

# the Outlet



Spring 2015

A FEW WORDS FROM THE PRESIDENT

## President's Message

By Mark Fisher



I just celebrated my nine year anniversary as a part of the Cincinnati Zoo team. I swear it feels like I started two years ago. Time flies when you are either, one busy, or two having fun. Fortunately for me, it has been both. I just wrapped up a tour of a few zoos that I have never been to, pushing the number of AZA institutions visited to

fifty-five. I have looked behind the curtain, lifted the hood, and peeled back the layers of the onion at most of these institutions and have learned a few things along the way about how different places operate and the role that the facilities team plays. Each institution is different and unique, but there are a few constants. One of those constants that I would like to cover is the issue of sustainability. What I have found is the overall quality and depth of an institutions sustainability program is directly proportional to the quality, attitude, and commitment of that institution's facilities team.

Whenever I see a zoo or aquarium that has a robust commitment to operating its facility in a manner that is consistent with its mission of conservation, I also see a facilities team that is committed to excellence. I see dedicated, passionate people that are not only focused on doing things right, but as importantly, doing the right thing.

It is not the director, or the education department, or anyone else. It is the facilities department. The reason is obvious when you think about it. At the end of the day, 95% of solutions to true conservation efforts are rooted in being less wasteful of our

natural resources; using less water, using less energy, disposing of less trash, etc. Also, the keys to reducing waste comes down to the way that we design, build, and maintain our built environment. Who is the heart and soul of the built environment in our industry? That would be us!

I am always so impressed with the intelligence, creativity, and common sense of our peers. The vast majority of the time, we already have the answers to the problems. We already know what and how. Mostly, we just need to get out of our own way. Too many times, the attitude is "my boss won't let us do that" or "but we have never done something like that here". Those are self-inflicted wounds. If you have a good idea and you spend some time working on the presentation of that idea to the right people, you would be surprised how easy it is to get to "yes". What better group to seek out advice or help than the AZFA? I can say with confidence that just about any sustainability related project that you are thinking about has been done before, usually by multiple institutions. All you need to do is reach out and network.

In Cincinnati, we have an extremely aggressive sustainability program, and one of the reasons is that myself and my team are always looking outward, watching and learning from others, and seeking input and understanding. In fact, the very latest effort we are focused on is a 100% conversion to LED lighting across the zoo. Thanks to several discussions with Andy Peterson and Point Defiance Zoo, we finally found a fixture that will work well for us at our Manatee Exhibit. I am constantly bouncing ideas off of Bob Wengel at Shedd Aquarium, if for no other reason than I respect his opinion and his experience when it comes to operating a facility at a very high level. There are dozens of other examples of people that I have gotten to know very well through the AZFA that have helped me and my team push our institution to places we never dreamed of.

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# Chateau Red Panda

By John Kanzia

I discovered this gem of a project one day last summer while I was walking back to my office from a meeting. We had just recently hosted the mid-year meeting, and I had a chance to see some of the really cool stuff that our Exhibits Shop had been working on. The Exhibits Shop bay door was open, and I saw a gigantic steel thing of beauty on a couple of sawhorses. I stopped in to ask what it was and the Exhibits team was more than happy to tell me about it. Over the summer, I brought Zoo Camp groups by the shop each week to check out the project on our way from Stingray Bay to the Animal Hospital. The campers enjoyed seeing the project, and the craftsmen and women enjoyed the recognition. I encourage you all to check out what your fabricators are doing; there is probably some really awesome stuff going on! Here is what I found out about the project from the craftsmen that are working on it:

Early in 2014, our talented crew of exhibit fabricators, welders, and carpenters were given the task of designing and building a tree with built-in enrichment for Red Pandas (*Ailurus fulgens*) for our new Wild Encounters exhibit, which opens on July 1st, 2015.



Clay tree model

They began by building a miniature clay model of what the tree might look like. Once the design was agreed upon by the Facilities (Exhibits, Carpenter, and Weld Shops) and Animal Programs staff, the Facilities staff then had to figure out how to go about building it. In order to stand up to the elements and support the sheer weight of the structure and branches the frame would need to be fabricated out of reinforced steel I-beams and box beams to prevent flexing and torqueing, which would then be wrapped in rebar and wire mesh to give the tree trunk and branches their basic shape. Next, a gunnite skin would be applied and textured with tree bark rollers (yes, they actually make those for concrete) and by hand to look like bark before it was painted. Scaling up the miniature model, they sketched out the tree so they would know how big it would be and how about much material they would need.

