



**naaeee**

North American Association  
for Environmental Education

## 44<sup>TH</sup> ANNUAL CONFERENCE

October 15-18

## 12<sup>TH</sup> ANNUAL RESEARCH SYMPOSIUM

October 14-15

*Building a Stronger and  
More Inclusive Movement*

**SAN DIEGO**  
**2015**



Check daily schedules (starting on page 42) for detailed information.

Exhibit Fair: FRIDAY, 9:00 AM–5:00 PM; SATURDAY, 9:00 AM–4:00 PM					
TIME	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
7:30					
8:00					
8:30		AFFILIATE WORKSHOP	CONCURRENT SESSIONS	CONCURRENT SESSIONS	
9:00	RESEARCH SYMPOSIUM 9:00–4:00	8:30–4:30	8:30–10:00	8:30–10:00	CONCURRENT SESSIONS 9:00–9:40
9:30					40 MINUTE COFFEE BREAK
10:00		RESEARCH SYMPOSIUM	30 MINUTE COFFEE BREAK	30 MINUTE COFFEE BREAK	
10:30		9:00–4:45	CONCURRENT SESSIONS 10:30–11:10	CONCURRENT SESSIONS 10:30–11:10	CONCURRENT SESSIONS
11:00		WORKSHOPS (Full day, morning, and afternoon)	20 MINUTE BREAK	20 MINUTE BREAK	10:20–11:50
11:30			PLENARY PANEL EE and Social Movements 11:30–12:30	KEYNOTE Andy Goodman 11:30–12:30	
12:00		FIELD TRIPS (Start and end times vary)			AWARDS LUNCHEON 12:00–2:30
12:30			EXHIBIT LUNCHEON 12:30–2:15 Poster Sessions, Affiliates Welcome, Silent Auction	LUNCH (on your own) 12:30–2:15 Meetings & Gatherings 12:45–2:00	
1:00		NATIONAL TRAINING WORKSHOP 1:00–5:00	WORKSHOP/ RESEARCH SYMPOSIUM LUNCH		
1:30					
2:00	12:00–1:00		CONCURRENT SESSIONS 2:15–3:45	CONCURRENT SESSIONS 2:15–3:45	
2:30					
3:00					
3:30			15 MINUTE BREAK	15 MINUTE BREAK	
4:00	RESEARCH SYMPOSIUM RECEPTION 4:00–6:00		CONCURRENT SESSIONS 4:00–5:30	Meetings & Gatherings 4:00–5:00	
4:30					
5:00		OPENING RECEPTION Share Fair & Authors' Corner 5:00–6:30	FILM SCREENING "The Guide" 5:15–6:45		
5:30					
6:00		OPENING CEREMONY 6:30–8:30		ANNUAL GALA AND AUCTION AT FIESTA DE REYES 6:00–8:30	
6:30					
7:00		KEYNOTE Stephen Pemberton	INFORMAL GATHERINGS 7:00		
7:30					
8:00					
8:30					



SAN DIEGO

2015

Welcome



**naaee**

North American Association  
for Environmental Education

## Welcome to the 44<sup>TH</sup> Annual NAAEE Conference!

On behalf of the board, staff, and conference planning team, welcome to San Diego and the 44th Annual NAAEE Conference. We're thrilled you could be here and hope that you enjoy everything the conference and this amazing city have to offer. This year's theme, Building a Stronger and More Inclusive Movement, reflects our ongoing commitment to enriching and expanding our work and workforce, along with other strategies for strengthening our field and achieving greater collective impact.

You'll have a chance to choose from hundreds of workshops, field trips, poster sessions, symposia, keynotes, presentations, and more that focus on everything from conservation education and sustainable communities to green schools, technology, leadership, and cutting-edge issues in the field.

This conference program guide is designed to help you navigate the conference—whether you've been coming for years or you're a first timer. If you have any questions, please see one of the many volunteers, wearing the bright NAAEE t-shirts, or come to the registration area for personal assistance. We want to help you feel welcome and make the most of your time here. We also hope you'll give our mobile app a try—and let us know what you think. Just download the "CrowdCompass Directory" to your phone or tablet and then search for "NAAEE."

We encourage you to attend the plenary events scheduled throughout the week. We have an exciting line-up of talented keynote speakers who will inspire and challenge you (see pages 29-32 for details), and we will use the plenary sessions to make announcements—and give out a few prizes!

### Here are some highlights of the week:

- The welcome reception on Thursday evening, which will include the Share Fair and Authors' Corner, followed by the opening ceremony, a special EE Leadership Award presentation, and our kick-off speaker, Stephen Pemberton, who will address ways in which diversity and inclusion and environmental education can bridge cultural divides
- Our annual Research Symposium, highlighting current research in the field (all day Wednesday and Thursday)
- A variety of workshops and field trips on Thursday
- Our annual gala and auction on Saturday evening at the historical and beautiful Fiesta de Reyes, located within Old Town San Diego Historic Park—this annual event helps us raise money for conference scholarships, and we have some fantastic items up for bid

# SAN DIEGO

2015

- A plenary session on Friday with four terrific panelists representing different experiences and ideas about the role of education in contributing to building a movement
- A Saturday morning keynote with Andy Goodman, who will help us change the world by changing our story
- An inspiring Awards Luncheon on Sunday with a panel of extraordinary young speakers who will captivate us with their passion and leadership
- The two-day Exhibit Fair, showcasing organizations working in environmental education, which we'll celebrate on Friday with a great luncheon, the Affiliates' Welcome, and the poster presentations
- NAAEE's annual business meeting on Sunday morning, where you can learn more about the Association and have a chance to provide input and sign up to be a member of our new eePRO community

We're also launching a prototype of our new website and professional development site called eePRO, and we would love to get your input. Let us know if you have a few minutes to take a quick survey—and if you do, you'll get a little "thank you" surprise. Just sign up at the registration desk, NAAEE's exhibit booth, or during the eePRO brown bag meetings at lunch on Saturday.

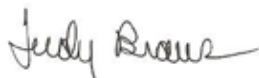
Thanks to everyone who has made this conference possible. We wouldn't be here without the dedicated work of our wonderful conference co-chairs, our committee chairs, the NAAEE board, Advisory Council, and staff, our amazing Affiliate Network, hundreds of volunteers, our funders, and so many other supporters. And a final thank you goes to all of you for attending—we know it's a big commitment. We hope you develop long-lasting personal and professional relationships, a sense of camaraderie with so many others who care about similar issues, and a chance to have deeper and more meaningful conversations. When you get an inspired and committed group together, magic happens—and we are looking forward to creating that magic together in San Diego!

Thank you, too, for the work you do all year to help create a more sustainable world. Please enjoy this warm and welcoming city, and take this opportunity to recharge your spirit, learn, make connections, and leave San Diego with a renewed passion to continue your important work!

**With warm regards from your conference leadership team:**



**Pepe Marcos-Iga**  
President



**Judy Braus**  
Executive Director



**Christiane Maertens**  
Deputy Director



**Lori Mann**  
Conference Manager



## Message from 2015 NAAEE Conference Co-Chairs

Welcome to San Diego! Did you know that you're visiting a global hotspot for biodiversity? San Diego is in the California Floristic Province, which is home to over 2,100 endemic species of wildlife and plants!

Our two programs, Inside the Outdoors and Emerald Cove Outdoor Science Institute, have introduced more than 3,000,000 students, teachers, and parents to Southern California's unique and very important ecosystems. When a child spends the day immersed in nature's laboratory on a field trip or a week experiencing science at an outdoor science school, the foundation is built for a love of science and the environment. An alternative education teacher explains, "Many of my students have given up on learning. When they get outdoors and explore science during an environmental education program, it is like turning on a light bulb. They realize they can learn; they just need to believe in themselves again. One environmental education experience can get them back on track to success in school."

Programs like ours are happening globally and the 2015 NAAEE conference represents the opportunity for us to hear about them from experts and each other. We hope you enjoy the next few days sharing your own experiences and learning about NAAEE member environmental education programs that are as diverse as the California Floristic Province.

**Thank you for all of the important work you do!**

A handwritten signature in black ink that reads 'Lori Kiesser'.

**Lori Kiesser**  
*Development Officer*  
Inside the Outdoors

A handwritten signature in black ink that reads 'Pam Johnson'.

**Pam Johnson**  
*Director of Educational Partnerships*  
Emerald Cove Outdoor Science Institute

See pages 107–108 for suggested restaurants and things to do in the San Diego area.

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CALIFORNIA  
DEPARTMENT OF  
EDUCATION

**TOM TORLAKSON**  
STATE SUPERINTENDENT OF PUBLIC INSTRUCTION

The 44<sup>th</sup> Annual Conference of the  
North American Association for Environmental Education  
October 15–18, 2015  
San Diego, California

Dear Educators:

On behalf of the California Department of Education (CDE), welcome to the 44<sup>th</sup> annual North American Association for Environmental Education Conference in beautiful San Diego. I applaud your work to advance environmental literacy and civic engagement throughout North America and wish you all the best as you seek to strengthen your profession through collaboration, networking, and shared dialogue.

We are proud that environmental education plays an important role in California in fulfilling the CDE's commitment to a world-class education for all students, from early childhood to adulthood. While many environmental programs and partnerships have long enhanced pre-kindergarten through grade twelve instruction in California, we are building on successful models to ensure environmental education and healthy, sustainable learning environments are available to all students.

I am pleased to announce that we recently launched California's *A Blueprint for Environmental Literacy*. This plan, developed by a diverse team of leaders and stakeholders, lays out strategies for expanding the reach of environmental literacy and sustainable schools programs. The goal is to ensure that our teachers have the resources and professional development they need to integrate these essential learning opportunities in the classroom and on the schoolyard. I trust that we can work together as a larger education community to share valuable tools and ideas to achieve our collective goal of preparing informed and engaged citizens for success in the 21<sup>st</sup> century.

Thank you for being part of this important work! Please enjoy your visit to San Diego.

Sincerely,

A handwritten signature in blue ink that reads "Tom Torlakson".

Tom Torlakson  
State Superintendent of Public Instruction





# Sponsors of environmental education and the 44<sup>TH</sup> Annual Conference—thank you!

## GOLD



## SILVER



## GREEN





## Environmental education we need for the world we want.



**There has never been a greater need for environmental education—or a greater opportunity.** Our country is facing unprecedented environmental, social, and economic challenges—from the world’s changing climate and loss of species and habitats, to declines in civic engagement, decreasing access to nature, and other threats. Environmental education has the potential to transform lives and society by addressing these challenges through helping to create a motivated and committed citizenry. Environmental education informs, inspires, and enlightens. It builds human capacity, influences attitudes, and can lead to action. And most importantly, it can help people make informed decisions about the environment that lead to informed stewardship and a more sustainable society.



**naaee**

North American Association  
for Environmental Education

Over 40 years of inspiring leadership  
and excellence in environmental education

## NAAEE: Be the change



For more than four decades, the North American Association for Environmental Education has worked to strengthen and expand the field of environmental education, with a growing network of support including:

- More than 16,000 members and supporters
- 54 state and provincial Affiliate organizations
- 30 countries around the world

Today, as we build on this foundation, NAAEE looks forward to strengthening our core and stimulating new thinking that will best meet the environmental and social challenges of the next decade.

### Building a network

**Annual Conference:** NAAEE has convened an annual conference for environmental education professionals since 1972. Averaging more than 1,000 participants each year, the event is designed to promote innovation, networking, learning, and dissemination of best practices. Held in a different city each year, the 2016 conference will take place in Madison, Wisconsin.

**Early Childhood EE Alliance:** In 2013, NAAEE launched the Natural Start Alliance—a coalition of educators, parents, and organizations focused on linking early childhood education with EE to connect young children with nature and enhance opportunities for outdoor play and learning.

### Strengthening the field

**EE Advocacy:** NAAEE has helped lead policy and outreach efforts on behalf of the field since its inception. NAAEE sponsors a monthly Action Network Call to highlight key opportunities for people across the country to get involved in local, state, and national issues, from supporting the **No Child Left Inside (NCLI)** coalition and the implementation of State Environmental Literacy Plans to strengthening public support for environmental education.

**EE Resources:** NAAEE's National Project for Excellence in EE has produced the *Guidelines for Excellence* series, the most widely accepted guidelines for environmental education around the globe. The online **EE Linked networks** provide up-to-date environmental education research, curriculum guides, professional development opportunities, and job postings.

### Inspiring innovation

**E-STEM Initiative:** NAAEE is leading a research effort to examine how environmental education and STEM (Science, Technology, Engineering, and Math) learning intersect and can be mutually supportive.

**Broadening the conversation:** With support from the U.S. EPA, NAAEE has collaborated with the Cornell Civic Ecology Lab and others on **EECapacity**, a project aimed at bringing new voices, innovation, and ideas together, including youth and community development professionals, to broaden the reach and impact of environmental education.

Connect with NAAEE today and join the movement to create a more sustainable future together.



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Promoting a science-informed society



To find out about our scholarships, funding opportunities, and learning resources, please visit the NOAA Education Resource Portal:

[www.education.noaa.gov](http://www.education.noaa.gov)

# The Basics



## Registration & Check-In Hours

Tuesday	5:00 PM–6:30 PM
Wednesday	7:30 AM–9:30 AM; 5:00 PM–6:30 PM
Thursday	7:30 AM–7:00 PM
Friday	7:30 AM–7:00 PM
Saturday	7:30 AM–5:00 PM
Sunday	7:30 AM–11:30 AM

**The registration desk is located in the Bayview Foyer.**

See the back page for maps of the San Diego Sheraton Hotel and Marina.



## Stay connected:



Be sure to connect to NAAEE on **Twitter** and get the latest conference updates **@NAAEEstaff**



Join our **Facebook** network and stay connected to trending EE information and events!



Follow us on Instagram **@NAAEEstaff** for photos from the conference. Tag your photos and posts with **#NAAEE2015** to see them displayed throughout the conference!



