Welcome to St. Louis, Missouri.

On behalf of the Saint Louis Zoo, I would like to welcome AZFA members and guests to the 17th Annual Conference. Please let us help make the most of your visit. Together, we have many speakers to challenge us, much work to do, special events to enjoy and important collaborations for the future.

Sharing new and innovative ideas, discovering new associates and vendor contacts, meeting longtime friends, working on green challenges, opportunities and strategies, all will make this a memorable time.

The Saint Louis Zoo is celebrating its 100-year anniversary. We look forward to the next 100 years, working with our colleagues around the world to sustain the rich biodiversity of our planet.

Jeffrey P. Bonner, Ph.D.
Dana Brown President & CEO
Saint Louis Zoo
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Cover photos by David Merritt and Robin Winkelman.
Bonner photo by Goldman
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<tbody>
<tr>
<td>7 - 10:30 a.m.</td>
<td>Board Meeting/Breakfast</td>
<td>Empire Room (Approx. 12 members)</td>
</tr>
<tr>
<td>8 a.m. - 6 p.m.</td>
<td>Conference Registration &amp; Info Booth</td>
<td>Chase Hotel Lobby</td>
</tr>
<tr>
<td>10 a.m. - 2 p.m.</td>
<td>Vendor Load In</td>
<td>Zodiac Room</td>
</tr>
<tr>
<td>10:30 a.m.</td>
<td>Depart Hotel</td>
<td>Board buses at Chase</td>
</tr>
<tr>
<td>10 a.m. - 2 p.m.</td>
<td>Vendor Load In</td>
<td>Zodiac Room</td>
</tr>
<tr>
<td>11 a.m. - 1:30 p.m.</td>
<td>Arrive Destination Tour/Wander – Rick Irwinn presentation on challenging exhibit installations.</td>
<td>City Museum</td>
</tr>
<tr>
<td>12 noon - 1 p.m.</td>
<td>Lunch on your own</td>
<td></td>
</tr>
<tr>
<td>1:30 p.m.</td>
<td>Depart City Museum</td>
<td>Board buses at City Museum</td>
</tr>
<tr>
<td>1:45 - 5:30 p.m.</td>
<td>Arrive at the Jefferson National Expansion Memorial Tour/Wander – Admission and movie ticket included, 50% off tram ride.</td>
<td>Jefferson National Expansion Memorial (AKA - Gateway Arch)</td>
</tr>
<tr>
<td>6 p.m.</td>
<td>Ice Breaker Buffet &amp; Band on the River – Depart for “Ice Breaker” down the stairs to riverfront – or ride shuttle for those not walking.</td>
<td>Becky Thatcher Riverboat – Blues Cruise</td>
</tr>
<tr>
<td>6 p.m.</td>
<td>Ice Breaker Group Photo</td>
<td>Arch Stairway or Boat Pic</td>
</tr>
<tr>
<td>6:30 - 9:30 p.m.</td>
<td>Ice Breaker</td>
<td>Riverboat Cruise &amp; Buffet Dinner</td>
</tr>
<tr>
<td>9:30 p.m.</td>
<td>Board Buses and Return to Hotel</td>
<td>Casino/Laclede's Landing/Arch Grounds</td>
</tr>
<tr>
<td>9:30 - ? p.m.</td>
<td>After Party – On Your Own</td>
<td></td>
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### Monday, October 4, 2010

<table>
<thead>
<tr>
<th>Time</th>
<th>Event/Kick-off</th>
<th>Location</th>
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<tbody>
<tr>
<td>6 - 8 a.m.</td>
<td>Breakfast on your own</td>
<td></td>
</tr>
<tr>
<td>8 a.m. - 4 p.m.</td>
<td>Registration</td>
<td>Chase Hotel Lobby</td>
</tr>
<tr>
<td>8:30 - 9:15 a.m.</td>
<td>Welcoming – Jeffrey P. Bonner, Ph.D., Dan Snyder &amp; Chris Vanskike Opening Remarks</td>
<td>Starlight Room</td>
</tr>
<tr>
<td>9:15 - 9:45 a.m.</td>
<td>Keynote Speaker – Thomas Taylor, Alberici Constructors, Inc./Vertigy LEED Buildings &amp; Construction</td>
<td>Starlight Room</td>
</tr>
<tr>
<td>9:45 - 10 a.m.</td>
<td>Break – Bottled beverages only</td>
<td>Zodiac Room</td>
</tr>
<tr>
<td>10 - 11:30 a.m.</td>
<td>Business Meeting – Summary Reports, President Report, Treasury Report, Nomination Ballots &amp; Ballot Box</td>
<td>Starlight Room</td>
</tr>
<tr>
<td>11:30 - 12 noon</td>
<td>Vendor Introductions</td>
<td>Starlight Room</td>
</tr>
<tr>
<td>12 - 1:30 p.m.</td>
<td>Lunch</td>
<td>Starlight Room</td>
</tr>
<tr>
<td>1:30 - 2:15 p.m.</td>
<td>Presenting Sponsor – Siemens Industry, Inc. <em>The Evolution of Mass Notification and Emergency Communications</em></td>
<td>Starlight Room</td>
</tr>
<tr>
<td>2:30 - 3:15 p.m.</td>
<td>Presenting Sponsor – PGAV Destinations <em>Best Green Practices for Construction and Renovation</em></td>
<td>Starlight Room</td>
</tr>
<tr>
<td>3:15 - 3:30 p.m.</td>
<td>Break – Bottled beverages only</td>
<td>Zodiac Room</td>
</tr>
<tr>
<td>3:30 - 4:15 p.m.</td>
<td>Ameren UE Utility Energy <em>Efficiency Best Practices</em></td>
<td>Starlight Room</td>
</tr>
<tr>
<td>3:30 - 4:30 p.m.</td>
<td>Workshop 01-1004 <em>Valve Type and Specification</em></td>
<td>Breakout Room A</td>
</tr>
<tr>
<td>3:30 - 4:30 p.m.</td>
<td>Workshop 02-1004 UV <em>Sterilizer Maintenance</em></td>
<td>Breakout Room B</td>
</tr>
<tr>
<td>3:30 - 4:30 p.m.</td>
<td>Workshop 01-1006 <em>ASTM D2855 Solvent Cementing Vinlys, PVC/CPVC Certification</em></td>
<td>Breakout Room C</td>
</tr>
<tr>
<td>4:15 - 4:30 p.m.</td>
<td>Introduction of Vendor's</td>
<td>Starlight Room</td>
</tr>
<tr>
<td>4:45 - 6:30 p.m.</td>
<td>Introduction of Vendor’s</td>
<td>Starlight Room (doors locked at 6:30 p.m.)</td>
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</tbody>
</table>
4:45 - 6:30 p.m.  Vendor Meet & Greet Trade Show  
Cash bar (1st drink free) & Appetizers  
Dinner on your own  
Zodiac & Starlight Room  
9 - 11 p.m.  Hospitality Suite Open  