The tree would measure approximately fifteen feet tall and thirty feet wide. Our shops are relatively big, but not that big, so each branch was welded individually, sent to the Exhibits Shop for tip meshing, and then moved to the construction site to be welded onto tree.



Box feeder construction

The tree also needed to incorporate automated feeders to keep the pandas active, searching the nooks and crannies for food. After all, providing animals with more naturalistic environments also encourages more naturalistic behaviors. Since what they wanted was not readily available, the feeders would also need to be fabricated. Three types were designed and built; a robust box-type feeder that holds a cup of food that would be mounted inside horizontal branches, a cylindrical feeder for the simulated knot holes in the tree, and a large feeder in the center of the tree containing a clockwork movement that would slowly dispense whatever was loaded into it near the base of the tree. The box-type feeders incorporate an electronic door lock mechanism and a spring to open the feeder door; talk about "thinking outside the box"! The Animal Programs staff ultimately wanted to have the ability to make the feeders open randomly. Initially, all of the feeder locations will be open to give the animals time to figure out where to find food on the tree. After a couple of weeks keepers will switch things up to encourage foraging behavior and begin closing the feeders so the pandas would need to start inspecting the tree to find out which feeders were open and when.



Box feeder ready for installation

As you might imagine, a massive amount of pre-planning was done to design the concrete pad and “trunk” of the tree so it would support the weight of the completed product, as well as designing the tree to be interesting to the animals, yet accessible for the animal keepers to get in to do maintenance and reload the feeders. Construction is currently underway, and the new Wild Encounters exhibit will be open when we host the conference next fall. If you are able to attend you will have the opportunity to see this unique tree, the shops that it was built in, and network with the very talented staff that designed and built it.



Cylinder feeder



Welding the last piece onto the frame



Red Panda tree branch



Red Panda tree (clockwork feeder in center)



Box feeders in branch

# Clark Waldram Fund Update

By Allmon Forrester

The Conservation Committee was very excited to receive five applications for the Clark Waldram Fund. It is cool to see the conservation work that is being done within our organizations and throughout the world and that the AZFA was sought out as a potential funding source for projects is great.

The Conservation Committee did an outstanding job evaluating each application and although many of the applications sparked interest, two were selected to bring to the Board at the mid-year meeting for support. Stay tuned until the annual conference in Chicago to hear about the exciting projects that were funded.

That being said, it is not too late to reach out to your organization or others you feel could benefit from the support of the Clark Waldram Fund. The Conservation Committee will be evaluating applications that are received this summer. If you hear of someone in your organization that has a conservation project that needs a little funding steer them to the AZFA website. They can also contact me directly if they have questions about the Clark Waldram Fund - aforrester@jbzoo.org.

Conservation is at the core of all our organizations and it is awesome that AZFA can play a role in this worthwhile endeavor.



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# AZFA 2015 Mid-Year Board Meeting Point Defiance Zoo & Aquarium, Tacoma, WA

By **Samanthe Peterson**

The following officers and committee chairpersons gathered in Tacoma, Washington on April 20th and 21st for the mid-year Board meeting: Mark Fisher (President), John Kanzia (Vice President), Rudy Castaneda (President Elect), Mike Patera (Treasurer), Grace Rettig (Secretary), Stan Chapin (Director at Large), Andy Peterson (Director at Large), Allmon Forrester (Conservation Committee), Adam Malstaff (Commercial Liaison), Bob Gluth (Commercial Liaison), Joe Graber (Membership Committee), and Jennifer Birdseye (Conference Committee).

John Kanzia is well underway with preparations for the annual conference in Chicago this October and has posted hotel and registration information on the website. There are eighteen educational sessions confirmed so far for the program on topics like CMMS, biodiesel, housekeeping, sustainability, and workshops on welding and enrichment prop fabrication. Other planned offerings will include professional development, OSHA certifications, and emergency preparedness. An agenda will be available soon on the website.

