

A FEW WORDS FROM THE PRESIDENT

## President's Message

By Allmon Forrester, Director of Facilities, Planning, & Sustainability, John Ball Zoo



It was on an honor to receive the gavel from Bob Wengel during the closing banquet of the 2017 AZFA conference in my home city of Grand Rapids, in front of my fellow co-workers and peers from around North America. It is humbling that this Association has entrusted me to continue the great work of so many

that have come before. I remember my first conference in Tacoma, WA in 2007, an awesome event that Stan Chapin and his team put on for us. As I was riding a bus up Mt. Rainer on a post conference trip with my wife Tania, across the aisle sat Bill Pawleki and his wife Diane. Bill went on and on about how great the AZFA was and how I should reach out to other zoos in my region in the coming year. I did not know then that I was being proselytized by one of the founding fathers of the AZFA. Fast forward to 2012 when Mark Fisher convinced me that signing up for the Conservation Committee was a great way to become more involved so my Director would send me to another conference. Then bingo, John Ball Zoo, conference host 2017. What a journey it has been.

### We Network. We Build. We Protect.

Looking forward to this upcoming year, how can our organization become more relevant to each other and to the AZA community? How can we help with the development of our peers in other zoos and aquariums? What is the best way to develop leaders within the AZFA? Can we pilot a program this upcoming year to try mentorship?

A common thread we all share when entering the zoo and aquarium world is that we did not have a clue of what we were in for. If I only had a senior member of this organization come to my facility for a couple of days to offer up some pointers and then be a direct source of contact, wow, that would have really helped me out. I briefly touched on this concept on opening day of the conference. For those that lead a team and are relatively new the zoo and aquarium world or those that are from smaller organizations and are challenged for resources, this might be exactly what you need. We have some current and past Board members that are in a position in their careers to come alongside folks in your organization and offer up their years of experience to those that need a little help. What this exactly looks like and what it may become I do not know. What I do know is that we care.

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Around the first of the year, we will officially launch this Mentorship Program. Until then feel free to reach out to me or anyone on the Board with ideas. It will be interesting to find out how useful this experiment may be while we try it out with two or three organizations this year.

We get a great conference high that we ride for a few weeks after it is over. How do how we continue this energy and continue to be more relevant to each other between conferences? Use whatever mode you prefer to stay connected all throughout the year; the forum, Facebook, email, phone, or text. As I look at the recent strides our organization has made in re-branding, membership, and great conference turn out, I can only hope we can continue this far into 2018.

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# The Green Scene

## Ice, Ice Baby!

By Mark Fisher, Vice President of Facilities, Planning, & Sustainability, Cincinnati Zoo

In 2011, the Cincinnati Zoo's facility team took on a heck of a task. How could we provide chilled water for our polar bears for the first time in the history of our Zoo and not totally break the bank both from a capital perspective, as well as an operating cost perspective? During the summer, our water temps would consistently reach into the upper 80's. This was obviously not an ideal situation. While there is no requirement via the USDA or the AZA in terms of a maximum temperature, it was clear that we needed to make some significant improvement.

In addition to the polar bear challenge we had a large sea lion pool that had a very old, beaten down chiller that was limping along trying to maintain 65 degrees. This chiller was over 30 years old. We also had a bird facility that had penguins and auklets which had a chilled water goal of 55 degrees that we were again struggling to maintain. There were several small, poorly engineered, and very old chillers feeding this facility. On hot days, our keeper staff had to haul in bags of ice, spending one to two hours each day to try and keep the temperatures down.

We approached this project from a larger view, looking at other, nearby facilities that utilized chilled water and decided to pursue a central chiller plant concept which would not only replace all the old clunkers, but would be upsized to provide some chilling for the polar bear pools. The goal was to get polar bear down to a maximum of 75 degrees during the hottest days. We also wanted to take a hard look at ice storage in an effort to keep our peak electric demand down and also reap the benefits of running the chiller at night, when it is cooler and the equipment runs more efficiently.

We ended up with an 80 Ton Daiken/McQuay air cooled chiller, matched with 540 Ton-hours of ice storage. There is a total of five heat exchangers and well over a thousand feet of piping. We decided to upsize the piping, make the equipment pads twice as big as they needed to be, and added quick connect flanges should we ever need to expand the system. The project cost was approximately \$600,000 including controls. The piping was the most extensive and expensive part of the project. We literally ran chilled water piping through basements, under roads, and down cave tunnels to get to the individual heat exchangers. We were able to tap a decent grant from Duke Energy for \$25,000 to help pay for the ice component specifically. \$600,000 is obviously a large sum of money, but if you look at what it would have cost to replace the chillers that had outlived their lifespan, and the cost of adding a standalone chiller just for the polar bear pool, I think it was a pretty reasonable cost.