To use the conference mobile app, scan the **QR code** on the back of the program or download the **CrowdCompass Directory** from your app store and search for “NAAEE”.

# General Information

## Auction Items

Please bring auction items to the NAAEE office in Marina 5, where volunteers will be ready to accept your donation. (If the office is not open, please leave donations at the registration desk.)

Bidding on silent auction items begins on Friday at 9:00 AM in the Exhibit Pavilion. The live auction will be held and the silent auction will close during the gala at Fiesta de Reyes on Saturday evening.

## Audio-Visual Equipment Problems

If presenters experience any audio-visual issues during your sessions, please ask the volunteer room monitor (if there is one) to report it to any staff member or the NAAEE office. Any staff member will help connect you with our audio-visual experts as quickly as possible.

## Authors' Corner

Authors will be available to sign and sell books during the opening reception on Thursday evening. See page 35 for more information.

## Breakfast

Quick breakfast items are available for purchase at the Sheraton's Marina Market and Café.

## Coffee Breaks

There will be coffee breaks at 10:00 AM on Friday and Saturday in the Exhibit Pavilion, and on Sunday at 9:40 AM in both the Grande and Nautilus Foyers.

## Community Service Project

Each year, NAAEE participates in a volunteer Community Service Project to give back to our host community. This year, we'll help Loma Portal Elementary School establish a schoolyard habitat; see page 23 for details. Sign up at the registration desk.

## Continuing Education Units

Conference participants can earn CEUs documenting their professional development hours through the University of Wisconsin–Stevens Point. Pick up information at the registration desk.

## Exhibit Fair

<b>Friday</b> 9:00 AM–5:00 PM	<b>Saturday</b> 9:00 AM–4:00 PM
----------------------------------	------------------------------------

We'll celebrate the Exhibit Fair with a full buffet lunch on Friday from 12:30 PM–2:15 PM in the Exhibit Pavilion. Explore the wealth of resources that our exhibitors have on display, visit the conference poster presentations, and get the latest news from your NAAEE Affiliate at the Affiliates Welcome.

## Field Trips

If you registered for a Thursday field trip, meet your host and transportation at the Sheraton entrance.

## Jobs and Resumes

Add your job listing or resume to the notebooks near the registration booth. Stop by and look for job openings or great candidates any time during registration hours.

## Mobile App

Our conference mobile app allows you to search the conference program, build your own schedule, network with other attendees, and more. Download the CrowdCompass Directory from your app store and search for "NAAEE." Need support? Ask at the registration desk.

## Ticketed Events

These events are included with conference registration. Guest tickets are available for purchase at the registration desk.



- **Exhibit Fair Celebration**, Friday, 12:30–2:15 PM. Includes a full buffet luncheon, exhibits, poster presentations, and the Affiliates Welcome. Additional tickets can be purchased until Wednesday at 11:30 AM.
- **Annual Gala and Stapp Auction at Fiesta de Reyes**, Saturday, 6:00–8:30 PM. Includes festive hors d'oeuvres, Mexican folklorico dancers, shops, and the silent and live auctions. Additional tickets can be purchased until Thursday at 5:00 PM.
- **Awards Luncheon and Closing Plenary**, Sunday, 12:00–2:30 PM. Additional tickets can be purchased until Friday at 11:30 AM.

## WiFi Access

Free Wi-Fi is available in the Sheraton's public areas and meeting rooms. We hope you'll take advantage of the access to send a few tweets using #NAAEE2015 to let folks know what you think of the conference!

## Young Professionals

Several special activities are planned for those just entering the environmental education profession. See page 23 for a listing of opportunities to meet new colleagues and further develop relevant skills.

# Conference Strands

Six cutting-edge thematic strands characterize this year's conference:



## Conservation and Education ●

Achieving conservation goals through education, communication, social marketing, and ecotourism strategies, including public participation in scientific research (PPSR) and place-based community action

**Strand Leader: Michelle Eckman**

## Environmental Education in Urban Settings ●

Resources, strategies, and dialogue about effective environmental education in urban settings

**Strand Leaders: Eboni Cooper and Alex Kudryavtsev**

## Greening PreK–12, Higher Education, and Vocational Training ●

Using environmental education to enhance student achievement, conserve resources on campus, support national education trends, and prepare educators to integrate environmental concepts into their curriculum

**Strand Leader: Nate Ivy**

## Inspiring Connections to the Outdoors ●

Cultivating partnerships and providing outdoor educational experiences that connect people of all ages to nature

**Strand Leader: José Gonzalez**

## Research-Based Practice in EE ●

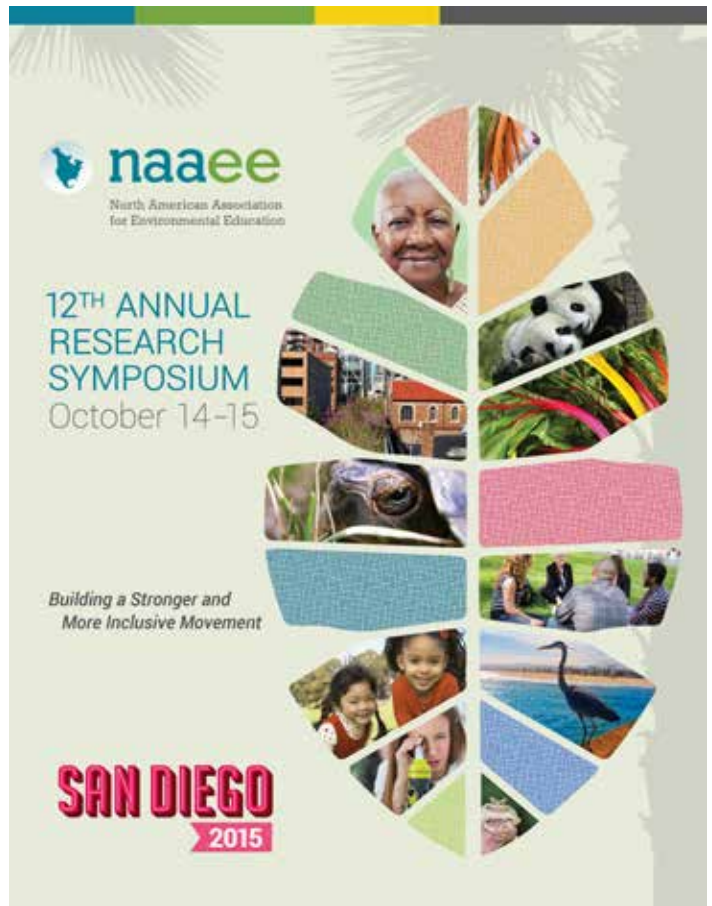
Using research to inform how we design, develop, refine, and promote environmental education programs, including methods to engage new and underrepresented audiences

**Strand Leader: Steve Kerlin**

## Teaching About Environmental Issues and Systems Thinking ●

Educating for informed participation in addressing environmental challenges with a systems-thinking approach

**Strand Leader: Dave Chase**



## Earn Continuing Education Units (CEUs) for Conference Attendance

NAAEE has partnered with the University of Wisconsin–Stevens Point (UWSP) to offer CEUs for attending the conference and Research Symposium.

Participants can receive a certificate documenting their continuing education units by completing an application form that verifies session attendance and submitting the form, along with a \$30 processing fee, to UWSP Continuing Education and Outreach. You can pick up an application form at the registration desk. Ten contact hours of professional development equals one CEU.

For more information please contact **Dr. Steve Kerlin** at [skerlin@uwsp.edu](mailto:skerlin@uwsp.edu).



Continuing Education and Outreach  
University of Wisconsin-Stevens Point



## Concurrent Session Formats

Conference participants will see a wide variety of session types listed in the conference program. NAAEE offers different formats in an effort to accommodate the maximum diversity and number of presenters. Session formats vary in length and degree of depth and interaction.

### Workshop (Full or half day)

Workshops are in-depth sessions that actively develop specific professional competencies and have widespread potential for implementation. Workshops are scheduled on Thursday, prior to the start of the formal conference. Participants can register for workshops at the conference as space allows; fees apply.

### Symposium (90 minutes)

Symposia are panel discussions presenting different perspectives on a topic or question related to one of the focus points for each strand. Panels generally include at least three panelists and a moderator.

### Hands-on Presentation (90 minutes)

Hands-on sessions provide participants with an opportunity to engage in teaching activities and interactive discussions about a particular topic.

### Traditional Presentation (40 minutes)

Traditional presentations focus on a single topic or program, typically including a talk or media presentation followed by a short discussion.

### Roundtable Discussion (40 minutes)

Roundtable discussions emphasize spirited discussion between the presenter(s) and session attendees about a central question. Presenters briefly introduce the baseline idea or issue they wish to explore, and then open the discussion for input and exchange of ideas among participants. Six roundtable discussions occur simultaneously in one large room.

### Poster (40 minutes)

Posters are 4-foot x 4-foot two-dimensional printed presentations illustrating research studies, programs, or other work. Posters are fixed to portable bulletin boards for conference participants to review at leisure. In addition, all presenters will be available during the Exhibit Fair Luncheon on Friday to share their posters, answer questions, and interact with attendees.

### Bright Spots (10 minutes)

Bright spots are succinct talks that celebrate specific triumphs and showcase things that work! Each

presenter has 10 minutes to highlight important research findings, successful and innovative family programs, school programs, community partnerships, conservation achievements, expanded audiences, civic engagement, and more. Three bright spots, generally related, are presented back-to-back during one 40-minute time block.

## Finding Sessions of Interest

We've included the following indicators to help you find sessions of particular interest.

### Diversity, Equity, and Inclusion

NAAEE strives to dedicate at least 15 percent of our concurrent sessions within each strand to advancing diversity, equity, and inclusion in EE. These sessions explore ways to strengthen our field through strategies and programs that, among others, help diversify our audiences as well as our workforce, build cultural competence, support environmental justice, engage with new audiences, forge new and lasting partnerships, honor traditional knowledge, and increase our reach and relevance throughout society.



Sessions marked with this icon have been identified by a team from NAAEE's Diversity and Inclusion eePRO group as helping to meet this goal.

### K–12 Teachers



Sessions marked with this green apple have been designated by the presenter as particularly relevant for classroom teachers.

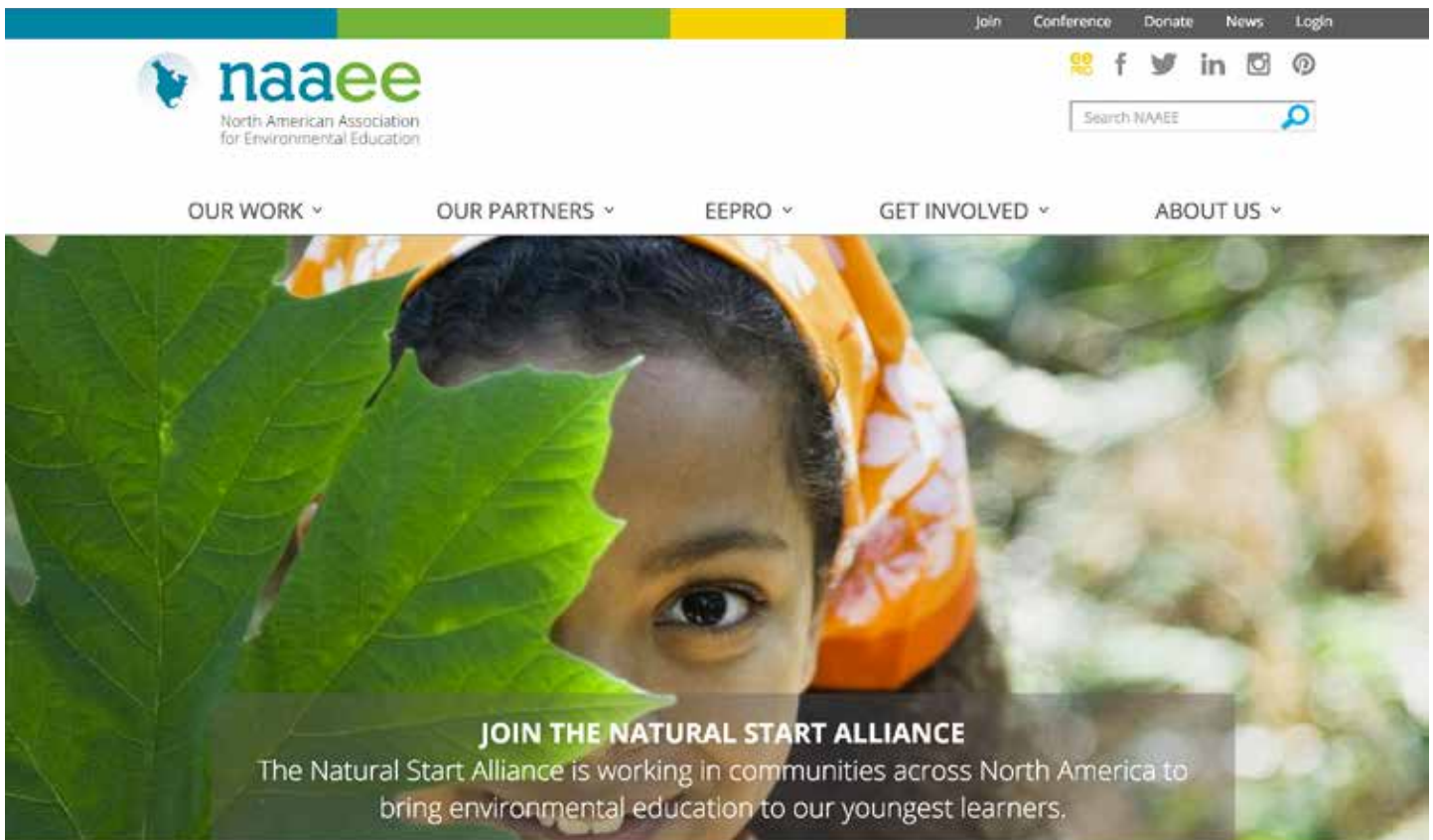
### Keywords

In addition, you can search on these tags in the mobile app to find sessions in these areas:

*Adult education*  
*Affiliates*  
*Arts*  
*Capacity building*  
*Early childhood*  
*EECapacity*  
*EE Certification*  
*Gardening*  
*International EE*  
*Middle & high school programs*  
*NGSS/Common Core*  
*Spirituality*  
*STEM*  
*Traditional knowledge*  
*Underserved audiences*

# Networking Opportunities

## Sneak Preview: NAAEE's New Website and eePRO



### Be part of something bigger!

We're excited to showcase the new NAAEE website here in San Diego. The website is still under development (Phase I is expected to launch by the end of the year), but we want your feedback now!