Tuesday, October 5, 2010

6 - 8 a.m.  Breakfast on your own  
8:15 - 8:30 a.m.  Shuttles Depart Hotel Lobby  
8:45 a.m.  Welcome - David Jarvis  
9 a.m.  Workshop 01-1005  
AZA Fire Extinguisher Training  
Saint Louis Zoo Training Department  
9:15 - 11:15  Workshop 02-1005  
Train the Trainer Certification  
Program for Sit Down Counter Balanced Lift Trucks  
Wiese Planning & Engineering, Inc.  
10:30 - 11:30 a.m.  Workshop 03-1005  
Train & Ride Maintenance  
Ryan Jeffrey, Saint Louis Zoo  
10:30 - 12:30 p.m.  Workshop 07-1005  
OSHA Lockout – Tagout Certification  
Darrell Carmichael, Brady Corporation  
(Sponsored by Grainger Corporation)  
12 - 2 p.m.  Lunch on your own  
Employee discount applies for lunch  
Painted Giraffe (Employee Special $5.50)  
Lakeside Cafe (50% off)  
Food Stands (50% off)  
1 - 2:30 p.m.  Workshop 06-1005  
Hilti – Powder Actuated Tools  
Train the Trainer Certification  
Sean Cordes, Hilti  
1 - 3:30 p.m.  Workshop 04-1005  
Masonry Rockwork & Hot Vines  
Van Sauer, Saint Louis Zoo  
1 - 3:30 p.m.  Workshop 05-1005  
Acrylic Scratch Removal Demonstration  
Jerry Smith, American Sealants
<table>
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<tr>
<th>Time</th>
<th>Event Description</th>
<th>Location</th>
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<tbody>
<tr>
<td>1 - 5 p.m.</td>
<td><strong>Behind-the-Scenes Tours:</strong> Penguin &amp; Puffin Coast, Big Cat Country, Bird House, Herpetarium, River’s Edge, Mechanical, Children’s Zoo, Caribbean Cove and Jungle of the Apes.</td>
<td>Zoo Grounds</td>
</tr>
<tr>
<td>2 - 3 p.m.</td>
<td><strong>Workshop 08-1005</strong> Ozone PM &amp; Troubleshooting</td>
<td>Penguin and Puffin Coast - Ozone &amp; Filter Room</td>
</tr>
<tr>
<td></td>
<td>John Gaudaur – Ozone Water Systems, Inc.</td>
<td></td>
</tr>
<tr>
<td>3:45 p.m.</td>
<td><strong>Sea Lion Show</strong></td>
<td>PNC Sea Lion Arena</td>
</tr>
<tr>
<td>3 - 5 p.m.</td>
<td><strong>Welcome Reception – Happy Hour</strong></td>
<td>McDonell Center at River Camp</td>
</tr>
<tr>
<td>5 - 7 p.m.</td>
<td><strong>BBQ Dinner at the Zoo – St. Louis Fair</strong></td>
<td>McDonell Center at River Camp</td>
</tr>
<tr>
<td>7:15 p.m.</td>
<td><strong>Shuttles depart for hotel</strong></td>
<td>South Entrance</td>
</tr>
<tr>
<td>9 - 11 p.m.</td>
<td><strong>Hospitality Suite Open</strong></td>
<td>Chase</td>
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</tbody>
</table>

**Wednesday, October 6, 2010**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 - 7:45 a.m.</td>
<td><strong>Presidents Breakfast</strong></td>
<td>The Bistro – Wine Room</td>
</tr>
<tr>
<td>6 - 7:45 a.m.</td>
<td><strong>Breakfast on your own</strong></td>
<td></td>
</tr>
<tr>
<td>8 - 8:15 a.m.</td>
<td><strong>Convene – Workshops and papers</strong></td>
<td>Starlight and Zodiac Room.</td>
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<td></td>
<td>by vendors and members presentations.</td>
<td></td>
</tr>
<tr>
<td>8:15 - 10:15 a.m.</td>
<td><strong>Session 10-1006</strong> True Colors Training</td>
<td>Starlight Room</td>
</tr>
<tr>
<td></td>
<td>▪ Lucy Bailey, Saint Louis Zoo</td>
<td></td>
</tr>
<tr>
<td>8:15 - 9:15 a.m.</td>
<td><strong>Session 01-1006</strong> Regulatory Compliance AZA HAZCOM</td>
<td>Breakout A</td>
</tr>
<tr>
<td></td>
<td>▪ Phil Sonderman, Saint Louis Zoo</td>
<td></td>
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<tr>
<td></td>
<td>NFPA 150 Standard on Fire and Life Safety in Animal Housing</td>
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<td></td>
<td>▪ Tom Nappo, Chubb Group of Insurance Companies</td>
<td></td>
</tr>
<tr>
<td>8:15 - 9:15 a.m.</td>
<td><strong>Session 02-1006</strong> Technology Corner Re-Birth of the Operations &amp; Maintenance Manual</td>
<td>Breakout B</td>
</tr>
<tr>
<td></td>
<td>▪ Joseph Arlotto, MWH Americas, Inc.</td>
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<td></td>
<td>The use of GIS &amp; GPS within Zoo’s for facility management”</td>
<td></td>
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<td></td>
<td>▪ Garrett Koch, Wind Environmental</td>
<td></td>
</tr>
<tr>
<td>8:15 - 9:15 a.m.</td>
<td><strong>Session 03-1006</strong> Environmental Sustainability “Anyone want to save their Zoo a couple of million dollars over the next few years in utilities?”</td>
<td>Breakout C</td>
</tr>
<tr>
<td></td>
<td>▪ Mark Fisher, Cincinnati Zoo</td>
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</tr>
<tr>
<td></td>
<td>Greening the Saint Louis Zoo</td>
<td></td>
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</tbody>
</table>
9:15 - 10:15 a.m.  Session 04-1006  Breakout A
- Mark Fisher, Ozone Water Systems, Inc.
  *System Safety Ozone System Safety*