Other Board business focused on improving the efficiency and stability of the organization. To that end, several bylaws changes will be drafted to consolidate committees and to create a Treasurer-Elect position that facilitates seamless oversight of AZFA finances from year to year. These changes will be submitted to the membership via e-mail and The Outlet for voting prior to the October conference.

The Board would like to thank Point Defiance Zoo & Aquarium for hosting the meeting and providing tours of their facility. Several members of the group were also able to visit Woodland Park Zoo in Seattle and are grateful for their hospitality.

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## Introducing The Green Scene

By Fia Cifuentes

Knowing and understanding that how we build, operate, and manage our buildings within our institutions counts for 85% of our carbon footprint, it was decided it was time to have a feature in The Outlet to keep our members inspired and informed about sustainability practices within our institutions. One such story is ours at the Cincinnati Zoo & Botanical Garden.

As the second oldest zoo in the country, the Cincinnati Zoo & Botanical Garden's green initiatives prove that old infrastructure can be turned around into a green, efficient, and sustainable operation. Our sustainability program has resulted in millions of dollars in utility savings, a plummeting carbon footprint, a culture shift among our staff and community, and a reputation as a national leader in sustainability through green building, solid waste management, renewable energy, water conservation, storm water management, energy efficiency, and community outreach.

On grounds, we walk the walk, by greening our operations at every turn:

- By fixing leaks, installing low-flow fixtures, upgrading filtration systems, and changing behavior, we have reduced our water consumption from 220 million gallons of water per year to 52 million gallons in just 9 years, saving over 5 million dollars and 1 billion gallons of water in the process.
- Using pervious pavement, rain gardens, green roofs, and catchment systems, we capture more than 15 million gallons of stormwater to use in irrigating gardens, recharging groundwater, and supplying water features in exhibits; all while preventing it from going into the sewer system.
- Despite adding 25% more building square footage in the past five years, we have reduced energy use by more than 10%.
- Our main parking lot features a 1.56 MW solar canopy, at the time of installation, the largest, publicly accessible array in the nation, providing 22% of the Zoo's total electric needs. We also harness renewable energy from wind and geothermal in our Vine Street Village Main Entry and from more solar panels in our Go Green Garden and Education Center.
- We have publicly committed to building all new projects to LEED standards, recognizing that the majority of our carbon footprint lies in the way we build, manage, and maintain our buildings. With 6 certified projects and another underway, we have more LEED projects than any other zoo in the nation.
- Committed to becoming a zero landfill facility with less than 1% of our waste stream going to the landfill, we recycle, reduce, and compost as much of our waste as possible. Eight to ten tons of organic waste is composted every five days. Options to compost and recycle are available all over the park, and we have established a green purchasing policy that allows us to reduce consumption and use more recyclable/compostable materials than ever.
- Our zoo is located in the Avondale neighborhood, a nationally recognized food desert. We understand the need and importance of local food for our guests, our animals, and our community. Our organic EcOhio Farm in Warren County grows 100+ acres of food for our animals and our region in partnership with Green BEAN Delivery. Green BEAN has been an incredible partner, working with us to support community needs and projects. On grounds, our food partner, Service Systems Associates (SSA) is committed to being as sustainable as we are. Next to the main restaurant, a new greenhouse supports an aquaponics system and grows fresh produce for the catering and restaurant kitchens. Edible food gardens all over the zoo grow produce for animal enrichment, as well as for use in our restaurants.
- Our commitment to local food is so strong that we worked with SSA to certify the Base Camp Café as a green restaurant. In spring of 2013, the Green Restaurant Association officially certified it as the greenest restaurant in the United States.
- We continue to push the envelope and green every part of our organization, including special events. For example, from our largest fundraiser of the year, Zoofari, a major percentage of waste was composted or recycled. Our 5k Cheeta Run has become a green certified race, the third in Ohio.
- We consistently engage the public in sustainability at key zoo exhibits including the Go Green Garden. During the summer, Green Teen volunteers are stationed in this exhibit, offering tours, and answering questions about the zoo's green initiatives as well as teaching guests how they can go green. Tours, talks, and other green programs are also offered.