We turned the system on in 2012, so we have had a solid 5 years of run time. Although we had some blips and bumps with the automation and controls, as it is a fairly complicated set up, I can say that the system is running as intended. We were able to knock 15 degrees off the polar bear water temperature and stabilize the temperatures for sea lion and penguins. Our peak demand and our kWh actually went down as well. That is pretty sweet right there. We were able to leverage our energy efficiency efforts to not only save

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Chiller

money and be less wasteful of our natural resources, but also provide better water for our animals. Oh yeah, and now, instead of our HVAC department having to maintain a half dozen, run down chillers, they have one newer chiller to maintain. Also, no more shoveling ice for our bird department. Everyone is happy, especially the polar bears.

This project has been so successful, we are actually finalizing the engineering on an expansion of the system, roughly doubling the capacity. We want to get another 10+ degrees out of our polar bear pool, add a little cooling to our new hippo exhibit to help the fish, and also add some redundancy to the system overall. We now look like really smart facility professionals when we can point out the forward thinking we had to spend money 5 years ago to make it easy for future expansion. In fact, I point that out to my boss on a weekly basis. Our intent is to have the expansion complete for next summer's heat wave.

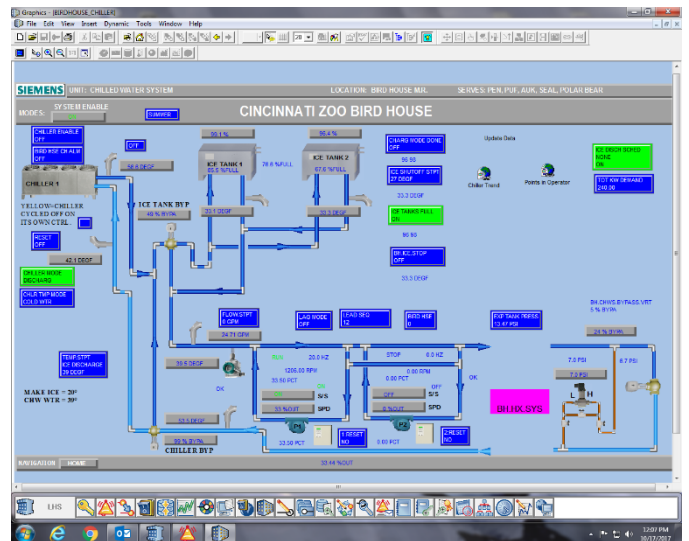
So, if you are looking to add some cooling or to upgrade an existing cooling system and you are worried about your peak demand and overall electricity usage, give ice storage a good look. Five years in and our team here in Cincinnati is officially a fan of ice storage technology!



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# 2017 Annual Conference

By Allmon Forrester, Director of Facilities,  
Planning, & Sustainability, John Ball Zoo

What happens when facilities folks from over 50 zoos and aquariums from 24 states, the District of Columbia, 3 provinces of Canada, and Bermuda come to Grand Rapids, MI? AZFA 2017!

I had a great time and I hope the attendees, vendors, and sponsors equally enjoyed the conference. The week started out a little soggy, but the rain clouds soon gave way to an awesome evening at Founder's Brewery for our Icebreaker. If you like beer, you like Grand Rapids.

The AZFA is much more than just the sharing of technical expertise. Our educational sessions were varied with members, vendors, and local talent offering up some outstanding content. Sessions included the response from San Antonio Zoo to hurricane Harvey zoo victims, Designing for an Autistic Audience, ADA Considerations, Environmental Concerns Around Plastics, Building the A Team, Making Safe Zoos Safer, and on, and on. We truly had a well-rounded program. Thank you to all those that lead and prepared a session.

If we placed an order with the weatherman for Zoo Day, we could not have asked for a more spectacular fall day in West Michigan. Behind the scenes tours, three workshops, the Funicular and Zip line rides that brought the kid out in all of us, filled the day. The night closed with the Banquet at the Amway Grand that raised over \$3,000 for the Clark Waldram Conservation Fund.