9:15 - 10:15 a.m.  Workshop 01-1004  Breakout B
- Michael Sass, Spears Manufacturing
  *Valve Type & Specification*

9:15 - 10:15 a.m.  Workshop 03-1004  Breakout C
- Amy Riedel, Waterlife Design Group
  *Water Quality “101”*

10:15 - 10:30 a.m.  Break – Bottled Beverages Only  Zodiac Room

10:30 - 11:30 a.m.  Session 06-1006  Starlight Room
- Dallas Meads, Denver Zoo
  *Orangutan Conservation Facilities in Borneo*
- Joe Knobbe/Tom Sehnert, Saint Louis Zoo
  *Madagascar – Capacity Building at Parc Zoologique Ivoloina: Training in Facilities Management to Support Animal Husbandry Programs*
- Paul Valley, Cleveland MetroParks Zoo
  *The Amphibian Crisis and You*

10:30 - 11:30 a.m.  Session 07-1006 Emergency Preparedness  Breakout A
- Phil Sonderman, Saint Louis Zoo
  *Catastrophe Preparedness*
- Dan Snyder, St. Louis Zoo
  *Emergency Backup*

10:30 - 11:30 a.m.  Session 08-1006 What’s New  Breakout B
- Dennis Ethier, New York Aquarium
  *Renovation of the Main Hall and Electrical Service Upgrade at the New York Aquarium*
- Matt Regensberger, Saint Louis Zoo
  *Designing Life Support Systems for a Species (Chitra indica) Specific Habitat*
- David McGuire, Saint Louis Zoo
  *Sea Lion Sound – The Saint Louis Zoo’s new Pinniped Habitat and Arena*

11:30 - 12:30 p.m.  Workshop 02-1004 UV  Breakout A
- Brian Brawner, R&B Aquatics
  *Sterilizer Maintenance*

11:30 - 12:30 p.m.  Workshop 03-1004  Breakout B
- Amy Riedel, Waterlife Design Group
  *Water Quality “101”*

11:30 - 12 noon  Lunch  Starlight Room

2 - 3:30 p.m.  Vendor Load Out  Zodiac Room
<table>
<thead>
<tr>
<th>Time</th>
<th>Event Details</th>
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<tbody>
<tr>
<td>2 - 3 p.m.</td>
<td><strong>Workshop 02-1004</strong>&lt;br&gt;&lt;i&gt;UV Sterilizer Maintenance&lt;/i&gt;&lt;br&gt;Brian Brawner, R&amp;B Aquatics</td>
</tr>
<tr>
<td>2 - 3 p.m.</td>
<td><strong>Workshop 03-1004</strong>&lt;br&gt;&lt;i&gt;Water Quality “101”&lt;/i&gt;&lt;br&gt;Amy Riedel, Waterlife Design Group</td>
</tr>
<tr>
<td>2 - 3 p.m.</td>
<td><strong>Workshop 01-1004</strong>&lt;br&gt;&lt;i&gt;Valve Type &amp; Specification&lt;/i&gt;&lt;br&gt;Michael Sass, Spears Manufacturing</td>
</tr>
<tr>
<td>3 - 5 p.m.</td>
<td>Committee Meetings &amp; Round Tables&lt;br&gt;TBD by Committee Chairperson</td>
</tr>
<tr>
<td>3:15 - 4:15 p.m.</td>
<td>Water Quality 101 Test</td>
</tr>
<tr>
<td>5:30 p.m.</td>
<td>Cash Bar Opens &amp; Auction Preview</td>
</tr>
<tr>
<td>6 - 7:30 p.m.</td>
<td>Auction</td>
</tr>
<tr>
<td>7:30 - 9 p.m.</td>
<td>AZFA Banquet Dinner</td>
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<tr>
<td>10 - 12 midnight</td>
<td>Hospitality Suite Open</td>
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**Thursday, October 7, 2010**

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<th>Time</th>
<th>Event Details</th>
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<tbody>
<tr>
<td>10 - 10:15 a.m.</td>
<td>Post Tour Shuttles to Forest Park&lt;br&gt;Depart Chase Hotel Lobby</td>
</tr>
<tr>
<td>12 noon</td>
<td>Shuttle to next museum</td>
</tr>
<tr>
<td>2 p.m.</td>
<td>Shuttle to next museum</td>
</tr>
<tr>
<td>4 - 5 p.m.</td>
<td>Shuttle to hotel</td>
</tr>
<tr>
<td></td>
<td>Dinner on your own</td>
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</table>
Concurrent Sessions & Workshops

Monday, October 4, 2010

9:15 - 9:45 a.m.  
**Keynote Address**  
**Vertegy/ Alberici Constructors, Inc. – LEED Buildings & Construction**

The Alberici Headquarters building has been certified Platinum under the LEED for New Construction (NC) rating system at 60 points, one of the highest LEED-NC credit levels achieved to date, worldwide. Alberici Constructors, Inc. assisted by Vertegy, an Alberici Enterprise, converted a 50-year-old manufacturing facility into 110,000 square feet of class A office space, incorporating numerous environmentally friendly features.

**Thomas Taylor, Vertegy (a subsidiary of J.S. Alberici, Inc.)**
Thomas is a fourth generation construction professional turned sustainability consultant and has served at Alberici Corporation for over 20 years. He brings experience and passion to the leadership of Alberici’s sustainable consulting service, Vertegy, and represented both owner and construction manager on Alberici’s dual-certified Four Green Globes and LEED Platinum Headquarters. He holds a B.S. in Business Management from Southern Illinois University with a minor in Construction Management. Over the years, Thomas has served and chaired various committees on both the local St. Louis and National Associated General Contractors of America (AGC). He is a member of the St. Louis Regional Chapter of the U.S. Green Building Council, chair of the sustainable construction task force of the National Associated General Contractors of America, and a LEED Accredited Professional.