We're hoping the new site will make it easy for you to find what you're looking for (from the latest EE research to job postings, professional development opportunities, discussion forums, and more) and to highlight the great work that is taking place at NAAEE and around the world. Our new software will allow you to more easily upload resources and content, write blogs, join discussion groups, and much more.



As part of this revision, we are also creating a new hub for EE professional development called eePRO, which will highlight news from NAAEE and the field, learning opportunities, resources, jobs, events, research, and much more. **NAAEE members** will have the opportunity to join one or more eePRO groups focused on the themes you care about most.

**We would love to get your feedback** to help shape the site. Please visit the registration desk or the NAAEE exhibit to take a short survey, talk with the staff, and win a prize for your help!

## Join the Discussion: eePRO Groups

**Fifteen eePRO groups are in the works.** EE Central is the place for general EE updates and info, and the rest of the themes are based on feedback from our members and supporters.

At the conference, we will be making our transition from the special interest groups of the past to the new eePRO groups. Several of the groups will meet on Saturday at lunch, and you are encouraged to join in! In addition to great discussion and networking opportunities, you'll also learn more about the new website, eePRO, and how to get involved.

You can also sign up for any of the eePRO groups at the NAAEE exhibit booth. And let us know if you're interested in contributing to one of the groups still in development.



EE Central



Advocacy



Affiliates



Climate Change Education



Connecting to Nature



Conservation & Behavior Change



Diversity, Inclusion, and Equity



Early Childhood EE



EE in Urban Settings



Green Schools



Guidelines for Excellence



Higher Education



International EE



Research & Evaluation



Sustainable Communities



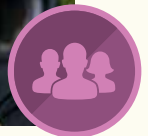
## Brown Bag Lunch Meetings • Saturday, 1:00 PM–2:00 PM



Advocacy  
Nautilus 2



Climate Change Education  
Seabreeze 1



Diversity, Inclusion, and Equity  
Nautilus 1



EE in Urban Settings  
Nautilus 3



Green Schools  
Grand Ballroom C



Higher Education  
Room 514



Talk to our staff members at the **NAAEE exhibit booth** for more information on this exciting networking opportunity.

Thanks to the U.S. Environmental Protection Agency for supporting the development of eePRO through EECapacity.



International EE  
Marina 2

## Meetings & Gatherings

### Accreditation Advisory Board and Accreditation Review Panel Meeting

**Sunday, 9:00 AM–12:00 PM, Room 511**

Working meeting for the Accreditation Advisory Board and Accreditation Review Panel. By invitation.

**Chair: Tom Marcinkowski**

### Accreditation Advisory Board Annual Meeting

**Saturday, 4:00 PM–5:00 PM, Room 511**

Working meeting for members of the Accreditation Advisory Board, Accreditation Review Panel, and State EE Certification Program representatives. By invitation.

**Chair: Tom Marcinkowski**

### Certification Forum

**Saturday, 1:00 PM–2:00 PM, Room 511**

Informal forum for states with, or interested in developing, EE Certification programs.

### Community Climate Change Fellows Meetings

**Friday, 5:30 PM–7:30 PM, Marina 6**

**Saturday, 4:00 PM–5:00 PM, Marina 6**

By invitation.

### Diversity Dinner

**Friday, 7:00 PM, Meet at entrance to Quinn's Ale House (Sheraton)**

Informal dinner gathering for those interested in diversity, equity, and inclusion in EE.



### Global Environmental Education Partnership

#### Welcome & Check-In

**Monday, 7:00 PM–9:00 PM, Harbor's Edge (Sheraton)**

By invitation.

#### GEEP Workshop

**Tuesday, 8:30 AM–4:30 PM, Harbor 1**

By invitation.

#### Follow-Up Meeting

**Thursday, 9:00 AM–12:00 PM, Seabreeze 2**

By invitation.

**Co-Chairs: Ginger Potter, Tzu-Chau Chang**

**NAAEE Leads: Judy Braus, Melissa Hopkins Taggart**



### Environmental Issues Forum Working Group Meeting

**Saturday, 4:00 PM–5:00 PM, Seabreeze 1**

By invitation.

### Guidelines Trainers' Bureau

**Thursday 5:00 PM–6:00 PM, Nautilus 3**

Members of the Guidelines Trainers' Bureau will meet to recap the year's efforts and hear about the latest training activities. By invitation.

**Coordinator: Bora Simmons**

### NAAEE Business Meeting

**Sunday, 9:00 AM–9:40 AM, Nautilus 5**

We welcome your input! Join NAAEE's President, Executive Director, board, and staff for a discussion on the current state of the organization and future directions for NAAEE. Topics will include strategic planning, a financial report, and your questions.

**Coordinators: Jose Marcos-Iga, Judy Braus**

### Natural Start Alliance Morning Networking

**Saturday, 8:00 AM–9:10 AM, Spinnaker 1**

Bring your breakfast and start your morning networking with early childhood environmental educators. This informal gathering will give you an opportunity to meet others who work with young children, share ideas, and learn about some of the things happening throughout the Natural Start Alliance.

**Coordinators: Christy Merrick, Betty Olivolo**

### Southeastern Environmental Education

#### Alliance Meeting

**Saturday, 4:00 PM–5:00 PM, Marina 6**

Members of SEEA and other affiliates in the southeastern United States will meet to discuss current activities.

**Coordinator: Ashley Hoffman**

### University of Michigan Gathering

**Friday, 7:00 PM–8:30 PM, The Boathouse (2040 Harbor Island)**

The University of Michigan's School of Natural Resources invites all alumni, faculty, students, and staff to a dinner hosted by Professor Michaela Zint at The Boathouse.

**Coordinator: Michaela Zint**

### U.S. Fish and Wildlife Service Meeting

**Friday, 2:30 PM–4:30 PM, Marina 6**

By invitation.

### Young Professionals Dinner

**Friday 7:00 PM, C Level Lounge (880 Harbor Island Drive)**

Informal dinner gathering for early career professionals. Meet in hotel lobby at 6:45 to walk together.

## EECapacity at the Conference



How do we strengthen the field of environmental education in a world where more and more people live in cities? How can environmental education contribute to environmental health and the well being of all communities, including those impacted by poverty and by floods, drought, and other stresses and disasters related to climate change and other factors?

The Expanding Capacity in Environmental Education Project—EECapacity—provides opportunities for professionals and volunteers to join in discussions about our environment and our communities, share success stories of where environmental education has made a difference, and learn about successful practices from across the globe. We believe that by providing these opportunities for individuals working in environmental education, youth and community development, resource management, and related fields, we will be able to build on and expand the critical role environmental education plays in fostering healthy environments and communities.

Funded by a cooperative agreement with the U.S. Environmental Protection Agency, EECapacity creates multiple opportunities for people to come together to learn, share, and grow. Our community of learners includes professionals working in nature centers; leaders in community gardening, “friends of parks” organizations, and other “civic ecology” practices; zoo, aquarium, museum, and botanic garden educators; teachers and university faculty; and individuals working in community and faith-based organizations, larger non-profits, government, and business. What binds us together is our commitment to helping all people—from preschoolers to senior citizens, those living in rural areas, suburbs, and densely populated inner cities, recently returned military veterans and their families, those jobless and those employed, and so many others—experience and steward nature, and work together to create a more sustainable future.

To learn more about EECapacity’s work, we invite you to participate in one or more of these sessions and visit [www.eecapacity.net](http://www.eecapacity.net).



## Wednesday

**EECapacity National Training Workshop**  
1:00 PM–5:00 PM, Nautilus 3

## Thursday

**Communication Strategies to Effectively Integrate Climate Change into EE Practices**  
8:30 AM–12:00 PM, Nautilus 2

## Friday

**Promoting Excellence In Environmental Education**  
8:30 AM–10:00 AM, Nautilus 4

**Connecting State Environmental Educator Certification Programs and Environmental Literacy Plans**  
8:30 AM–9:10 AM, Marina 2

**What’s Up with Online Learning?**  
9:20 AM–10:00 AM, Marina 4

**EE Certification: Nuts, Bolts, and Challenges**  
10:30 AM–11:10 AM, Seabreeze 2

**Working in Community: A New Set of Guidelines for Excellence**  
10:30 AM–11:10 AM, Marina 3

**An Interactive Poster: Youth Respond to Climate Change Through Co-Design**  
12:30 PM–2:15 PM, Pavilion

**Describing the Scale, Diversity, and Practice of EE in America**  
12:30 PM–2:15 PM, Pavilion

**Fostering Community Water Conservation: An Online Project-Based Learning Community Approach**  
12:30 PM–2:15 PM, Pavilion



## Saturday

Environmental Literacy Plans, Professional Development, and Guidelines—A Perfect Match  
8:30 AM–10:00 AM, Marina 4

Is Climate Change Changing the Face of EE?  
8:30 AM–9:10 AM, Marina 2

Tracking the Impact and Efficacy of Innovation in EE  
10:30 AM–11:10 AM, Seabreeze 2

EECapacity Project-Based Learning Communities:  
Collaborative Generation of EE Resources  
3:05 PM–3:45 PM, Spinnaker 2

EECapacity: Insights from Four Years of Professional Development in Urban EE  
3:05 PM–3:45 PM, Spinnaker 2

T3 Accelerator: An Online Learning Opportunities  
Booster for EE Organizations  
3:05 PM–3:45 PM, Spinnaker 2

Urban Environmental Education: EECapacity's e-Book  
12:30 PM–2:15 PM, Pavilion

EECapacity's Community Climate Change Fellowship:  
A Mosaic of Approaches  
2:15 PM–2:55 PM, Marina 2

Tracking Preservice Educators' Use of WILD and  
PLT Curriculum  
2:15 PM–2:55 PM, Marina 3

Affiliates: Are You Considering a Certification  
Program for Environmental Educators?  
4:50 PM–5:30 PM, Spinnaker 1

EE Recertification: I Am a Guinea Pig  
4:50 PM–5:30 PM, Spinnaker 1

Why be EE Certified? Testimonials from Graduates of  
EE Certification Programs  
4:50 PM–5:30 PM, Spinnaker 1



## Sunday

Linking Environmental Literacy and the Standards:  
NGSS, C3, and CCSS  
9:00 AM–9:40 AM, Marina 2

Preservice Training Affects How Practicing Teachers  
Include Environmental Education  
11:10 AM–11:50 AM, Spinnaker 1



### Did you know?

For every human on Earth there are **1.6 million** ants.



## **NAAEE and the Affiliates: A Force for Nature**

NAAEE's Affiliate Network is a powerful collective for environmental education and capacity building in the field. The network represents 54 organizations, each affiliated with NAAEE, that work together to support environmental education professionals throughout the United States, Canada, and Mexico. Since the partnership began in 1998, NAAEE and the affiliates have created a more unified voice for EE on all levels, promoting collaborative learning, professional development, and resource development.

Throughout the conference, there are a number of sessions that focus on strengthening affiliate organizations, sharing best practices, and building capacity at all levels of the field. Check out these sessions to learn more.

### **Affiliate Sessions**

**naaee**  
Affiliate

## **Thursday**

**Fundraising for Success: A Collaborative Forum for Affiliate Leaders**

8:30 AM–4:30 PM, Nautilus 5

## **Friday**

**Set Your Nonprofit Up for Success! Principles of Nonprofit Management**

2:15 PM–2:55 PM, Marina 4

**The Basics of Nonprofit Board Governance**

3:05 PM–3:45 PM, Marina 4

**Environmental Literacy Plans: Measuring Success**

4:00 PM–4:40 PM, Marina 2

**Affiliates: Are You Considering a Certification Program for Environmental Educators?**

4:50 PM–5:30 PM, Spinnaker 1

## **Saturday**

**Establishment of a New Professional Association for Environmental Educators in Virginia**

9:20 AM–10:00 AM, Grand Ballroom C

**Tell Your Story: Marketing and Branding in EE Affiliates**

10:30 AM–11:10 AM, Grande Ballroom C

**Strengthening and Diversifying Your Network**

2:15 PM–2:55 PM, Marina 4

**Building a Movement: Affiliate-Driven Collective Impact in Environmental Education**

3:05 PM–3:45 PM, Marina 4



## **Sunday**

**Staffing Your Affiliate: Are You Ready to Take the Leap?**

10:20 AM–11:00 AM, Grande Ballroom C

**Sustainable DC Model Schools: Implementing NGSS Through Environmental Literacy**

11:10 AM–11:50 AM, Grande Ballroom C



**naaee**

North American Association  
for Environmental Education

[naaee.org](http://naaee.org)

## A Gift That Lives On

Invest in NAAEE's future. Bequests are a meaningful way to help us continue to provide the education we need for the world we want.

Please consider including NAAEE in your will or living trust. We can provide official language for you and your attorney.

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*The bristlecone pine is a symbol of longevity. The oldest known tree species in the world, the bristlecone pine lives in air mountain regions of six western states, including the White Mountains of California. The average lifespan is 1,000 years, although some living trees were but 300-year-old saplings when the pyramids were built in Egypt 4,000 years ago.*





## Activities for Young and Emerging Professionals

Young professionals and others new to the field of environmental education can get to know one another and receive precious insight from mentors who are eager to share their valuable experiences. Going beyond the usual CV writing workshops, these activities offer you the chance to meet, learn skills, and share ideas with other environmental educators.