A big thank you to the folks at Binder Park Zoo for opening their doors for the post conference tour. Zoo Director Diane Thompson and Facility Manager Damon Hicks rolled out the red carpet for us showing what great things an AZA zoo can do without tax base funding.

A very, very special shout out to the sponsors and vendors. Without them, conferences would not be possible. Last but not least, you helped write another exciting chapter in the long list of great conferences we have shared over the years. When we get together, it is like seeing

family. Thank you all for coming and sharing and please share with your fellow co-workers what you learned. The best way to stay relevant and come to another conference is to continue to share all year long. Report back to other departments in your institution what they may find useful from what you saw or experienced and thank your organization for making arrangements to be able to send you to the AZFA conference. See you all in next year in Washington D.C.

## 2017 Conference - Media Coverage Links

Radio: WGUV Public Media Morning Show interview  
<http://wgvunews.org/post/aquarium-and-zoo-facilities-association-conference>

Print: Grand Rapids Business Journal write-up  
<http://www.grbj.com/articles/89118-john-ball-zoo-showing-best-practices-to-industry>

Television: Fox 17  
<http://fox17online.com/2017/10/17/840-guest-educational-conference-brings-staff-from-50-zoos-aquariums-to-gr/>



WGUV Morning Show

# 2017 Annual Conference



## New Members

### Professional

Casey Beck, Assistant Director of Engineering,  
Fort Worth Zoo

Nathan Bernhard, Manager Building Operations,  
The Calgary Zoo

John Borgmeyer, Exhibits Manager,  
Woodland Park Zoo

Carl Coker, Zoo Facilities Maintenance Supervisor,  
Alexandria Zoological Park

Dale Drozda, Life support/Electrician,  
John G. Shedd Aquarium

David Ferrell, Maintenance Apprentice,  
Alexandria Zoological Park

Marc Gautreau, Calgary Zoo

Marshal Hicks, Zoo Maintenance Tradesworker,  
Alexandria Zoological Park

Gary Hochthanner, Director of Physical Plant & Facilities  
Planning, Saginaw Children's Zoo

Charles (Joey) Jourdant, Facilities Manager,  
Virginia Aquarium and Marine Science Center

Nick Kaiser, Operator III,  
John G. Shedd Aquarium

James Mancari PE, Facilities Planning & Construction,  
North Carolina Zoo

Kenneth Paltl, Maintenance Technician,  
Bermuda Aquarium, Museum and Zoo

Brian Sawicki, Director of Park Design and Maintenance,  
The Living Desert

Derek Stough, Shop Lead,  
Brevard Zoo

Rachel Syracuse, Executive Assistant,  
Buffalo Zoo

Mark Whittaker, Facility Engineer,  
Bermuda Aquarium, Museum and Zoo

Thomas Yoder, Maintenance Associate,  
Potawatomi Zoo

### Organization

Matthew Utley, Director of Horticulture and Facilities,  
Tracy Aviary

Cynthia Wagner, Director,  
Potter Park Zoo/Ingham County

### Associate

Jerry Buckridge, Retired

### Commercial

Connie Bender, President,  
ShowEase Inc.

Darrin Honious, Sales Representative,  
YSI Inc.

Elizabeth Kavanaugh, Project Manager,  
Collidescape.org

Jeremiah Koch, Owner,  
Shine Glass Renewal

Jeff Koehn, Principal,  
IBI Group

Hari Kunduru, Founder,  
Zoptiks

Andy Pettit, Sales Manager,  
Timberline Live Pet Foods

Steve Rippe, General Manager,  
Techtron Engineering

Jason Stephens, Business Development Manager,  
Linkology USA

Bob Thompson, Vice President,  
Sign Guardian

Perry Tishgart, President,  
Champion Lighting and Supply Company

Bill Weaver, Vice President, Product and  
Market Development,  
Harrington Industrial Plastics



# Calendar

Deadline for articles for the next newsletter:  
January 15th

## Publication Schedule

- Summer Issue - July
- Winter Issue - January
- Fall Issue - October
- 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, sam.peterson@sazoo.org

## Editor's Note

**By Jennifer Golden, Operations Project Manager,  
Zoo New England**

I would like to take a moment to express thanks to our Commercial Members for their support throughout the year as well as during the annual conference.

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 100 zoos and aquariums and our membership continues to grow!

If you are a Commercial Member interested in advertising please contact me at [jgolden@zoonewengland.com](mailto:jgolden@zoonewengland.com)

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