1:30 - 2:15 p.m.  
**Siemens Industry, Inc. – Starlight Room**  
**The Evolution of Mass Notification and Emergency Communications**

Sygnal Mass Notification systems to help you get messages where they are needed most. It is a highly adaptable system that can utilize your existing infrastructure, such as voice systems, LED signage, and LAN networks. Sygnal is based upon the idea that an effective emergency communication system needs to function at three levels simultaneously in order to ensure that everyone gets the information they need. It should contact people “Inside” buildings; “Outside” critical locations and their surrounding vicinity; and “At Your Side,” alerting people through personal devices such as cell phones and PDAs.

**Peter Tately, Siemens Industry, Inc.**
Pete Tately joined the Siemens Fire business in 2007 to lead the company’s mass notification program, featuring the Sygnal mass notification system. He has over 25 years of building systems infrastructure experience with the last 14 years dedicated to life safety and emergency communications. Pete has made a name for himself as a thought leader in the emerging mass notification market with a particular interest in higher education and campus environments. He is currently based out of Siemens’ Fire home office in Florham Park, New Jersey. He is an active member of; the National Fire Protection Association (NFPA), the Center for Campus Fire Safety (CCFS), the Society of Fire Protection Engineers (SFPE), the Automatic Fire Alarm Association (AFAA) and he serves on the Life Safety 101 & 5000 NFPA committee for Healthcare Occupancies.
Today's zoos want to practice what they preach, both educating visitors on green practices and setting a positive example for the community. To this end, ‘being green’ is often one of the most important operational goals for a zoo. However, ‘being green’ can be a lofty and challenging task in the light of construction and renovation projects. We’ll examine today's best green practices and their applicability to a typical zoo exhibit project, bringing to light the true impact of green design on guest experience, animal husbandry, staffing efficiency, initial investment, and long-term operating cost.

**Mariusz Bleszynski, Project Manager, PGAV**

Born and raised in Poland, Mariusz has a great perspective to add to any project. His perspective has been greatly impacted by the Masters of the Italian Renaissance. The Renaissance style places emphasis on symmetry, proportion, and geometry. As a result, Mariusz is very interested in incorporating interesting technologies and applied science into his work. Mariusz attended Technical University in Gdansk, Poland and received his Master's degree in Architecture. Since then, he has studied at a few technical institutes in North America, studied and practiced Naval Engineering, and eventually landed at PGAV to pursue his career in architecture. Mr. Bleszynski has been a member of the American Institute of Architects and is also LEED Accredited through the United States Green Building Council. He is determined to apply sustainable design features on applicable projects in the future.

**Stacey Tarpley, Zoologies Landscape Architect, PGAV**

Stacey Tarpley came to PGAV with expertise in landscape architecture and zoology. She was inspired to pursue these fields after visiting a third-world zoo, where animals lived solitary lives inside tiny concrete cages. This heartbreaking experience made Stacey passionate about changing the future of zoological facilities. She has a keen interest in creating habitats that not only entertain and educate the public, but also enhance the lives of the animals.

Stacey’s extensive travels have led her across the globe observing both cultural and natural diversity on six of the seven world continents. Whether seeing Walabees in Australia, Caribou in Alaska, or the Keel Billed Toucan in Belize, she has had the opportunity to learn a great deal about natural ecosystems and animal behavior. These experiences strengthen her ability to create strong storylines and design more realistic and intriguing experiences, as well as create more enriching homes for captive animals.

Stacey received her Bachelor’s of Science in Zoology, with a concentration in Zoo & Aquarium Science in 2000 from Michigan State University. She went on to earn her Master’s in Landscape Architecture in 2003 from North Carolina State University.

**Susan Davis, Business & Community Relations, AmerenUE**

This session will provide an overview of energy efficiency measures and low cost building operations and maintenance practices. Learn how you can save money and energy while reducing your carbon footprint. Examples of energy efficiency projects at the St. Louis Zoo in partnership with the local utility AmerenUE.

Susan Davis is a member of AmerenUE’s Business & Community Relations Department and is the Key Account Executive for the St. Louis Zoo. She works with UE’s largest industrial and commercial customers on energy related topics, including energy efficiency and usage. With over 16 years of experience in the utility industry, she has developed business plans and marketing strategies for utility products and services. Susan has a Bachelor of Science degree in Math and English and a Masters in Information Technology from Washington University in St. Louis. She is a member of the Association of Energy Engineers.
Spears - Workshop 01-1004
Valve Type and Specification

Spears will lead a hands-on workshop designed to cover a multitude of valve designs and criteria to consider when specifying a valve for an application. Attendees will handle and operate various valves, discuss ideal applications for those valves and specification criteria. A Certificate of Attendance will be awarded to the attendee.

Michael Sass, Spears Manufacturing
Michael Sass has worked for Spears Manufacturing for five years he has worked in the construction management industry for over 20 years. Michael has participated in AZFA conferences for three years training members on PVC and CPVC installation, valves and systems.

R&B Aquatics – Workshop 02-1004
UV Sterilizer Maintenance

R&B Aquatics will host a hands-on workshop covering the practical care and maintenance of smaller scale ultra-violet sterilizer systems. Attendees will break down a UV sterilizer, conduct the process of cleaning and inspecting the quartz sleeves, replace the UV bulbs and reassemble the system. A Certificate of Attendance will be awarded to the attendee.

Brian Brawner, President, R&B Aquatics

IPS Corporation – Workshop 01-1006
ASTM D2855 Solvent Cementing Vinyl's, PVC and CPVC

IPS Corporation will host a hands-on workshop that covers the American Society for Testing and Materials standards for chemical bonding of PVC. Attendees will learn the basic principles of solvent cement welding, the proper techniques for solvent cement welding of plastic joints, the importance of correct sized applicators, the Weld-On guide to solvent cements and primers, set and cure times and the cause of failed joints. Attendees will be required to demonstrate the knowledge to properly prepare and bond PVC. Successful attendees will be awarded the ASTM D2855 Certification card.