### Networking at C Level

**Friday, 6:45 PM, C Level Lounge (880 Harbor Island Drive)**

Network with other young professionals at C Level Lounge. Meet in the lobby of the Sheraton at 6:45 p.m. and we'll walk one-half mile to C Level, where you can enjoy spectacular views of the Pacific Ocean and meet new friends. (Note: Beverages and dinner are available for purchase.)

### Introduction to Fundraising

**Saturday, 1:00 PM– 2:00 PM, Nautilus 3**

One of the biggest challenges faced by environmental educators is how to secure program funding. Spend your lunch hour with a fundraising mentor as you explore various ways to secure project support, including volunteers, in-kind donations, and funding. (Note: Bring your lunch.)

### Social Media Roundtable

**Saturday, 4:00 PM– 5:00 PM, Nautilus 1**

Continue to network as you explore the role social media plays in promoting environmental education. This roundtable session will allow young professionals to share how they use social media and gather new ideas from each other.



## Community Service Project

**U.S. Fish and Wildlife Service Schoolyard Habitat—  
Loma Portal Elementary School**

**Saturday, 12:45 PM–2:45 PM. Meet at the Sheraton front  
entrance. Transportation and a box lunch provided.**

Each year, NAAEE works with a local organization to organize a community service project through which conference participants can give back in a meaningful way to our host community.

This year, we'll be helping Loma Portal Elementary School establish a U.S. Fish and Wildlife Service Schoolyard Habitat on their campus. Joining other members of the school family for a volunteer workday, NAAEE members will assist with such projects as installing rain barrels, planting four parklette trees in planters, and prepping wood and building a shed to get ready for the Living Lab/Habitat Garden that will be installed in January.

Located within a few miles of the Sheraton, the school was built in 1914 to serve the students and families moving into the developing neighborhood of Loma Portal, associated with the then new Naval Training Center (now Liberty Station).

Participation is limited to the first 20 people to sign up at the conference registration desk.





## NAAEE Evaluation Clinic

**Environmental Education Evaluation Clinic**  
**Saturday, 8:30 AM–10:00, Nautilus 2**

Assessing outcomes and evaluating programs are some of the most challenging activities for us as environmental educators. NAAEE's second annual evaluation clinic provides environmental educators with the opportunity to ask assessment and evaluation questions in a safe, supportive environment and to obtain input from evaluation experts as well as peers with relevant experience. There are no formal presentations. Instead, the format will include informal, roundtable conversations with leading evaluation experts and driven by participants' questions and interests.



## Litterati

Soda cans, plastic bags, and cigarette butts. Trash is everywhere. By combining technology, social awareness and art, Litterati is tackling this ever-escalating problem—one piece of litter at a time.

The Digital Landfill is a photo gallery showcasing litter that has been collected, and the movement's overall impact. Using geo-tagging, Litterati is able to provide insight into problem areas and highlight the most active Litterati communities. Keyword tags on the photos help identify those brands and products that generate the most litter, and the group will use this to work with companies and organizations to find environmentally friendly and sustainable solutions.

### You can join the Litterati in two ways:

1. Photograph a piece of litter, upload the photo to Instagram, and tag it with #Litterati.
2. Download the Litterati mobile app for your iPhone.

And, of course, after you've photographed the litter, recycle it or throw it away!

**Check out the Litterati photos in the Exhibit Pavilion.**



[litterati.org](http://litterati.org)



## Be sure to visit the Wyland Mobile Learning Center (MLC)

The Wyland Foundation's Mission is to bring people together for clean water and a healthy ocean. By Inspiring a student's curiosity of the natural world through arts & science and using art as a gateway to science learning, we encourage children to become creative, solution-oriented stewards of our planet as a whole. The Foundation's MLC programs fill the gap in community services, field trips, art, and science activities that have resulted from the poor economic conditions of the past several years. One of our most innovative tools, our Clean Water Mobile Learning Center, provides a state of the art science "classroom" that travels all over the country with interactive exhibits.

**Explore the Wyland Mobile Learning Center outside the Exhibit Pavilion.**

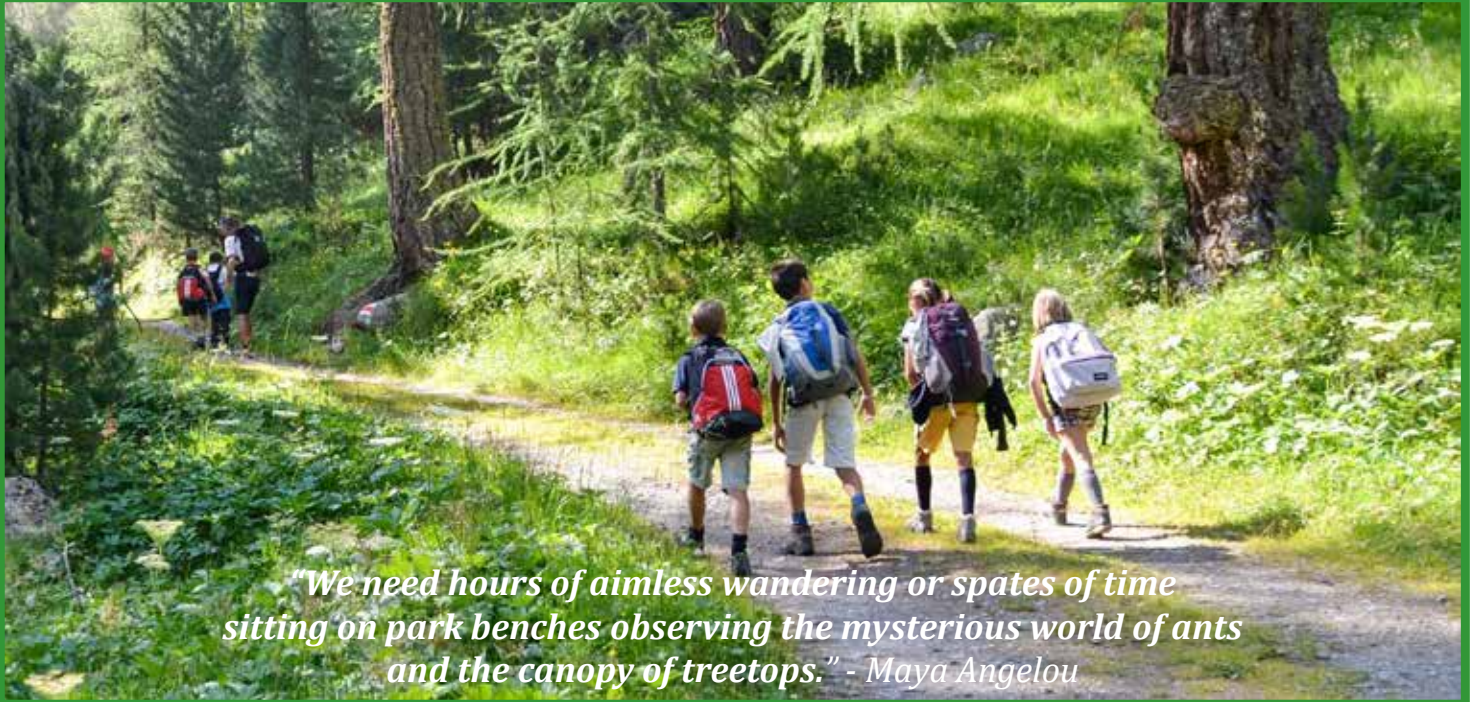


[wylandfoundation.org](http://wylandfoundation.org)

SF Bay Area

**EEFC**  
Environmental Education  
Funders Collaborative

## We Welcome Funders and Educators to the NAAEE 44<sup>th</sup> Annual Conference!



*"We need hours of aimless wandering or spates of time sitting on park benches observing the mysterious world of ants and the canopy of treetops." - Maya Angelou*



The Bay Area Environmental Education Funders Collaborative (EEFC) strengthens local philanthropy that is focused on equipping students with the outdoor experiences, scientific knowledge, and habits to become lifelong environmental advocates and engaged members of their communities.

Join us. Visit [www.eefcfunders.org](http://www.eefcfunders.org)

*Clarence E. Heller Foundation \* David and Lucille Packard Foundation \* Dirk and Charlene Kabcenell Foundation  
Foundation for Youth Investment \* Kimball Foundation \* Morgan Family Foundation  
Sand Hill Foundation \* S.D. Bechtel Jr. Foundation*



# Thank you to our partners and supporters

This conference wouldn't have been possible without the dedication of all the people on this list, as well as their employers and families. These amazing volunteers have given generously of their time and talents. There are also hundreds of others, not listed here, who pitched in to help along the way. Thanks to all of you for your hard work and willing spirits. You've brought this conference to life!

## Conference Co-Chairs



**Lori Kiesser**  
Development Officer,  
Inside the Outdoors



**Pam Johnson**  
Director of Educational  
Partnerships,  
Emerald Cove Outdoor  
Science Institute

## Conference Committees

### Affiliates Welcome

Barbara Garrity  
Jan Weaver

### Auction

Dawn Curtis  
Mikayla Curtis

### Awards

Brenda Metcalf

### Diversity, Equity, and Inclusion

Darryl Ramos-Young  
Raquel Pinderhughes  
Eaton Dunkelberger  
Sandi Funke  
Alicia King  
Camile Rivera-Tinsley  
Anne Marie Tipton  
Jody VanRiper  
Moira Wilkinson

### Field Trips

Pam Johnson

### Local Arrangements

Erin Foster  
Anne Fege  
Janice Swaisgood  
Anne Marie Tipton

### Program Production

Ruth Mann

### Research Symposium

Cat Stylinski  
Ruth Kermish-Allen  
Erin Kelly

## Strand Leaders

- **Conservation and Education**  
Michelle Eckman
- **Environmental Education in Urban Settings**  
Ebony Cooper  
Alex Kudryavtsev
- **Greening PreK–12, Higher Education, and Vocational Training Leader**  
Nate Ivy
- **Inspiring Connections to the Outdoors**  
José Gonzalez
- **Research-Based Practice in EE**  
Steve Kerlin
- **Teaching About Environmental Issues and Systems Thinking**  
Dave Chase

## Technology

Rob Stewart

## Young Professionals

Marie Rychlik

## Conference Proposal Reviewers

Thank you to 107 colleagues who took the time to diligently review more than 600 proposals submitted for this year's conference. If you would like to volunteer to review the 2016 proposals, watch for announcements in *EE News*, NAAEE's regular email bulletin. We look forward to working with you to create another outstanding program in Madison!

## Onsite Volunteers

Thanks to each member of our incredible onsite volunteer crew.

## Conference Scholarships

NAAEE is proud to have provided funds to help enable more than 175 professionals and students attend the 2015 conference in San Diego. Our thanks to the following organizations, whose support made this possible.



The **Environmental Education Scholarship for Academic Study** is awarded to a college or university student in each year's conference host state.

Recipients are selected based on their understanding of and commitment to environmental education and their potential for future contributions to the field. This year, NAAEE recognizes **Daniel Dominguez Valles, University of California, Los Angeles**, and **Kathryn Harhai, Pitzer College**.



The **Columbia Sportswear Teacher/Administrator Scholarship** recognizes a teacher's achievement in environmental education in the classroom and the administrator who supported

his or her endeavors. This year's recipients are **5th grade teacher Trevor Hance** and **principal Jan Richards** of **Laurel Mountain Elementary School** in Austin, Texas.

We are especially grateful to the many NAAEE members who contribute to scholarships through their Stapp Scholarship Auction purchases and as part of their conference registration.

## The UL Innovative Education Award

Over the past year, NAAEE is proud to have teamed with UL to invest in environmental and STEM education, sustainable communities, and youth empowerment by developing the UL Innovative Education Award. By offering recognition grants and support, this major initiative increases the impact of existing innovative nonprofit programs that use the environment as a pathway to STEM learning. Please join UL and NAAEE in congratulating these five extraordinary recipients of the first ULIEA awards.

### Grand Prize Winner—\$100,000 Recognition Grant The Future City Competition

A project-based learning competition that asks teams in middle schools throughout the U.S. to imagine, research, and design virtual reality scale models of cities of the future that emphasize environmental sustainability, with a goal of making the world a better place

### Tier Two Winners—\$50,000 Recognition Grants Women in Natural Sciences Program

An out-of-school-time, four-year program that provides mentoring for Philadelphia high school girls to help prepare them for, and help them down a path to, college and STEM/E-STEM careers

### Cafeteria Culture—Arts+Action Cafeteria Waste Reduction

A program that develops hands-on activities around sustainability topics and incorporates them into the school curriculum with the objective of achieving zero-waste standards in school cafeterias and climate-smart communities, and works to dramatically reduce levels of garbage at schools and in the homes of students

### Tier Three Winners—\$25,000 Recognition Grants Making Tracks: Environmental Leadership Through Knowledge Integration

The Trent Aboriginal Cultural Knowledge and Science (TRACKS) Program works with indigenous youth from local First Nations communities by integrating traditional and contemporary indigenous knowledge and culture with environmental science skills, knowledge, and activities

### The University of Idaho McCall Outdoor Science School: Building E-STEM Identity in Idaho

A program that connects students to peers, mentors, community leaders, and experts in an E-STEM initiative that uses problem-based and inquiry-based approaches in small groups to bring innovative solutions to complex real world problems in the context of Idaho's land, water, and communities

For more information, visit:  
[naaee.org/ulinnovativeeducation](http://naaee.org/ulinnovativeeducation)



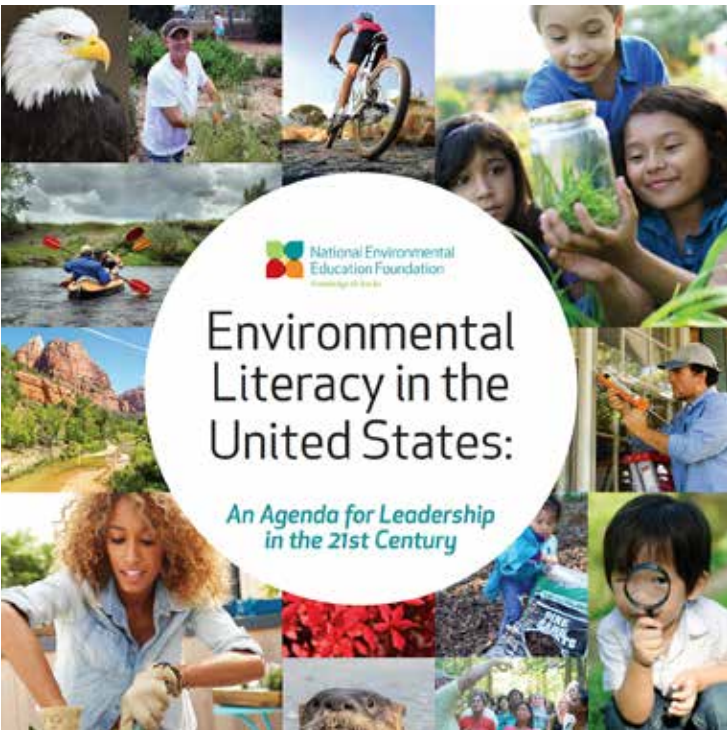
# PARK

There are parks everyone should see some day, and a few you could stop by this afternoon.