The Cincinnati Zoo also takes action to promote sustainable living, strengthen relationships, and support the local Avondale community. As just a few examples, the Zoo strives to:

- Empower the community by providing resources and tools needed to go green with initiatives that save money, save resources and instill pride in homes and neighborhoods
- Drive community greening and beautification through turning vacant lots into safe and vibrant parks and urban farms. Northern-Larona Community Park is one example of a vacant lot, just 2 blocks away from the Zoo, that we are helping to turn into a park
- Educate about the importance of buying local by helping create a community garden and community kitchen, creating a central location, Gabriel's Place, in Avondale for fresh, healthy and affordable food
- Initiate and support local schools in sustainability projects, including creation of greenhouses, composting programs and Green Teams

- Encourage home weatherization projects by providing education, awareness and resources needed for homeowners to save money, energy and create healthy, comfortable living environments
- Work with local businesses, such as Park+Vine, and organizations like Green Umbrella to encourage green practices throughout the region
- Collaborate with community partners like Habitat for Humanity to provide sustainable housing for our community, such as a LEED Platinum certified home
- Support and nourish our Avondale community through Thanksgiving meal donations, holiday toy drives, mentorship programs, and more
- Enhance wildlife habitat through reestablishment of a 24-acre wetland on our EcOhio Farm property

Our aggressive sustainability program has resulted in a transformation of our entire institution – aesthetically, financially, and culturally. This transformation could not have taken place without the commitment, drive, and passion of our staff at every level. The key has been a common sense, practical approach: innovating by pushing the envelope, not taking no for an answer, not making excuses, and using our leadership position to bring the issue of sustainability to the forefront to make positive changes in our community.

Fia Cifuentes is the Sustainable Communities Advocate at the Cincinnati Zoo & Botanical Garden. If you have a story to share in the Green Scene, please email her at [sophia.cifuentes@cincinnati-zoo.org](mailto:sophia.cifuentes@cincinnati-zoo.org).



Parking lot 1.56 MW solar canopy

## AZFA New Members

### Professional

Richard Adams, LSS Technician,  
Ripley's Aquarium of Canada

Susan Barton, Facilities Director,  
John G. Shedd Aquarium

Danny Carmichael, Facilities Director,  
Friends of the Zoo, Kansas City

Bill Davis, Facilities Maintenance Supervisor,  
The Phoenix Zoo

Dan Haugen, Physical Plant Director,  
Minnesota Zoo

Daniel Hodges, Technician,  
Jacksonville Zoo

Jimmy McGhee, Plumber,  
Tennessee Aquarium

David Muzia, Director of Facilities,  
Seattle Aquarium

Robert Rakoczy, Aquarium Maintenance Supervisor,  
Mote Marine Laboratory

### Professional cont.

Allen Schroeder, Maintenance Coordinator,  
Blank Park Zoo

Janine Tokarczyk, Husbandry Construction Supervisor/Animal  
Keeper Conservators' Center

Brad Walker, Facilities Coordinator,  
Jacksonville Zoo

### Commercial

Justin Holliday, Sales, Renewal Service, Inc.

### Associate

Edward Lawton President, Lawton & Assoc.