Stephen Gardiner, Bilingual Technical Services Representative, IPS Corporation
IPS Corporation manufactures Weld-On solvent cements and primers for joining PVC and CPVC pipe and fittings. Mr. Gardiner is based out of Durham, NC. and has conducted solvent welding training seminars and ASME B31.3 bonder qualification seminars and performance testing of pipe joint coupons, in both English and Spanish, all over the United States and overseas since 2005. Mr. Gardiner has trained more than 6,000 installers in proper solvent welding techniques. This number includes over 2,500 installers being bonder qualified to the ASME B31.3 standard. Mr. Gardiner has experience in the IPS Weld-On hydrostatic laboratory testing solvent cement products to ASTM and NSF standards and performing forensic claim evaluations of failed pipe joints. Mr. Gardiner wrote the solvent cement welding procedure in 2008 for the American Welding Society (AWS). He is a member of AWS and ASTM. Mr. Gardiner has a B.A. in business administration and a M.A.T. in teaching.
Workshop 01-1005
AZA Fire Extinguisher Training
Training Center

Saint Louis Zoo will lead a hands-on training workshop targeted at basic fire safety and fire extinguisher training. Attendees will receive an overview of the various classifications of fire extinguishers and what they are used for; each attendee will have the opportunity to extinguish an actual fire. Attendees will be awarded a Certificate of Attendance.

Phil Sonderman, Director of Safety & Risk Management, Saint Louis Zoo
Phil Sonderman has over 37 years experience in, training, administrative management, environmental compliance, fire protection, good manufacturing practices, emergency medical services, and workers compensation practices. Phil also conducts several training classes for Saint Louis Zoo employees including (but not limited to) hazardous communications, industrial vehicle safety and confined space. He is currently developing a protocol that will provide safe practices, and performance in emergency situations and conditions for the Saint Louis Zoo.

Workshop 02-1005
FM Compound
Train the Trainer Certification Program for Sit Down Counter Balanced Lift Trucks

Wiese Planning & Engineering on-site training session lasts approximately seven to eight hours. The session consists of classroom instruction, safety video, written quiz, course review manual, and hands-on operation. Some of the topics covered (if applicable) are:

- Lift Truck Fundamentals
- Principles of Stability, Balance, and Capacity
- Pre-Operational Inspection
- Safety Guidelines for Operating Lift Trucks
- Safe Load Handling Techniques
- Changing Liquid Propane Tanks
- Charging and Changing Batteries in Electric Lift Trucks

Each student who successfully passes the course will receive an operator's certificate of completion and wallet card. A computer printout of course results, written quiz, and hands-on evaluation forms will be supplied for your records.

Dennis Lammlein, Training Instructor, Wiese Planning & Engineering
Dennis has been with Wiese for 37 and has been training on Forklifts, Aerial Man Lifts, Skid-Steers, Mobile Cranes and Yard Tractor Spotter trucks for the last 21 years.

Workshop 03-1005
Train and Ride Maintenance
Vierheller Station

Saint Louis Zoo Guest Services Manager Ryan Jeffrey will be conducting an on site workshop of train, carousel, and simulator ride maintenance. He will cover the daily, weekly, monthly, and annual operations, safety inspections, and maintenance requirements. Attendees will receive an overview of cost effectiveness verses installation and maintenance costs. Attendees will tour each of the facilities and be awarded a Certificate of Attendance.

Ryan Jeffrey, Manager of Guest Services and Attractions, Saint Louis Zoo
Mr. Jeffrey has over 10 years of experience in the Attractions industry. Starting out as an entry level Conductor on the Zooline Railroad, he now oversees all daily operations and directs maintenance personnel for all Saint Louis Zoo ride operations, including the historic Emerson Zooline Railroad, Mary Ann Lee Conservation Carousel, 3D Motion Simulator, and 3D Theater. He holds Bachelors and Masters Degrees in Communications Management from Webster University.
This session will provide an overview of the OSHA requirements for Lockout/Tagout and how those requirements impact your facility.

The presentation is a general overview, which covers:

- Basic reasoning for Locking and Tagging
- Frequency & Impact of LOTO Accidents
- When LO/TO should occur (types of equipment)
- OSHA's Six Step Process
- Removing LO/TO
- Special situations, such as Group Lockout, Shift Transfers and Emergency Lock Removal.
- What OSHA looks (fines) for
- Elements of the organizational policy
- Training requirements
- Developing effective equipment procedures
- Drive the point home “Lockout for Life” video, featuring re-enactments of LOTO accidents

Darrell Carmichael, National Account Manager - Brady Corporation.
Darrell has been with Brady for 13 years, having also served in Territory Manager, Market Development and Strategic Distribution Management roles. Prior to joining Brady, he spent 6 years in the Power Transmission/Motion Control industry. He has conducted over 200 LOTO seminars, and worked with dozens of companies on a corporate level, and many more on a local level, to implement industry-leading LOTO initiatives.

Hilti will lead a workshop demonstrating the proper techniques involved in safely operating powder actuated tools. Attendees will be tested and have to physically demonstrate proper powder actuated tool use. Successful attendees will be awarded a Hilti certification card for powder actuated tools

Shaun Cordes, Hilti Corporation
Sean Cordes has been with Hilti for over 5 years. He provides training for powder actuated tools, anchoring, and firestop products. Sean is the industrial government and healthcare account manager for the Saint Louis Metro area.

Saint Louis Zoo Masonry & Special Construction crew will conduct a demonstration on the fabrication of hot wire vines and grasses, and fiberglass reinforced concrete castings. They will also answer any questions you may have on fiberglass molds and castings. Attendees will be awarded a Certificate of Attendance.

Van Sauer, Supervisor Special Construction and Masonry, Saint Louis Zoo
Van Sauer has over 30 years experience with the Saint Louis Zoo. He supervises special construction projects that involve rockwork fabrication and installation, hot vine and grass installation, molds or castings that will enhance immersion exhibits, and specific masonry work that will provide pleasing aesthetics and meet AZA guidelines.

American Sealants will conduct a demonstration that will cover the process involved in properly removing light scratches from acrylic surfaces. Attendees will receive a Certificate of Attendance.

Jerry Smith, American Sealants
Ozone Water Systems will discuss and demonstrate basic preventive maintenance on ozone generators and supportive equipment. This discussion will occur in the penguin puffin filter room so John can show examples and demonstrate technique.

John Gaudaur – Field Technician, Ozone Water Systems, Inc.
John has been performing system troubleshooting, service and maintenance in the ozone and water treatment industry for 19 years. He has worked at zoos and aquariums across the country and water treatment plants around the world. His initial mechanical training was received in the US Navy where he was a Machinist Mate for 6 years serving on board the USS Coral Sea and USS Guadalcanal. He currently oversees the service department at Ozone Water Systems, Inc. and is based in Huntington Beach, California.