Arches National Park | Brooklyn Bridge.

[findyourpark.com](http://findyourpark.com)



NEEF'S *Environmental Literacy in the United States* report explores how environmental education links to major trends and innovations in technology, employee engagement, nature appreciation, K-12 teaching and building sustainable communities.

View the report at [www.NEEFusa.org](http://www.NEEFusa.org)

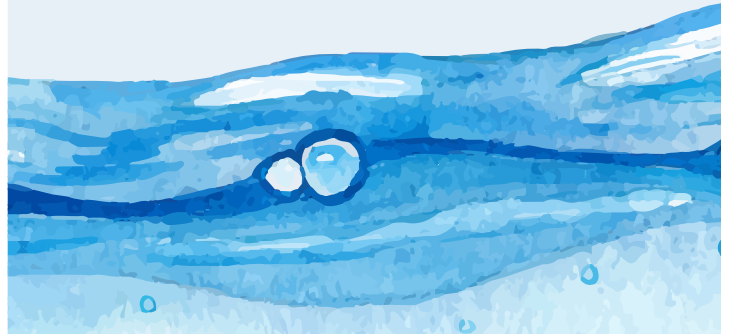


**naaee**

North American Association for Environmental Education

## Cal Water H2O Challenge

NAAEE joined with the California Water Service to create the Cal Water H2O Challenge, a classroom competition that teaches kids to care for water and empowers them to make a difference through project-based learning.



We are proud to recognize the inaugural competition's grand prizewinner: **Kelli Voss and Sarah Greenberg's 5th Grade Class at Shasta Elementary School** in Chico, CA.

This prize-winning classroom developed a rain collection system to water a native plant, drought-tolerant garden that they also designed and planted themselves. As the students worked in teams as financiers, execution specialists, designers, engineers, and researchers, they studied water conservation and the California drought. They also created brochures to spread conservation awareness at Shasta Elementary and neighboring schools. The classroom received a \$3,500 grant and a wonderful trip to the Channel Islands with NatureBridge.

For more information, visit: [calwater.com/challenge](http://calwater.com/challenge).

# Keynote Speakers

The distinguished group of keynote speakers for the 2015 conference includes a member of the teaching faculty of Vice President Al Gore’s Climate Project, the subject of a Hollywood screenplay, the first person of color to serve as president of the Sierra Club’s board, a member of the inaugural class of Audubon/Toyota TogetherGreen Fellows, a participant in the first TED Youth national conference, and the recipient of two best actress nominations for British Columbia’s film and television industry Leo Award.

In keeping with our conference theme—**Building a Stronger and More Inclusive Movement**—each of our compelling speakers has helped to redefine leadership and change the way we think about diversity, equity, and inclusion. Collectively, they have inspired and empowered countless individuals, and you will find yourselves among them.

## An Inspiring Lineup of Keynote Speakers



### Thursday



#### Stephen Pemberton

**Joined at the Hip: How Diversity and Inclusion and Environmental Education Can Bridge Cultural Divides**

**6:30 PM–8:30 PM, Grande Ballroom A**

Stephen Pemberton’s critically acclaimed memoir, *A Chance in the World: An Orphan Boy, a Mysterious Past, and How He Found a Place Called Home*, chronicles his difficult path through foster care and his determined search for his family. It is this inspirational journey that has compelled Steve to become a unique and powerful force for change. Pemberton offers abundant inspiration to others, emphasizing that from tragedy and strife can come extraordinary accomplishment.

Overcoming seemingly insurmountable odds, Steve has gone from being a forgotten ward of the Commonwealth of Massachusetts to becoming a trailblazing Divisional Vice President at Walgreens and the first Chief Diversity Officer for the 113-year-old company. Prior to that, he made history as the first Chief Diversity Officer and Vice-President of Diversity and Inclusion for an Internet start-up while at Monster.com.

### Friday



#### PLENARY PANEL:

**Harry Boyte, Hahrie Han, J. Drew Lanham, Jackie Ogden**

**Moderated by Allison Chin**

**EE and Social Movements: Connecting the Dots**  
**11:30 AM–12:30 PM, Grande Ballroom A**

**Harry Boyte** is founder of the Center for Democracy and Citizenship at the Humphrey School of Public Affairs, merged into the Sabo Center for Democracy and Citizenship at Augsburg College, where he now serves as Senior Scholar in Public Work Philosophy. He is also a Senior Fellow at the University of Minnesota’s Humphrey School of Public Affairs. Harry is founder of Public Achievement, an international civic education and empowerment initiative for young people now in hundreds of communities in more than two dozen countries. He has authored or edited ten books on

democracy, citizenship, and community organizing, and his work has appeared in more than 150 publications.

As coordinator of a network of higher education institutions created at the invitation of the White House Office of Public Engagement, Harry worked to develop strategies to strengthen higher education as a public good. He also worked with the White House Domestic Policy Council to analyze the gap between citizens and government and report the findings to President Clinton. In the 1960s, Harry was a Field Secretary for the Southern Christian Leadership Conference, the organization headed by Martin Luther King, Jr.

**Hahrie Han** is the Anton Vonk Associate Professor of Political Science at the University of California, Santa Barbara. She specializes in the politics of social policy. Her recently published book, *How Organizations Develop Activists: Civic Associations and Leadership in the 21st Century*, examines the strategies that the most effective civic associations use to engage activists and develop civic leaders in health and environmental politics. Hahrie has also consulted and done research with a wide range of civic and political organizations around the world, including the Sierra Club, Greenpeace, Mothers Out Front, MoveOn.org, Reform Immigration for America Now, the National Korean-American Service and Education Consortium (NAKASEC), ReThink Health, and Doctors for America. Hahrie received Stanford University's Centennial Teaching Award in 2002 and Wellesley College's Apgar Award for Innovative Teaching in 2006.

**J. Drew Lanham** is a Clemson University Master Teacher and Alumni Distinguished Professor in wildlife ecology, with research interests in songbird ecology and conservation; integration of game and nongame wildlife management; and the African American land ethic and its role in natural resources conservation. Drew is an active board member of several organizations including the South Carolina Wildlife Federation, Aldo Leopold Foundation, and BirdNote.

Drew is a widely published essayist and an endeavoring poet who has contributed to several anthologies with pieces focusing on a passion for place and internal and societal conflicts that sometimes put ethnicity and passion for nature at odds. His first solo work, *The Home Place-Memoirs of a Colored Man's Love Affair with Nature* (Milkweed Editions) will be published in 2016. Drew views his professional passion and personal missions converging to define environmental sustainability and conservation in new ways.

As Vice President of Animals, Science and Environment, Walt Disney Parks and Resorts, **Jackie Ogden** and her team are responsible for inspiring millions of Disney guests, employees, and business partners to conserve wildlife and the environment. Jackie oversees animal care and health, education, and science; leads the Agricultural and Water Sciences teams and Environmental Integration; and is responsible for animal operations and environmental sustainability.

Prior to her career with Disney, Jackie worked for the Zoological Society of San Diego and Zoo Atlanta. Jackie received her Ph.D. in general/experimental psychology, with a specialization in animal behavior, from the Georgia Institute of Technology. She is the immediate Past Chair of the Association of Zoos and Aquariums Board of Directors.



**Moderator Allison Chin** is an environmental and social justice activist who volunteers with organizations to fight for all peoples' rights to clean air, clean water, and a safe and healthy environment in which to thrive. She actively serves

on the Boards of Sierra Club, the Sierra Club Foundation, and Women's Voices for the Earth. Allison co-chairs the Green Leadership Trust, a network of all people of color and indigenous people who serve on Green Group environmental boards. She is an ardent advocate for building the environmental movement's power by diversifying its leadership at all levels.

Allison was the first person of color to serve as president of the Sierra Club Board of Directors (from 2008 to 2010 and from 2012 to 2013). During her tenure, she presided over a historic decision for the organization to partake in an act of civil disobedience against the Keystone XL pipeline. Allison's long relationship with the Sierra Club started just out of college through the San Jose chapter of the Inner City Outings program, and she has since served in numerous leadership positions.

Allison is a retired biologist, and was Senior Director, Preclinical with Geron Corporation and a Postdoctoral fellow and staff scientist at Stanford University School of Medicine.



## Saturday



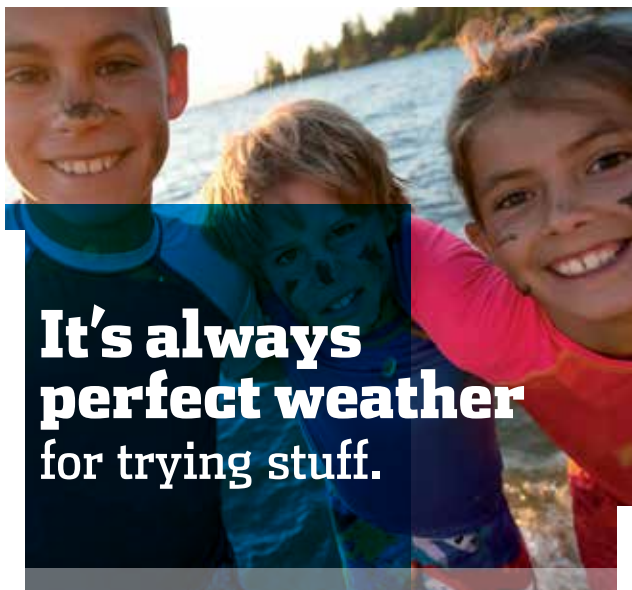
### Andy Goodman

**Change the Story, Change the World**  
11:30 AM–12:30 PM, Grande Ballroom A

**Andy Goodman** is co-founder and director of The Goodman Center, which teaches public interest

professionals how to reach more people with more impact. Along with the book, *Storytelling as Best Practice*, he is author of *Why Bad Ads Happen to Good Causes* and *Why Bad Presentations Happen to Good Causes*. He also publishes a monthly journal, *free-range thinking*, to share best practices in the field.

Best known for his speeches and workshops on storytelling, presenting, and strategic communications, Andy has been invited to speak at Harvard's Kennedy School of Government, the Woodrow Wilson School of Public Affairs at Princeton, and at major conferences across North America. He serves as Senior Advisor for Civic Ventures and is on the advisory boards of VolunteerMatch and GreatNonprofits.



**It's always  
perfect weather  
for trying stuff.**



**Columbia**  
Trying stuff since 1938

## Sunday



### PLENARY PANEL:

**Ta'Kaiya Blaney, Vincent Culliver,  
David Flores, Charles Orgbon III**

Moderated by **Juan Martinez**

**Game Changers Under 25: What Can We Learn?**  
12:00 PM–2:30 PM, Grande Ballroom A

NAAEE members dedicate their lives to empower future generations to become global citizens and environmental stewards. The young professionals on this panel are on the frontlines of the fight for environmental and social justice, connecting their peers to the outdoors in an urban world, and inspiring a new way of thinking. This closing plenary session will explore the role people under 25 are playing in the environmental education movement and provide advice to professionals about how to best reach the next generation.

*This panel is made possible by the U.S. Fish and Wildlife Service, and Chief of the Division of Educational Outreach Steve Chase will start things off with a few words of welcome.*

**Ta'Kaiya Blaney (Tla'amin)** is a singer, songwriter, actor, and Native Children's Survival (NCS) Youth Ambassador. At the age of 10, Ta'Kaiya's first musical release, "Shallow Waters," brought her national acclaim. She has been featured in several television programs, including the 2015 HBO documentary series, *Saving My Tomorrow*.

In recent years, Ta'Kaiya has performed and spoken at grassroots Indigenous gatherings and rallies, and at United Nations forums across the globe, including the TUNZA United Nations Children and Youth Conference on the Environment in Bandung, Indonesia; the United Nations Rio+20 Conference on the Environment in Rio de Janeiro, Brazil; and the United Nations Permanent Forum on Indigenous Issues in New York. In 2014, at the age of 13, on behalf of NCS, Ta'Kaiya presented an intervention establishing the NCS "Indigenous Children's Fund" at UN headquarters in New York City.

**Vincent Culliver** is an instructor for Outdoor Outreach (OO), a San Diego-based nonprofit that connects youth to the transformative power of the outdoors. He first joined the organization as a student participant. As Assistant Coordinator for OO's Outdoor Voices Youth Leadership Initiative, Vincent has been working to increase outdoor access for youth by sharing his experiences with key local, state, and national decision makers. Vincent has worked with other OO young leaders to develop recommendations, ranging from improved public transportation to universal outdoor education, to increase outdoor access for diverse urban youth. He has helped present these to legislators across the state through meetings and public comment. In August 2014, Vincent presented specific recommendations to USFWS Director Dan Ashe and Interior Secretary Sally Jewell for how to connect more young people to the outdoors.

