generators for Dispatchable Service Generation participation, but DSG costs exceeded the project budget and DSG was removed from the project scope.

### Critical Issues

- **Budget:** The budget shows caution due to the low contingency of 6 percent, and unknown amount of damaged underground electrical conduit which will need to be replaced to pull new feeders.
- **Schedule:** The generator supplier has not confirmed an assembly or shipping date. The current schedule shows delivery and installation of the generator October 25 and the project completing December 17, 2018.

### Summary Status

Milestones/deliverables/information for this reporting period:

- The contractor is pressing the generator supplier for an estimated delivery date, but so far has received limited information from the supplier on delivery.

## Electrical Infrastructure

- Zoo Facilities Management continues to manage the generator replacement and middle service road feeders project (now combined), with oversight from the zoo bond Construction Manager Jim Mitchell, due to the project complexity and scale.

Planned milestones/deliverables/information for the next reporting period:

- The contractor is scheduled to investigate the damaged underground conduit runs on September 4.



**Oregon Zoo Bond Program**  
 Project Status and Financial Information at a Glance  
 Expenditures and Revenue through July 2018

Oregon Zoo Bond  
 Citizens' Oversight  
 Committee Meeting  
 Sept. 12, 2018  
 Agenda item D

Program Budgets and Expenditures						Project Budgets	Zoo Bond Fund Expenditures	Nonbond Fund Expenditures	Total Project Expenditures	Project Forecasted Total Expenditures
<b>Construction Projects</b>										
Veterinary Medical Center	Pre-Schematic Design	Design Development	Construction Docs	Contracting	Construction	\$ 9,464,299	\$ 8,840,329		\$ 8,840,329	\$ 8,840,329
Penguin Life Support System	Complete	Complete	Complete	Complete	Complete	\$ 1,800,000	\$ 1,762,250		\$ 1,762,250	\$ 1,762,250
Water Main Building	Complete	Complete	Complete	Complete	Complete	\$ 267,459	\$ 242,495		\$ 242,495	\$ 242,495
Elephant Lands	Complete	Complete	Complete	Complete	Complete	\$ 57,561,443	\$ 54,147,246	\$ 3,260,000	\$ 57,407,246	\$ 57,407,246
Condors of the Columbia	Complete	Complete	Complete	Complete	Complete	\$ 2,628,592	\$ 2,215,609		\$ 2,215,609	\$ 2,215,609
Remote Elephant Center					Project Eliminated	\$ 117,864	\$ 39,672	\$ 78,191	\$ 117,864	\$ 117,864
Education Center	Complete	Complete	Complete	Complete	Complete	\$ 17,699,157	\$ 15,794,971	\$ 1,613,343	\$ 17,408,314	\$ 17,482,791
Polar Passage/Primate Forest /Rhino	Complete	Complete	75%	Complete		\$ 43,802,256	\$ 3,553,055	\$ 878	\$ 3,553,933	\$ 43,802,256
Electrical Infrastructure					41%	\$ 1,500,000	\$ 616,995		\$ 616,995	\$ 1,500,000
Close-out Contingency						\$ 1,000,000	\$ 24,104		\$ 24,104	\$ 1,000,000
<b>Interpretives</b>										
Program Interpretive Experience	Condors Interp.	Elephants Interp.	Wayfinding			\$ 2,766,640	\$ 2,204,418	\$ 301,993	\$ 2,506,410	\$ 2,766,640
	Complete	Complete	95%							
<b>Percent-for-Art</b>										
One-Percent-for-Art Requirement	VMC Art	Art Program Planning	East Plaza Art	West Plaza Art	Central Plaza Art	\$ 843,154	\$ 687,297	\$ 50,000	\$ 737,297	\$ 843,154
	Complete	Complete	Complete	Complete	80%					
<b>Planning Projects</b>										
Comprehensive Capital Master Plan	Proposals Submitted	Contract Award	Interim Reports	Final Deliverables	Close-out	\$ 1,850,000	\$ 1,691,504		\$ 1,691,504	\$ 1,691,504
Stormwater/ Wastewater Analysis	Complete	Complete	Complete	Complete	Complete	\$ 160,000	\$ 159,979		\$ 159,979	\$ 159,979
Stormwater Minor Projects & Campus Surv	Complete	Complete	Complete	Complete	Complete	\$ 386,797	\$ 386,797		\$ 386,797	\$ 386,797
<b>Land Use Processes</b>										
Land Use – New CUMS	Project Scope and Baselines	Technical Studies and Application	Public meetings	Submit CU MS to City for Approval	Land Use Approval Process	\$ 796,785	\$ 816,777		\$ 816,777	\$ 816,777
Land Use – Amended CUMS	Complete	Complete	Complete	Complete	Complete	\$ 110,429	\$ 142,617		\$ 142,617	\$ 142,617
<b>Program Administration</b>										
Program Administration, Metro Central Support and Bond Issuance						\$ 7,200,000	\$ 5,873,125		\$ 5,873,125	\$ 7,200,000
Unallocated Program Contingency										\$ 3,680,482
Unallocated Program Contingency										\$ 3,680,482
<b>Expenditure Totals</b>							\$ 99,199,239	\$ 5,304,405	\$ 104,503,644	\$ 152,058,788