Wednesday, October 6, 2010

8:15 - 10:15 a.m. Session 10-1006 Starlight
True Colors Training
Are diverse personalities interfering with getting the job done? Do your co-workers seem to focus on all the wrong things? Join us in a fun, thought provoking session on why this happens and how you can make things better. Experience the True Colors program that all Saint Louis Zoo employees take. Identify strategies to avoid conflict, get your ideas across to team members, and simplify how you think about dealing with others.

Lucy Bailey, Manager, Training and Staff Development, Saint Louis Zoo
Lucy has served the Zoo for many years in a variety of positions including Volunteer, Keeper, Children's Zoo Supervisor and Docent Coordinator. She has a degree in psychology and maintains her interest in animals through her small dog training business and as a volunteer with her dog training club. Lucy's focus in her current role at the Zoo is to provide employees and volunteers the support they need to better care for the animals, the visitors, the facility, and each other.

8:15 - 9:15 a.m. Session 01-1006 Breakout Room A
Regulatory Compliance
This session will discuss various regulatory requirements and how those requirements could impact your institution.

AZA HAZCOM
Following the guidelines of OSHA 1910.1200, The Hazardous Communications Standard, this program fulfills the necessary training for basic compliance with this standard.

Understanding the responsibilities of the employer, the employee, and the chemical manufacturer are covered. Breaking down the mystery of reading an MDSD (Material Safety Data Sheet) is presented. Primary and secondary labeling examples are shown for compliance and for the safety of those using, or exposed to a product.

And a short intro to the Tier Two reporting as required by LEPC's (Local Emergency Planning Commission's) in your jurisdiction is also discussed.

Phil Sonderman, Director of Safety & Risk Management, Saint Louis Zoo
Phil Sonderman has over 37 years experience in, training, administrative management, environmental compliance, fire protection, good manufacturing practices, emergency medical services, and workers compensation practices. Phil also conducts several training classes for Saint Louis Zoo employees including (but not limited to) hazardous communications, industrial vehicle safety and confined space. He is currently developing a protocol that will provide safe practices, and performance in emergency situations and conditions for the Saint Louis Zoo.
This section will discuss the basic principles of NFPA 150, Standard on Fire and Life Safety in Animal Housing Facilities. The standard addresses a wide variety of animal occupancies and what controls are necessary to ensure a safe environment for both people and animals within the facility, whether it be open or closed to the public. The areas where NFPA 150 is silent will also be reviewed, along with best practices to address those items.

Tom Nappo, Chubb Group of Insurance Companies
Tom Nappo has worked as a Risk Engineer with Chubb Insurance since 2002. He has contributed to Chubb's animal laboratory, vivarium and high volume low-speed fan standards, along with serving as a faculty instructor at the fire protection lab at Chubb's Loss Control University in Warren, NJ. He has served as an alternate technical committee member on NFPA 150, Standard on Fire and Life Safety in Animal Housing Facilities, since its inception in 2005. He is a NFPA Certified Fire Protection Specialist and holds an Associate in Risk Management (ARM) designation. His professional associations include NFPA, the Society of Fire Protection Engineers, and the American Society of Safety Engineers.

8:15 - 9:15 a.m.  Session 02-1006  Breakout Room B
Technology Corner
This session is intended to cover any area that would revolve around technology and how it is being used to make all our jobs easier.

Re-Birth of the Operations & Maintenance Manual
Traditional O&M manuals sit on shelves, ignored and unused. The information they contain becomes outdated and in their place often exists a loose collection of notes and data fragmented between departments and staff; knowledge becomes lost. However, electronic O&M manuals are being created that are dynamic, expandable and capture knowledge as it is created.

With this new breed of O&M manual, operators can lookup part numbers, review operational procedures, establish maintenance schedules, and review daily records with a quick keystroke.

Joseph Arlotto, Senior Aquatics Engineer, MWH Americas, Inc.
Mr. Arlotto brings more than 22 years of experience in operating, maintaining and managing a wide variety of LSS. Degreed in engineering but job-trained in daily operations, he couples “nuts and bolts” practicality with a theoretical vision. Mr. Arlotto has supervised LSS operation at Brookfield Zoo, Albuquerque Biological Park and San Diego Zoo, and currently consults to the aquatic industry as a Senior Engineer at MWH Americas, Inc. He is based in San Diego, California.

The use of GIS (Geographic Information Systems) & GPS (Global Positioning Systems) within Zoo’s for Facility Management.
This presentation will cover the use of GIS within zoo’s in the broad sense and how this relates to facilities management. Actual examples of how GIS is being used within zoo’s will be discussed. Information will be provided on where to start if you are planning to implement a GIS within your zoo.

Garet Koch, Wind Environment Services, LLC, Founder
Garet Couch, is the founder of Wind Environmental Services L.L.C., a nationally recognized GIS firm. Garet is a certified Geographical Information Systems Professional (GISP). He takes great pride in not only educating others but also learning from his GIS peers as an ESRI Authorized Instructor. Garet has worked with many different professions and organizations regarding GIS and Water Quality. He maintains the highest level of licensing in both Missouri and Oklahoma for Water and Wastewater treatment. Garet has an extensive background in water quality as well as performing GIS and mapping projects using GIS and GPS, as well as traditional surveying equipment and techniques. Garet continues to update his formal and industry education by staying active in GIS and Water Quality. He is always looking for new ways to leverage these technologies to benefit communities and organizations throughout the U.S.
Environmental Sustainability

This session is designed to cover topics relating to a multitude of environmental conservation efforts and initiatives at zoo’s and aquariums across the country.

Greening the Saint Louis Zoo

This presentation will focus on the various conservation and recycling efforts within the Saint Louis Zoo. Sam will review state and private grant funding, past achievements and future endeavors.

Patrick Williamson C.P.M., Director of Distribution & Purchasing, Saint Louis Zoo

Patrick Williamson is the Director, Purchasing and Distribution for the Saint Louis Zoo. The Zoo hosts about 3 million visitors annually and is dedicated to the conservation of animals and their habitats through animal management, research, recreation, and educational programs that encourage the support and enrich the experience of the public. As the Director of Purchasing and Distribution his responsibilities include the day to day operations of the Distribution Center which deliver all materials throughout the Zoo, competing/purchasing/contracting, customer service and record retention, uniform store and various other duties.

"Anyone want to save their Zoo a couple of million dollars over the next few years in utilities?"

A synopsis of how the Cincinnati Zoo cut it's water usage in half and it's energy usage by a quarter over a four year span. Practical tips and ideas and lots of lessons learned.