Mexico City native, **David Ricardo Flores Gonzales**, is a journalist, political organizer, social activist, and full-time student. David writes for a local Guadalajara newspaper about culture, politics, and social movements. David works with Lexicon of Stability's Project Localize, helping classrooms identify and promote ways to encourage progress and empower people in their communities through collective action for sustainable economic, cultural, and social development. Focused on local food systems, Project Localize participants learn about their communities' food producers, farmers, and stakeholders, create informative artwork related to their findings on sustainability, then share with their communities to create lasting change.

David also works with Wikipolítica México, a sociopolitical movement working to improve the democratic process in Mexico and empower citizens through social innovation to encourage progress on a national scale. Through his work with Wikipolítica México, David helped to elect 25-year-old Pedro Kumamoto, the first independent deputy in the Jalisco Local Congress. This grassroots movement's success is a rare feat in Mexico's political landscape, which for the past 80 years has been dominated by two political parties, the centrist PRI, and conservative PAN. David also contributes his thoughts on youth participation in the political process to a local radio program. David feels that everyone can create change in their communities to solve the world's most pressing problems, such as pollution, energy consumption, and poverty.

In 5th grade, **Charles Orgbon III** responded to his school's litter problem by leading school-based community beautification projects. When he realized that the environmental movement wasn't adequately supporting young environmental change makers, he created Greening Forward. Today, the youth-driven, youth-imagined organization has grown into the largest movement of its kind. Greening Forward has distributed tens of thousands of dollars to youth environmental projects that plant trees, build compost bins, install rain barrels, monitor streams, and recycle waste. The organization has planned numerous International Young Environmentalists Youth Summits, and advocates for a number of environmental issues.

To inspire more young people to make a positive difference in the world, the Children's Museum of Indianapolis has commemorated Charles' efforts in its permanent exhibit, Power of Children. Charles is one of 18 young people profiled in Laurie Ann Thompson's award winning *Be a Changemaker: How to Start Something that Matters*, an inspiring guide for young social entrepreneurs who want to effect social change.



A proud product of south central Los Angeles, **moderator Juan D. Martinez** is Children & Nature Network's Director of Leadership Development and the Natural Leaders Network, which focuses on celebrating the positive value of nature.

His passion to empower youth led him to direct Sierra Club's first environmental justice youth leadership academy in Los Angeles. Named by *National Geographic* as an Emerging Explorer in 2011, Juan was recognized by the National Science Teachers Association's Multicultural and Equity Committee for his work as a Global Explorer. He represents The North Face as an ambassador for outdoor engagement and in 2012 he became the youngest member in history of the Sierra Club Foundation Board of Trustees.

# 12<sup>TH</sup> ANNUAL RESEARCH SYMPOSIUM

October 14-15

**NAAEE's annual Research Symposium brings together more than 100 new and experienced researchers from around the globe** to explore the current state and future directions of environmental education research and to advance the use of practices proven to be effective. The Symposium facilitates discussion about ongoing research, fosters dialogue about research-community partnerships, and provides opportunities for graduate students and others to develop and expand their research skills.



## The Importance of the Incidental: Environmental Learning in Everyday Life

**Nicole Ardoin, Joe Heimlich**

Most environmental learning occurs outside the formal school system, in the course of everyday life. Such learning happens across experiences (life-wide), continually and inconsistently through a person's life (life-long), and occasionally striking a chord of interest and greater exploration (life-deep). To understand this life-wide, life-long, and life-deep learning, it is important to contextualize the learning in the situation of a person's complex being.

This keynote will consider the conditions in which individuals enter informal, non-formal, and incidental environmental learning opportunities. One focus will explore the range of mundane-to-unusual in a person's life: the rich combination of ordinary and extraordinary circumstances that comprise our lives and, accordingly, our learning experiences. Our second focus will explore the concept of learningscapes: the combination of social roles and ways that individuals engage in institutions, structures, society, recreation, and so on. We will discuss the strengths of and challenges to learningscapes as a framework for understanding environmental learning and explore opportunities for environmental education based on environmental learningscapes.

Through presentation, discussion, and small groups, we will draw on learning and behavior theory—as well as practice in environmental education and related fields—to examine notions of environmental learning across everyday life.



**Nicole Ardoin** is an assistant professor in the Stanford University Graduate School of Education and Woods Institute for the Environment. Her research interests include relationships between environmental learning and behavior, particularly as influenced by place-based connections.



**Joe Heimlich**, principal researcher at the Lifelong Learning Group and professor emeritus at The Ohio State University, focuses on environmental education and evaluation in informal settings—particularly museums, zoos, and aquariums—and across the learningscape.

A new citizen science project in conservation



# WildCam Gorongosa

As part of a large-scale restoration effort, researchers in Gorongosa National Park in Mozambique are working to discover the park's animals and track their recovery using motion-sensitive trail cameras. These cameras have snapped hundreds of thousands of photos (and counting). **You can now get involved by identifying the wildlife!**

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# Special Events

## Thursday

### Social Hour: Making New Connections

4:00 PM–5:00 PM, Quinn’s Ale House (Sheraton lobby)



Come break the ice at this no-host social hour where you can meet new people, expand your circle, and celebrate diversity, equity, and inclusion efforts in environmental education across North America and around the world. Let members of the NAAEE staff, board of directors, advisory council, and Diversity and Equity eePro group welcome you to San Diego and NAAEE. Join us in making connections and building bridges as we kick off the 44th annual conference! The group will then move to the official opening reception on the Bayview Lawn.

### Opening Reception with Share Fair & Authors’ Corner

5:00 PM–6:30 PM, Bayview Lawn



**Welcome!** Whether this is your first NAAEE conference or your thirty-first, it all starts here! Meet new colleagues and greet returning ones as you enjoy substantial hors d’oeuvres and a cash bar at the opening reception of the conference.



**Dr. Zoolittle** and an animal ambassador from the San Diego Zoo will be working the crowd, extending an official welcome to the wonderful city of San Diego, and NAAEE Board and staff members will be there to greet you and answer any questions about NAAEE and the 2015 conference.

You’ll also have the opportunity to explore the exciting work of a variety of nonprofit organizations at this year’s Share Fair. The Share Fair includes tabletop displays highlighting successful programs and inspiring ideas of a variety of nonprofit organizations.

And don’t miss the Authors’ Corner, which features NAAEE members and other writers who are available to discuss, sign, and sell their newest publications. Chat with the authors about writing and publishing for the environmental education field and learn more about their experiences.

Come connect with colleagues and begin to foster relationships that we hope will continue far beyond the conference.

## Thursday

### Conference Opening Ceremony

6:30 PM–8:30 PM, Grande Ballroom A



Immediately following the reception, we'll officially kick off the conference with opening remarks from Executive Director Judy Braus and Board President Pepe Marcos-Iga.

This year, NAAEE is thrilled to recognize **Randi Fisher**, co-founder and trustee of the **Pisces Foundation**, with the NAAEE Award for Distinguished Leadership in Environmental Education. The Foundation's vision, "people and nature thriving together," reflects Randi's belief in the importance of environmental education in creating a more sustainable future and how important it is to creating learning opportunities to connect people and nature. Randi has truly made a lasting difference in this field, and we are pleased to have an opportunity to honor her with an inspiring tribute.

Following the award presentation, **Stephen Pemberton** will take the stage with this year's opening keynote. A pioneering corporate executive, visionary youth advocate, dedicated board member, and best-selling author, Steve has always made equality, access, and opportunity pillars of his professional and personal life. He currently serves as Chief Diversity Officer and Divisional Vice President for Walgreens, one of America's oldest and most successful companies. After his powerful presentation, Steve has graciously offered to sign copies of his book, *A Chance in the World*.

## Friday

### Exhibit Fair Luncheon

12:30 PM–2:15 PM, Exhibit Pavilion

The Exhibit Fair will be open Friday and Saturday for you to explore innovative programs, dynamic practices, and effective products. And you can help us celebrate by joining us for a great buffet luncheon.

During this special event, you can chat with our exhibitors, who are eager to connect you with the latest and greatest in environmental education products and services. It's an opportune time to peruse the exhibits, bid on fabulous finds in the silent auction, and pick up a new book or teaching tool in the conference bookstore.

The NAAEE Affiliates will also be in the Exhibit Hall to welcome you and share information about the many services they offer to their members on the state and provincial levels. Learn how the Affiliates are helping to develop state environmental literacy plans, find out which states have environmental educator certification programs, and check out other professional development opportunities in your area.

Take advantage of this great time for networking and enjoying a good meal—it's included with your Friday or full conference registration.

Exhibitors are listed on page 110.

### Short Film Screening: *The Guide* by HHMI BioInteractive

5:15 PM–6:30 PM, Grande Ballroom A

Join us for a special screening of HHMI BioInteractive's inspiring short film, *The Guide*. Set against the restoration of Mozambique's Gorongosa National Park, we witness the change in perspective of young tour guide, Tonga Torcida, as he develops a mentoring relationship with famed biologist, Dr. E.O. Wilson. Dr. Wilson inspires Torcida to broaden his thinking and pursue a scientific career. Stay after the show for a Q&A with HHMI science education fellow and former Gorongosa Project researcher, Bridget Conneely.

This event is free, but advance registration is required. Check for available space at the registration desk. Light hors d'oeuvres will be served. Registration includes one drink ticket.

## Saturday

### Annual Gala and Auction

6:00 PM–8:30 PM, Meet buses at Sheraton entrance



NAAEE hosts this year's gala reception and the Stapp Scholarship Auction at the historical and beautiful Fiesta de Reyes, located within Old Town San Diego State Historic Park. With a world-class restaurant, 19 unique shops, Mexican folklorico dancers, and a lush garden courtyard filled with old and rare native plants, this will be a festive and fun celebration for all to enjoy. It's the perfect place to revel in 19th century history, as the Casa de Reyes restaurant is on the site of one of San Diego's first adobe homes, built in 1823. There, Dona Maria de los Reyes Ybanez de Dominguez warmly welcomed her friends and guests, just as Fiesta de Reyes welcomes NAAEE nearly 200 years later.



Get ready to bid on your favorite items in the energetic live auction, which features special treasures in all price ranges, including a fabulous trip to the Galapagos Islands donated by Lindblad Expeditions. The silent auction will culminate at the reception as well. Be there to slip in your final bid and snatch up a great variety of books (many signed by authors), arts and crafts, jewelry, clothing, pottery, and much more.

Every auction purchase helps support scholarships that enable students to attend the conference. The scholarship fund was established in honor of Dr. William Stapp (1930-2001), one of the founders of the field of environmental education. Bill was a huge supporter of NAAEE and introduced many of his students to the association and the conference. Many "Stapplings" have gone on to fill leadership roles in the organization.

This action-packed, fun-filled evening is included with weekend or full conference registration, but be alert that you'll need to show your name badge for entry. Guest tickets can be purchased at the registration desk as space allows. Transportation is provided.

## Sunday

### NAAEE Awards Luncheon

12:00 PM–2:30 PM, Grande Ballroom A

Help us recognize NAAEE award recipients at the annual Awards Luncheon. We will honor individuals and organizations for their laudable work on behalf of the environment at the local, regional, national, and international levels. The awards ceremony includes presentation of the President's Award and NAAEE's highest honor, the Jeske Award.



Following the awards, the incredible young leaders comprising our final plenary panel will simply astound you! Game changers under the age of 25, these talented, dedicated, magnetic individuals will supply enough motivation to fuel our work until we meet again for our 2016 conference in Madison. You do not want to miss this!

The Awards Luncheon is included with weekend or full conference registration. Guest tickets can be purchased at the registration desk as space allows.