Leona Mitchell, Project Manager, Toronto Zoo

### Organization

John G. Shedd Aquarium, Bob Wengel, Vice President



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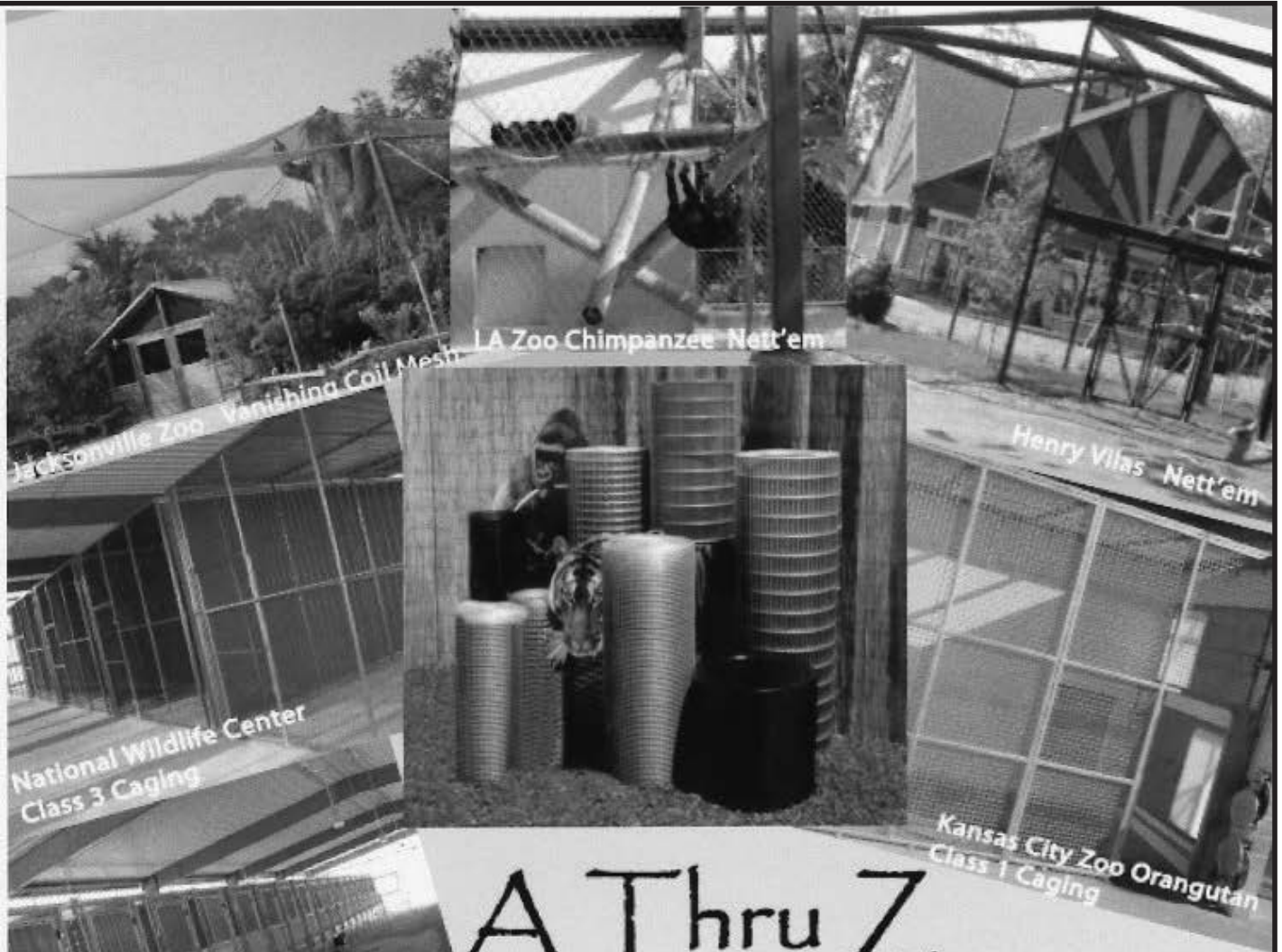
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# Calendar

Deadline for articles for the next newsletter: June 17th

# Publication Schedule

Summer Issue - July  
Fall Issue - October  
Winter Issue - January  
Spring Issue - April

# www.azfa.org

Don't forget to check out the AZFA website for updates and news.

Website Administrator  
John Kanzia, john.kanzia@czs.org

# Membership

Membership Administrator  
Samanthe Peterson, speterson@sazoocom

# Editor's Note

**By Jennifer Golden**

I would like to take a moment to express thanks to our Commercial Members who have supported The Outlet by advertising, and show appreciation to those who have found it beneficial to continue their advertisements this year.

Advertising in The Outlet is a great way for companies to target our unique group of professionals dedicated to the construction and maintenance of aquarium and zoo buildings, exhibits, and systems. The Outlet currently reaches hundreds of individuals at over 75 zoos and aquariums and our membership continues to grow!

If you are a Commercial Member interested in advertising rates please contact me at jgolden@zoonewengland.com.