Program Resources	Expected Amount	Zoo Bond Fund Revenues Received	Nonbond Revenues Received	Total Revenues Received/Issued	Funds Not Yet Received
General Obligation Bonds, premiums and interest - Note 1	\$ 142,696,320	\$ 142,621,002		\$ 142,621,002	\$ 75,318
Oregon Zoo Foundation	\$ 7,918,000		\$ 6,018,000	\$ 6,018,000	\$ 1,900,000
Grants, donations, rebates and partner investments	\$ 1,444,469		\$ 1,059,135	\$ 1,059,135	\$ 385,334
<b>Resource Totals</b>	<b>\$ 152,058,788</b>	<b>\$ 142,621,002</b>	<b>\$ 7,077,135</b>	<b>\$ 149,698,137</b>	<b>\$ 2,360,652</b>

Reports will show newly added items for two months' reports:  
 Note 1 - In May 2018, Metro received \$1,784,345 bond premium on the sale of the final \$10 million in bonds.



**PROJECTS SCHEDULE**  
**Oregon Zoo Bond Program**  
 As of August 24, 2018

Oregon Zoo Bond Citizens'  
 Oversight Committee Meeting  
 Sept. 12, 2018  
 Agenda item E

Task Name	Start	Finish	2018				2019				2020					
			Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3			
<b>Consolidated Bond Program Schedule</b>	10/1/09	8/13/20														
<b>Water Main Building</b>	10/26/09	7/29/11														
<b>Veterinary Medical Center</b>	11/12/09	1/24/12														
<b>Land Use Permits</b>	3/16/10	1/28/13														
<b>Comprehensive Capital Master Plan</b>	6/2/10	11/3/11														
<b>Penguinarium Filtration</b>	11/1/10	2/29/12														
<b>Condors of the Columbia</b>	7/25/12	3/4/14														
<b>Elephant Lands</b>	11/7/11	12/7/15														
<b>Percent for Art</b>	10/1/09	6/25/20	[Red bar spanning from Qtr 1 2018 to Qtr 3 2020]													
VMC Commissioned Art	10/1/09	1/24/12	[Red bar from Qtr 1 2018 to Qtr 1 2019]													
Art Conservation/Remove-Relocate Art	5/16/12	6/30/18	[Red bar from Qtr 4 2018 to Qtr 4 2019]													
Major Art Commission #1 (Elephant Lands)	5/13/13	9/30/15	[Red bar from Qtr 3 2018 to Qtr 2 2019]													
Major Art Commission #2 (Education Center)	4/1/14	11/30/16	[Red bar from Qtr 4 2018 to Qtr 3 2019]													
Major Art Commission #3 (Polar Passage)	3/1/16	6/25/20	[Red bar from Qtr 4 2018 to Qtr 3 2020]													
<b>Interpretive Experience</b>	3/19/12	4/26/19	[Purple bar from Qtr 3 2018 to Qtr 4 2019]													
Interpretive Roadmap	3/19/12	9/30/12	[Purple bar from Qtr 3 2018 to Qtr 3 2018]													
Condors of the Columbia Interpretives	6/14/12	3/7/14	[Purple bar from Qtr 2 2018 to Qtr 1 2019]													
Elephant Lands Interpretives	6/25/12	11/13/15	[Purple bar from Qtr 2 2018 to Qtr 4 2019]													
Wayfinding Design/Solicitation	3/17/14	12/31/15	[Purple bar from Qtr 4 2018 to Qtr 3 2019]													
Wayfinding Construction/Install Pylons/4 Kiosks	1/2/16	6/28/17	[Purple bar from Qtr 1 2019 to Qtr 2 2019]													
Wayfinding Install Central Plaza Kiosk; Post-construction	3/4/19	4/26/19	[Purple bar from Qtr 2 2019 to Qtr 2 2019]													
<b>Education Center</b>	3/21/13	6/30/17	[Blue bar from Qtr 1 2018 to Qtr 4 2018]													
Early Demolition	3/21/13	6/12/13	[Blue bar from Qtr 1 2018 to Qtr 1 2018]													
RFP Design	1/21/14	4/18/14	[Blue bar from Qtr 4 2018 to Qtr 4 2018]													
Design	4/21/14	9/11/15	[Blue bar from Qtr 4 2018 to Qtr 3 2019]													
Construction	9/15/15	12/28/16	[Blue bar from Qtr 4 2018 to Qtr 4 2018]													
Post Construction	12/29/16	6/30/17	[Blue bar from Qtr 4 2018 to Qtr 3 2019]													
<b>Polar Passage/Primate Forest/Rhino</b>	2/9/16	8/13/20	[Light blue bar from Qtr 1 2019 to Qtr 3 2020]													
RFP Design	2/9/16	6/20/16	[Light blue bar from Qtr 1 2019 to Qtr 1 2019]													
Polar Passage Design	6/21/16	5/13/18	[Light blue bar from Qtr 2 2019 to Qtr 2 2019]													
Primate Forest/Rhino Design	11/17/16	8/31/18	[Light blue bar from Qtr 4 2018 to Qtr 3 2019]													
Construction	6/4/18	6/19/20	[Light blue bar from Qtr 2 2019 to Qtr 3 2020]													
Post Construction	6/22/20	8/13/20	[Light blue bar from Qtr 3 2020 to Qtr 3 2020]													
<b>Electrical Infrastructure</b>	10/18/16	12/17/18	[Dark blue bar from Qtr 4 2018 to Qtr 3 2019]													