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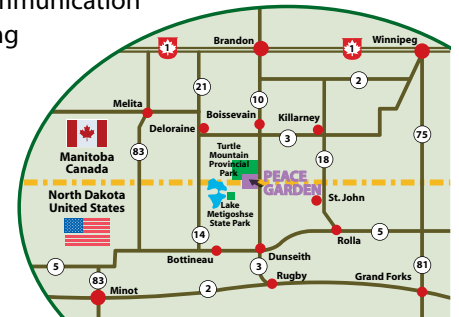
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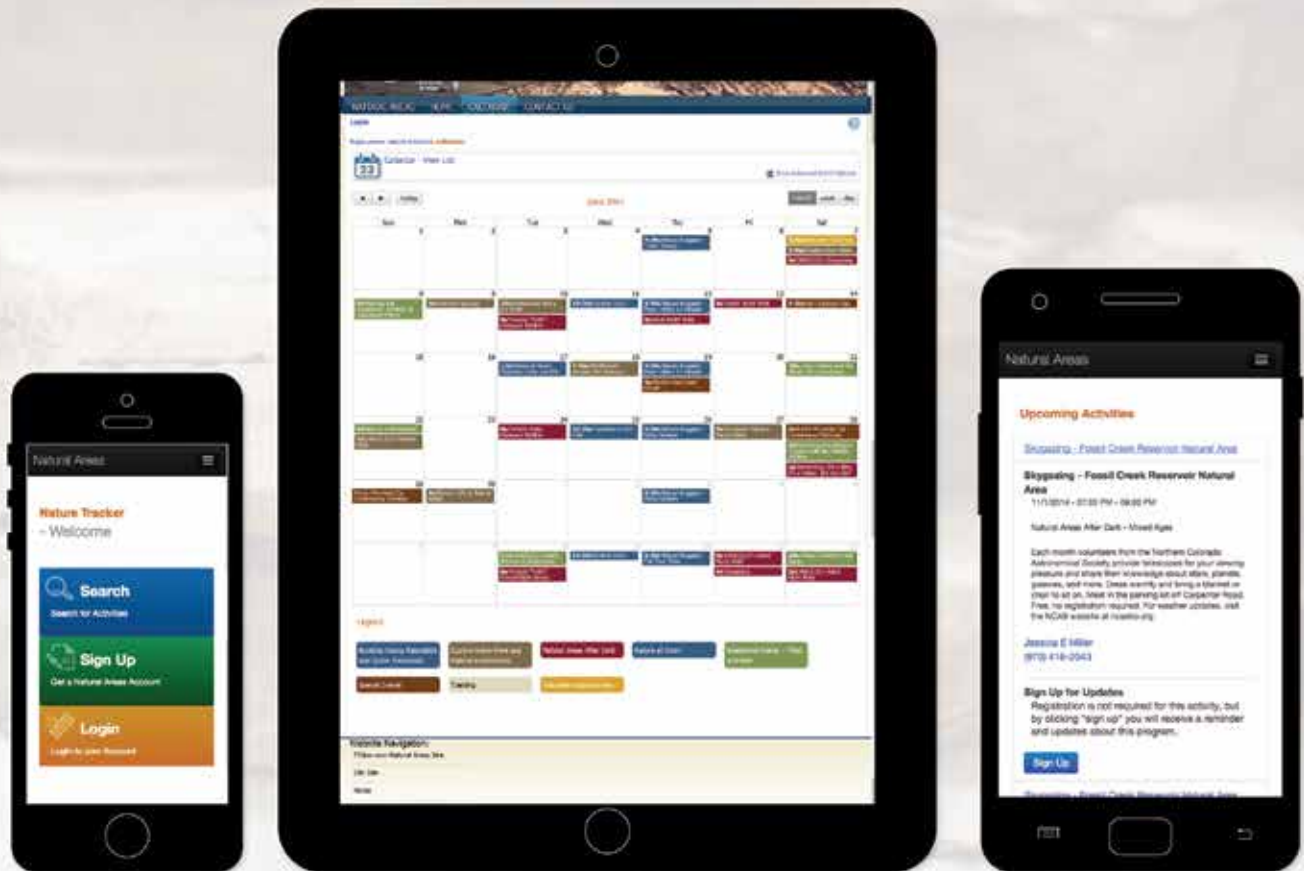


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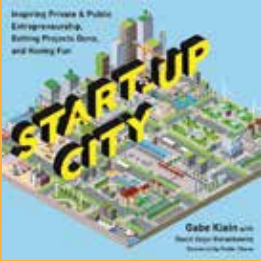


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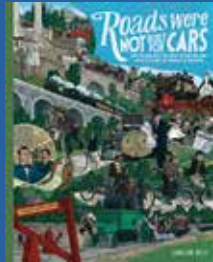
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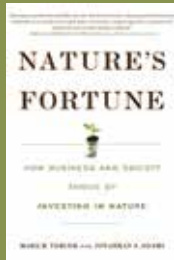
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# Nature-Based Preschool National Conference



# 2016

**August 15-17, 2016**

**Dodge Nature Center  
and Preschool**

St. Paul, Minnesota



## Who is this Conference for?

This conference is for educators and administrators who operate—or who want to operate—nature-based preschools, and allows these specialized educators to network, learn, and propel the field forward.

## What is a Nature-Based Preschool?

Nature preschools put nature at the heart of the program, are based on high-quality early childhood education and environmental education practices, and work toward dual goals of supporting child development and laying a foundation for environmental literacy.

## About Our Conference Site

Join us in the Twin Cities at the Dodge Nature Center, which includes hundreds of acres of open space, a working farm, and one of the nation's oldest and most respected nature-based preschools.

**naturalstart**  
alliance

[naturalstart.org/nature-preschool](http://naturalstart.org/nature-preschool)



**DODGE**  
NATURE CENTER



## Did you know?

The San Diego County Bird Atlas, one of the San Diego Natural History Museum's most ambitious research projects, reports **587** species and subspecies of **native, migrant, and well-established exotic species of birds in the county**—more than in any other region of the United States.



Costa's hummingbird



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# Monday/Tuesday

## Monday 7:00 PM

**Global Environmental Education Partnership Welcome & Check-In**  
**7:00 PM–9:00 PM, Harbor’s Edge (Sheraton)**

By invitation.

Co-Chairs: Ginger Potter, U.S. EPA;

Tzu-Chau Chang, Taiwan Normal University

NAAEE Leaders: Judy Braus, Melissa Hopkins Taggart

## Tuesday 8:30 AM

**Global Environmental Education Partnership Workshop**  
**8:30 AM–5:00 PM, Harbor 1**

By invitation.

Co-Chairs: Ginger Potter, U.S. EPA;

Tzu-Chau Chang, Taiwan Normal University

NAAEE Leaders: Judy Braus, Melissa Hopkins Taggart

## Tuesday 1:00 PM

**Researching Engagement at the San Diego Zoo: A Field Session**  
**1:00 PM–5:00 PM, San Diego Zoo**

Consider the opportunities and constraints of outdoor settings during this field experience at the San Diego Zoo. Discuss approaches appropriate to this and similar sites. Meet taxis at the front entrance to the Sheraton. (Pre-registration required.)

Presenters: Joe E. Heimlich, Lifelong Learning Group/COSI; Nicole Ardoin, Stanford University

## Tuesday 6:00 PM

**Research Symposium Informal Dinner**  
**6:00 PM, Selected restaurants**

A casual evening of food, fun, and conversation focused on EE research. Attendees cover their own transportation and meal. Check list at registration desk for assigned restaurant locations. (Pre-registration required.)



NAAEE extends a warm welcome to the members of the Global Environmental Education Partnership and all of our international participants.





## Wednesday

### Wednesday 9:00 AM

#### Research Symposium

9:00 AM–4:00 PM, Grande Ballroom C

NAAEE's annual Research Symposium brings the academic community together to explore the current state and future directions of environmental education research and to advance the use of practices proven to be effective. Join new and experienced researchers from around the globe to converse about emerging and traditional areas of environmental education research. The 2015 NAAEE Research Symposium facilitates discussion about ongoing research, fosters dialogue about research/community partnerships, and provides opportunities for graduate students to develop the skills needed to become professional researchers. (The Research Symposium requires an additional registration fee.)

Co-Chairs: Cat Styliniski and Ruth Kermish-Allen

### Wednesday 1:00 PM

#### EECapacity National Training Workshop

1:00 PM–5:00 PM, Nautilus 3

Training for the leadership teams of the EECapacity state capacity building projects. By invitation.

Coordinator(s): Anne Umali Ferguson, Cornell University; Jose Marcos-Iga, Environmental Education Exchange; Lori Mann, NAAEE



### Wednesday 4:00 PM

#### Research Symposium Reception

4:00 PM–6:00 PM, Grande Foyer

For Research Symposium participants only.

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# Thursday

## Thursday 7:30 AM

**Research Symposium Grad Student Breakfast**  
7:30 AM–9:00 AM, Grande Ballroom

For Research Symposium participants only.

## Thursday 8:30 AM

### Workshops

**Note:** Workshops require an additional fee. Onsite registration will be accepted as space allows; check at the registration desk. There are full day, morning, and afternoon options. Lunch is included with full day workshops.

### Full Day Workshops

8:30 AM–4:30 PM

**Affiliate Workshop: Fundraising for Success—A Collaborative Forum for Affiliate Leaders**  
8:30 AM–4:30 PM, Nautilus 5

Join us for a collaborative fundraising forum tailored to the specific needs of affiliate leaders. Receive an introduction to fundraising, learn from experts in the field, and share success stories. Potential topics include donor cultivation, crowdfunding, grant writing, conferences and other special events, and exploring joint funding opportunities between affiliates.

**Presenter(s):** Ashley Hoffman, Kentucky Association for Environmental Education; Laura Downey, Kansas Association for Conservation and Environmental Education; Adrian Ayson, New England Environmental Education Alliance; Katie Navin, Colorado Alliance for Environmental Education; Andy Robinson, Andy Robinson Consulting



**Framing Issues for Public Deliberation: NAAEE’s Environmental Issues Forums**

8:30 AM–4:30 PM, Nautilus 1

People are constantly challenged by environmental issues that have far-reaching consequences. With productive civic engagement, people weigh options and discover common ground for action. This workshop introduces NAAEE’s Environmental Issues Forums process, developed with the Kettering Foundation. You’ll learn how to name and frame issues to promote civic deliberation.

**Presenter(s):** Michele Archie, The Harbinger Consulting Group; Bora Simmons, National Project for Excellence in Environmental Education

**From Passion to Movement: Building Effective Advocacy for Environmental Education**

8:30 AM–4:30 PM, Seabreeze 1

How do you turn that passion for outdoor education into a movement? This participatory workshop shares our model for building cross-sectorial collaboration and nurturing grassroots activism. You will learn how we built a strong statewide coalition and effective advocacy campaign through research, polling, grassroots organizing, influencer engagement, and clear, compelling messaging.

**Presenter(s):** Nancy E. Bales, Gray Family Foundation; Rex Burkholder, Gettingto2100.org; Kim Silva, Friends of Outdoor School; Caroline Fitchett, Outdoor School for All

**Using Found Objects to Introduce STEM Concepts to Little Ones**

8:30 AM–4:30 PM, Nautilus 4

The morning will be spent in physical and earth science, the afternoon with life science. Participants will conduct a series of activities using simple and found objects from the local environment and evaluate them as tools for using back home with young children. Rocks, sticks, containers, critters, leaves, soil are used.

**Presenter(s):** Bob Williams, University of Texas–Austin; Mary Elizabeth Hobbs, University of Texas–Austin

## Morning Workshops

**8:30 AM–12:00 PM**

### Communication Strategies to Effectively Integrate Climate Change into EE Practices

**8:30 AM–12:00 PM, Nautilus 2**

Environmental educators interested in addressing climate change as part of their EE practices will have the opportunity to explore several effective approaches to communicating about climate change, understanding their audiences, and discovering the best methods of engagement, including the use of social media, op-eds, storytelling, and public deliberation forums.

**Presenter(s):** Marianne Krasny, Cornell University; Judy Braus, NAAEE; Jose Marcos-Iga, Environmental Education Exchange; Anne Umali Ferguson, Cornell University; Bora Simmons, National Project for Excellence in Environmental Education



### Connecting the Dots From Urbanization to Conservation

**8:30 AM–12:00 PM, San Diego Zoo (Meet transportation at the Sheraton entrance.)**

Tackling environmental education in urban settings can be intimidating and overwhelming. Step into the shoes of K–12 students with engaging, hands-on activities that connect students to nature and inspire them to make a difference. Cultivate teaching strategies and methods to successfully engage students both in the classroom and outdoors.

**Presenter(s):** Maya O'Connor, San Diego Zoo; Kristina Seitz, San Diego Zoo

## Thursday 9:00 AM

### Research Symposium continues

**9:00 AM–5:00 PM**

For registered Research Symposium participants only.

### Global Environmental Education Partnership Meeting

**9:00 AM–12:00 PM, Seabreeze 2**

By invitation.

## Thursday 12:00 PM

### Lunch

**12:00 PM–1:30 PM, Nautilus 3**

Lunch is included with the Research Symposium and all full day workshops. The meal is self-service and available any time between 12:00 PM and 1:30 PM. (Lunch is not provided with half day workshops.)

## Thursday 1:00 PM

### Afternoon Workshops

**1:00 PM–4:30 PM**

#### Steps to Creating a Diverse and Representative Environmental Workforce

**1:00 PM–4:30 PM, Seabreeze 2**

The Foundation for Youth Investment made the Green ceiling section of Green 2.0 actionable. Join us in discussing the triumphs, challenges, and strategies in creating a diverse and representative outdoor workforce. Through guided discussions and action planning, we will walk participants through a process to reach actionable goals for their organizations and outdoor community.

**Presenter(s):** Rena Payan, Foundation for Youth Investment

#### Teaching Systems Thinking and Environmental Problem Solving Through Games and Simulations

**1:00 PM–4:30 PM, Nautilus 2**

This workshop will build educators' capacities for using games and simulations to teach systems thinking and environmental problem solving. Participants will learn to facilitate several eco-educational games for diverse audiences. The session includes a "game design laboratory" to provide space and guidance for educators to create games that fit their unique contexts.

**Presenter(s):** Curt Gervich, State University of New York–Plattsburgh

#### The Playful Path to Environmental Literacy: Family Learning Through Play

**1:00 PM–4:30 PM, Marina 6**

Play isn't just fun, it's also a powerful educational tool for children and families. Unfortunately, unstructured play is endangered in America today. We'll explore why nature play is vital, share innovative ways to incorporate family play, provide resources to support you, and, of course, we'll learn through play.

**Presenter(s):** Nette Pletcher, Association of Zoos & Aquariums; Janice Swaisgood, Children & Nature Network; Christy Merrick, NAAEE



### Thursday 4:00 PM

#### Social Hour: Making New Connections 4:00 PM–5:00 PM, Quinn’s Ale House (Sheraton lobby)

A no-host social hour where you can meet new people, expand your circle, and celebrate diversity, equity, and inclusion efforts in environmental education across North America and around the world.

See page 35 for more information.

### Thursday 5:00 PM

#### Guidelines Trainers’ Bureau Meeting 5:00 PM–6:00 PM, Nautilus 3

By invitation.  
Coordinator: Bora Simmons

#### Opening Reception with Share Fair and Authors’ Corner 5:00 PM–6:30 PM, Bayview Lawn

Meet new colleagues and greet returning ones as you enjoy hors d’oeuvres and a cash bar at the opening reception of the conference. Dr. Zoolittle and an animal ambassador from the San Diego Zoo will be working the crowd, and you can explore the exciting work of a variety of nonprofit organizations at this year’s Share Fair. Also, check out the Authors’ Corner, which features NAAEE members and other writers who are available to discuss, sign, and sell their newest publications.