Mark Fisher, Senior Director of Facilities and Planning, Cincinnati Zoological Gardens

A product of the University of Cincinnati’s Civil and Environmental Engineering program, Mark spent the first eleven years of his professional career working as a project manager for Turner Construction, a commercial construction company. Many of those years were spent at the Cincinnati Zoo, overseeing the construction of several major exhibits. In 2006, he came on board at the zoo as the Senior Director of Facilities and Planning. In addition to the standard duties of a facilities manager, Mark is also the driving force behind the zoo’s sustainability movement. Implementing the most aggressive green building program in the nation, along with producing dramatic reductions in natural resource consumption, he has taken the zoo from an organization that barely had a recycling program, to becoming the greenest zoo in America.

Systems Safety

This session will present key safety issues related to a multitude of systems such as ozone production and delivery, compressed air, steam, hydraulics or filtration/LSS.

Respecting Your Life Support Design when Upgrading Ozone Equipment.

This presentation will discuss the many different ozone generators on the market and how care needs to be taken in specifying equipment upgrades to avoid potentially catastrophic issues with the collection housed in the tank.

Mark Fisher, President, Ozone Water Systems, Inc.


Valve Type and Specification

See Monday October 4- 3:30 pm – 4:30 pm for description
9:15 - 10:15 a.m.  
**Waterlife Design Group – Breakout Room C**  
**Workshop 03-1004**  
**Water Quality “101”**

Waterlife Design Group will lead a workshop designed to provide the attendee with the basic knowledge of how filtration systems function. Attendees will gain an introduction to basic filtration principles such as design flow rate calculations based on filter area and pipe size, pressure and how it relates to filter loading, types of filters and head pressure calculations as they pertain to pump sizing. Attendees will be required to complete a written test and successful attendees will be awarded a Certificate of Completion.

**Amy Riedel, Manager of Design & Engineering, Waterlife Design Group**

Ms. Riedel, with more than 17 years in the industry, not only has an in depth academic background in aquaculture and aquarium design, but extensive hands on field experience turning valves and cutting pipe as well. Her skill set gives a unique advantage to approaching design in that she knows the theoretical end of aquatic systems but also has the practical experience to know how to optimize the execution of a design so that it is friendly, intuitive, and easy to maintain by the client.

10:30 - 11:30 a.m.  
**Session 06-1006**  
**Starlight**  
**Conservation in the Wild**

This session will provide an overview of various conservation efforts being undertaken across the globe; many of the projects are funded by individual organizations or with federal grants. Many of the projects have had AZFA support through the Clark Waldrum Conservation Fund.

**Orangutan Conservation Facilities in Borneo**

Dallas has been employed at the Denver Zoo for over 30 years, he holds a Construction B Supervisor Certificate for the past 25 years. He is often sought out for his knowledge in design, fabrication, construction, and innovation in problem-solving skills. Among his numerous accomplishments, Dallas recently added his technical expertise in collaboration with a Professional Team from the Denver Zoo to Indonesian. This past May, the Team was joined by Dr. Ian Singleton-SOCP Director, to visit the Sumatra Orangutan Conservation Program’s (SOCP) facility and the site of their proposed conservation and education center, and additionally, with the administration from the Borneo Orangutan Survival Foundation (BOS) in Samboja, East Kalimantan.

**Dallas Meads, Master Carpenter, Denver Zoo**

Dallas will be presenting on the construction, maintenance, and training issues in these third world countries, as well as, presenting opportunities for further development of exchange programs in the education and training of natives in the facilities and maintenance field.

**Madagascar - Capacity Building at Parc Zoologique Ivoloina: Training in Facilities Management to Support Animal Husbandry Programs**

The Saint Louis Zoo’s Wildcare Institute has sponsored a multi-phase training initiative at the Parc Ivoloina Zoo, Madagascar. Early phases stressed training in areas of veterinary care and husbandry issues. While great strides were made in these areas, deficiencies in the facilities themselves prevented even greater success.

Joe Knobbe of the Zoo’s Primate Unit and Tom Sehnert of the Zoo’s Specialty Construction staff, proposed a program to integrate facilities management into the animal husbandry programs. While Joe had extensive knowledge in the design, material and function of primate facilities, he lacked some of the skills to convert those ideas into practice. Tom, on the other hand, had extensive training and experience in those many skills needed for facilities construction, repair and renovation.

During their month-long stay, Joe and Tom not only helped to repair and renovate many of the facilities, but also worked directly with Malagasy staff in the instruction and training of the many “tools” necessary for developing and maintaining proper facilities for animal husbandry programs.

**Joe Knobbe, Zoological Manager of Primates, Saint Louis Zoo**

Joe has been with the St. Louis Zoo for 24 years. He oversees an extensive collection of primates including one of the largest zoo populations of lemurs. He has lent his skills to two Field Conservation grants funded
through the Saint Louis Zoo's Wildcare Institute. His focus has been the Ivoloina Zoo in Madagascar. In addition to his interest in lemurs, Joe serves on numerous primate management committees and is the Coordinator for the Baboon SSP.

**Tom Sehnert, Special Construction Crew, Saint Louis Zoo**
Tom has over 12 years experience with the Saint Louis Zoo exhibits fabrication crew. He builds and maintains special construction projects that involve rockwork fabrication and installation, hot vine and grass installation, molds or castings that will enhance immersion exhibits, and specific masonry work that will provide pleasing aesthetics and meet AZA guidelines.

**The Amphibian Crisis and You**
My talk revolves around a number of subjects. First, it is the story of Golden Frogs disappearing from the face of the earth. I will go on to show that hundreds of species of amphibians are becoming extinct and discuss the reasons why. But I further explain the journey of me, a tradesmen, (a facilities staff person), getting involved with field research and how it has changed my life. This is the real message. It is the importance of aquarium/zoo managers/directors providing opportunities for us to become involved with the animal care staff and the scientific community. It has awakened a passion for conservation within me for the zoological community. I find myself volunteering for and spreading the word of conservation. I have also provided this talk to other zoo’s staff to discuss this entire concept but, also to inform them that AZFA has had a huge roll in conservation and that grant opportunities for conservation are available to them through AZFA.

**Paul Valley, Interactives/Electronics Technician, Cleveland Metroparks Zoo**
Paul's professional background began in the communications industry as a broadcast field engineer, and business owner/consultant. Paul started in 1997 as a consultant with Cleveland Metroparks Zoo where he learned about the unique requirements of the interactive displays and control systems involved within the zoo. He is has worked for the Cleveland Metro Parks as Interactives/Electronics Technician for the last eight years. Within the first year he improved the “uptime” of operational interactives from 60% to 95%. He regularly provides technical consulting for the Zoo's functions and projects involving: Facility Operations; Animal Care; Marketing; Education; Guest Services and our Zoological Society. In 2006, Paul traveled to Panama where he assisted animal care by volunteering for an international emergency amphibian rescue. He looks forward to sharing his experience and continued efforts of the program with the AZFA professional members and vendors.

**10:30 - 11:30 a.m.**

**Session 07-1006**

**Emergency Preparedness**

From the vulture flying into the transformer to the tree in Ohio falling; disasters, minor or major, can strike at any time. This session will cover ways that other zoos and aquariums are preparing for the unexpected.

**Catastrophe Preparedness**

Learn how the effort the Red Cross, The Division of Senior Services, and other organizations are working toward the goal of having American’s better prepared in the event of a natural or man-made disaster. Even though local, state and federal agencies have plans to protect the public, YOU are responsible for your own safety, even in an emergency.

Remember!
- Emergencies happen.
- It can be a tornado, house fire, flood terrorist attack or the “big shake”.
- No one wants to think about disasters, but being prepared for an emergency can help protect your family.

**Phil Sonderman, Director of Safety & Risk Management, Saint Louis Zoo**
Phil has over 37 years experience in, training, administrative management, environmental compliance, fire protection, good manufacturing practices, emergency medical services, and workers compensation practices. Phil also conducts several training classes for Saint Louis Zoo employees including (but not limited to) hazardous communications, industrial vehicle safety and confined space. He is currently developing a protocol that will provide safe practices, and performance in emergency situations and conditions for the Saint Louis Zoo.
Emergency Backup
This session will discuss the planning and implementation of what is needed to restore power to your facility in the event of a power outage. It will use the Saint Louis Zoo as a case study to show the various steps in planning, budgeting, and implementation of reserve power from our utility company and the purchase of generators to achieve the desired goal for life and safety of our animals, visitors and employees.

Dan Snyder, Director of Facilities Management, Saint Louis Zoo
Dan is a graduate of Ranken Technical College in Industrial Electricity, Dan has over 35 years of service at the Zoo as a Licensed Electrician, Maintenance Supervisor, Superintendent of Buildings and Grounds and in his present position for the past four years overseeing all aspects of the division.

10:30 - 11:30 a.m.  08-1006 What’s New  Breakout Room B
This session is tailored to showcase any new projects ongoing at any facility on the planet. The project’s may be just through design, in construction or recently opened. Share experiences of what worked and what didn’t, how long things really took and what unique obstacles were faced and how they were overcome.

Renovation of the Main Hall and Electrical Service Upgrade at the New York Aquarium
Founded in 1896, the New York Aquarium is one of the oldest Aquarium’s in the country. The Aquarium was originally built in Castle Clinton on Manhattan’s Battery Park, later relocated to the Bronx Zoo’s Lion House and finally to its current location in Coney Island, Brooklyn in 1957. This renovation project is of the original hall to the 1957 aquarium on Coney Island and a complete electrical upgrade for the 14 acre New York Aquarium Campus.

Dennis Ethier, Director Plant Engineering, New York Aquarium
Dennis has over 15 years experience in design, construction and project management of Zoo and Aquarium related projects ranging from the very small to over $100 million. As a member of the Aquarium’s Senior Management Team; Dennis manages a staff of 20 full-time employees, is responsible for coordinating the day-to-day activities of the maintenance staff and various contractors and how that work interfaces around the animal collection and guest experience. Dennis received undergraduate degrees in Construction & Cabinetmaking as well as Architecture & Building Engineering from the New England Institute of Technology.

Designing Life Support Systems for a Species (Chitra indica) Specific Habitat
In late 2009, the Saint Louis Zoo staff began a collaboration to design/build a new habitat for Chitra indica, (Asian narrow-headed softshelled turtle). The collaboration was critical in order to meet species’, keepers’, Iss’ and the viewing public’s needs. In this short presentation, I will go over how we came to these needs and how we built out the LSS side of the project.

Matt Regensberger, Lead LSS Technician, Saint Louis Zoo
Matt has been employed by the Zoo as a life support systems technician for eight years. Matt has a BSBA from the University Missouri – St. Louis.

Sea Lion Sound – The Saint Louis Zoo’s new Pinniped Habitat and Arena
Construction on the Saint Louis Zoo's new $20M pinniped habitat and arena began in September 2010, with plans to open to the public in spring 2012. In this presentation, you will learn about the entire planning process, spanning five years, starting with strategic planning, integration with the master plan, concept design and construction documentation. As with any large zoo project, there were significant challenges to be addressed, and a great deal of effort applied to create a dynamic, innovative product while keeping the cost realistic.

David McGuire, VP of Architecture & Planning, Saint Louis Zoo
David McGuire, is responsible for the long range planning and execution of capital improvement projects. Mr. McGuire is past president of the Aquarium and Zoo Facilities Association and has been an advocate for the organization for over fourteen years. His involvement with the Saint Louis Zoo began in 1990, when his firm was selected to design the Endangered Species Research Center and Veterinary Hospital, and to begin planning for the replacement of the then outdated Pachyderm Habitats. Since then, he has been integral to the transformation of the Zoo by leading the implementation of major projects such as River’s Edge, Fragile Forest and Penguin and Puffin Coast. He is a registered architect, and a graduate of Washington University School of Architecture.
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<td>11:30 - 12:30 p.m.</td>
<td>R&amp;B Aquatics</td>
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<td>Workshop 02-1004 UV Sterilizer Maintenance</td>
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General Information
The information desk will be available daily during conference proceedings outside of the Starlight Room. The Saint Louis Zoo volunteers and staff will be happy to assist you at any time during the conference.

Name Badges
Your name badge must be worn for the duration of the conference. It will serve as your pass for all conference proceedings, transportation, special events, and activities.

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The registration desk will be open:
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All group transportation will depart from and return to the Chase Park Plaza Hotel, St. Louis. The departure and return location is located in the hotel main lobby area.

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