See page 35 for more information.



Humboldt Lily



#### Did you know?

The **California Floristic Province** is one of only five areas in the world with a Mediterranean-type climate, which is characterized by hot, dry summers and cool, wet winters.

### Thursday 6:30 PM

#### Conference Opening

Kick off the conference officially with remarks from Executive Director Judy Braus and Board President Pepe Marcos-Iga, presentation of the NAAEE Award for Distinguished Leadership in Environmental Education, and the opening keynote.

#### KEYNOTE:



#### Stephen Pemberton

**Joined at the Hip: How Diversity and Inclusion and Environmental Education Can Bridge Cultural Divides**  
6:30 PM–8:30 PM,  
Grande Ballroom A

See pages 29 and 36 for more information.

**International Journal of Early Childhood Environmental Education**  
*Addressing Policy, Practice, and Research That Matters*

**naaee**  
North American Association  
for Environmental Education

**Congratulations to the consulting and book editors of the new issue of *International Journal of Early Childhood Environmental Education*.**

[www.naaee.net/publications/IJEECE](http://www.naaee.net/publications/IJEECE)

# Friday

## Friday 8:30 AM

The following sessions all start at 8:30 AM. The end times vary with the type of session as indicated. Ninety-minute sessions are listed first, followed by 40-minute sessions.

### Symposia

#### 8:30 AM–10:00 AM

##### **People-Power: Citizen Science and Water Quality** 8:30 AM–10:00 AM, Nautilus 5

From Watershed Wikis to Intelligent River Tools, learn how citizen science coupled with environmental education can help communities get actively engaged in the management of their water resources. Join this discussion with leaders of three innovative citizen science projects that are helping to monitor and improve water quality.

**Presenter(s):** Anthony Aufdenkampe, Stroud Water Research Center; Rachel Hansgen, Groundwork Denver; Donna Power Stowe, Earth Force

Strand: ●

##### **Promoting Excellence in Environmental Education** 8:30 AM–10:00 AM, Nautilus 4

You've heard about NAAEE's Guidelines for Excellence and may even have a copy or two. But how are they being used to improve EE practice? Hear directly from educators who are using them for program development, implementation, and improvement.

**Presenter(s):** Yash Bhagwanji, Florida Atlantic University; Katie M. Navin, Colorado Alliance for Environmental Education; Donny E. Roush, Earth Force; Elizabeth Schmitz, Kentucky Environmental Education Council (KEEC); Andree Walker Bravo, Utah State University Extension–Salt Lake County; **Moderator:** Bora Simmons, National Project for Excellence in Environmental Education

Strand: ●



### Strands

- Conservation and Education
- Environmental Education in Urban Settings
- Greening PreK–12, Higher Education, and Vocational Training
- Inspiring Connections to the Outdoors
- Research-Based Practice in EE
- Teaching About Environmental Issues and Systems Thinking
- Addresses Diversity, Equity, and Inclusion
- Appropriate for Teachers

### Hands-On Presentations

#### 8:30 AM–10:00 AM

##### **Becoming a Culturally Responsive EE Organization: Shifting a Predominantly White Institution**

##### 8:30 AM–10:00 AM, Nautilus 3

The mainstream EE movement needs to diversify, but where do historically white institutions start? This workshop will highlight the use of evaluation tools in the journey of one such organization, IslandWood, as it shifts toward cultural responsiveness. Participants will explore the entire process and leave with the evaluation tools used.

**Presenter(s):** Sapna Sopori, IslandWood

Strand: ● 

### Exploring Watershed Biodiversity to Instill Conservation Practices in Middle School

8:30 AM–10:00 AM, Nautilus 2

As teens solidify perceptions about themselves and their surroundings, the time is ideal to ignite curiosity and compassion about their natural environment. Using a local watershed as an “outdoor classroom,” students explore biodiversity and ecosystem services, participate in community conservation actions, and inspire and encourage others to do the same.

**Presenter(s):** Tara Fuad, San Elijo Lagoon Conservancy; Elayna Flanders, San Elijo Lagoon Conservancy

Strand: ●

### Practices and Insights for Cultivating Ecological Perception in an Urban Setting

8:30 AM–10:00 AM, Seabreeze 1

A series of meditative “ecological practices” was used with undergraduate students in an urban setting to facilitate a more direct, inter-subjective engagement with the “more than human” world. A chance to engage in these practices will be provided and the students’ experiences as described in their journals will be presented.

**Presenter(s):** Mark Hathaway, University of Toronto

Strand: ●

## Traditional Presentations

8:30 AM–9:10 AM

### Connecting Adults with Nature Through a Website Program

8:30 AM–9:10 AM, Marina 4

NEST-Adventures.com encourages all adults to connect with nature to achieve benefits for self, family, and community. Engaging in eco-sensory seasonal activities, reading youthful eco-literature, and sharing your own success stories online are included. The program is based on transformative and constructive learning theories and positive psychology.

**Presenter(s):** Darleen K. Roberts Stoner, NEST Adventures; Deborah Strunk, NEST Adventures

Strand: ●

### Connecting State Environmental Educator Certification Programs and Environmental Literacy Plans

8:30 AM–9:10 AM, Marina 2

EE certification programs and ELPs share the common goal of achieving environmental literacy. They are, however, usually seen as distinct initiatives with little correlation. This facilitated discussion will encourage participants to think about and discuss why/how connections between the two can and should be made.

**Presenter(s):** Susan McGuire, McGuire Consulting; Alison Heimowitz, Clackamas Community College



### Inspiring Empathy by Integrating Art and Music into Environmental Education

8:30 AM–9:10 AM, Marina 1

Art and music offer powerful media for empathy building, and empathy is a powerful fuel for inspiring responsible environmental behavior. Our presentation explores integration of art and music with place-based education and all-ages intergenerational learning to engage current, new, underrepresented, and unrepresented audiences into environmental education.

**Presenter(s):** Liz A. Stanislav, LizziDesign Humane Environmental Education; Srinivasan Varadarajan, LizziDesign Humane Environmental Education

Strand: ●

### Reflections on Walking in Nature: Innovations in Preservice Teacher Preparation

8:30 AM–9:10 AM, Seabreeze 2

How can we expect novice educators to foster environmental literacy with young children when many preservice teachers entering the field “suffer” from what Richard Louv described as “nature-deficit disorder?” Discover an innovative and transformative process for exposing preservice teachers to the wonders of nature through weekly nature walks and journal reflections.

**Presenter(s):** Michaela Cole, Our Lady of the Lake University

Strand: ●

### Strategies and Visions to Diversify Residential Environmental Education

8:30 AM–9:10 AM, Marina 3

This qualitative study examines the strategies, barriers, visions, and resources needed for providing access to Residential Environmental Education programs (REE) for multicultural urban youth. Strategies for diversifying the REE field and visions of where the field is headed next in becoming culturally competent will be discussed.

**Presenter(s):** Kate Bodey, Teton Science Schools; Kate Muir Welsh, University of Wyoming

Strand: ●

## Understanding the Needs of Out-of-School-Time Audiences

8:30 AM–9:10 AM, Nautilus 1

Would you like to partner with out-of-school-time (OST) providers (community centers, libraries, etc.) to deliver environmental programming, but need to better understand their needs? Join Denver Zoo to discuss findings from a needs assessment of Colorado OST providers that can be applied in your own community.

**Presenter(s):** Alicia Christensen, Denver Zoo

Strand: ● 

## Watershed Avengers: Connecting an Entire Community to Science, Conservation, and the Natural World

8:30 AM–9:10 AM, Marina 6

Ocean Discovery Institute has found success inspiring tomorrow's environmental stewards through the restoration of a significantly degraded urban canyon in the Pueblo watershed located in City Heights, CA. Explore our model, lessons learned, and effective practices in connecting an underserved community to local natural environments and inspiring continued stewardship action.

**Presenter(s):** Carla Pisbe, Ocean Discovery Institute

Strand: ●

## Bright Spots

8:30 AM–9:10 AM



Learn about two or three successful and loosely related programs in each 40-minute Bright Spots. Sessions are presented in the order listed.

## Spinnaker 1

### Starting a Successful Milk Carton Recycling Program in Your School

Students all over the country are successfully recycling milk and juice cartons and other waste generated in their school cafeterias. These programs not only reduce waste going to the landfill and reinforce students' recycling behavior at home, they also can be used as teaching opportunities to reinforce core curriculum.


**Presenter(s):** Debbi Dodson, Carton Council

Strand: ●

## Students Aiding the World: Benefits of Service Projects for All

Let's educate and serve the community! Learn how EE service projects can serve all members of your community through practical applications and teaching strategies. Explore examples and discuss possibilities for integrating environmental action-projects, service-learning, and interactive activities in formal and informal settings.

**Presenter(s):** Kim Charmatz, Florida Gulf Coast University

Strand: ● 

## The CoRe Network—Recycling Made Easy!

See a need: fill a need! The absence of municipal recycling on the small island of Barbados provided the perfect opportunity for innovation on the part of a small, environmentally focused NGO, the Future Centre Trust! The CoRe Network is remarkably simple, but widely successful.

**Presenter(s):** Cherice Gibson, Future Centre Trust

Strand: ● 



## Did you know?

Home to native plants and animals found nowhere else, California's 270 state parks are havens for extraordinary biodiversity that ranks the state among the world's top 25 biological hotspots.

● Conservation and Education

● Environmental Education in Urban Settings

● Inspiring Connections to the Outdoors

● Research-Based Practice in EE

● Greening PreK–12, Higher Education, and Vocational Training

● Teaching About Environmental Issues and Systems Thinking

 Teachers

 Diversity, Equity and Inclusion

## Roundtable Discussions

**8:30 AM–9:10 AM, Grande Ballroom C**

### A Powerful, Green Experiment at the North Carolina Aquariums

#### Table 1

Four North Carolina aquariums, working through a grant funded by The Ocean Project, focused our efforts on promoting clean energy in the form of Renewable Energy Certificates (REC) to visitors during peak visitation months. We tested separate interpretive messages and approaches to determine which was most effective at motivating visitors to purchase RECs for their homes.

**Presenter(s): Windy Kent, NC Aquarium at Pine Knoll Shores**

Strand: ●

### Anticipating Controversy: Communications Planning That Works

#### Table 2

You would expect public uproar when you cut and remove healthy, mature oaks from a woodland. Hear the story of how the Lake County Forest Preserves minimized the controversy by anticipating it and then find direct applications to your own work during the session.

**Presenter(s): Nan M. Buckardt, Lake County Forest Preserves, IL**

Strand: ●

### Every Kid in a Park—Connecting 4th Graders to Public Lands

#### Table 3

President Obama recently launched “Every Kid in a Park,” an initiative to inspire the next generation of caretakers for our public lands by providing fourth graders and their families free admission. What are the merits of introductory visits to parks and how do you turn first-time visits into lasting engagements?

**Presenter(s): Katherine Chesson, National Park Foundation**

Strand: ●

### Greening Schools in Our Nation’s Capital

#### Table 4

The District of Columbia Sustainable Energy Utility (DCSEU) works with the Department of Energy & Environment (DDOE) and the Vermont Energy Investment Corporation (VEIC) to incentivize energy efficiency, administer rebates to Washington Gas & Pepco customers for energy savings, and provide no-cost technical assistance to DC residents. DC schools veteran Cory Chimka leverages partnerships with a focus on creating more comfortable & efficient learning environments.

**Presenter(s): Cory Chimka, District of Columbia Sustainable Energy Utility**

Strand: ●

### Impact of a Preservice Environmental Education Class

#### Table 5

Does a one-credit-hour weekend environmental education class have an impact on preservice educators? This study used a pre/post test design to determine what perceptions students had before the mid-semester class, and how their perceptions changed as a result of participating in the class.

**Presenter(s): David Allen, Murray State University**

Strand: ●



### Start the Conversation Through Storytelling

#### Table 6

There’s nothing like a good story to both entertain and educate. Stories are especially critical when dealing with controversial issues, as pre-existing personal concepts prevent meaningful connections and dialogue. A story can set a tone, putting an issue into a context that brings opposing viewpoints together.

**Presenter(s): Jennifer Alldredge, Alliance to Save Energy**

Strand: ●

## Friday 9:20 AM

The following sessions are all 40-minute sessions that start at 9:20 AM and end at 10:00 AM.

### Traditional Presentations

#### 9:20 AM–10:00 AM

##### **Innovative Pathways for Environmental Literacy**

9:20 AM–10:00 AM, **Seabreeze 2**

Looking for innovative ways to promote environmental literacy in your state beyond the Environmental Literacy Plan? Learn how Rhode Island partnered with the state's school construction team to incorporate environmental education into K-12 school curriculum. We will discuss how Green Ribbon Schools and other healthy schools initiatives can advance environmental literacy in your region.

**Presenter(s): Kristen Swanberg, Rhode Island Environmental Education Association; Shareen Knowlton, Roger Williams Park Zoo**

Strand: ●

##### **SCA Opportunities: Building Diversity in Conservation Careers**

9:20 AM–10:00 AM, **Marina 2**

Building a more diverse and inclusive sector of conservation professionals starts with first-time, gateway experiences and internships. Find out about opportunities with Student Conservation Association (SCA) for young adults 18+ exploring conservation careers. Opportunities are available in every corner of the nation and in your own backyard.

**Presenter(s): Moleek Busby, Student Conservation Association**

Strand: ●

##### **Sustainability Matters: The Utility of Environmental Education Research for Decision-Making**

9:20 AM–10:00 AM, **Marina 3**

This session explores the utility of research analyzed by the Sustainability and Education Policy Network in influencing decision makers about the significance of sustainability and environmental education. The research emphasized in this session focuses on data collected on early childhood through grade 12 by the provincial Ministries of Education in Canada.

**Presenter(s): Jada Koushik, University of Saskatchewan**

Strand: ●

##### **Using Practicum-Based Learning to Engage Students in Greening a City**

9:20 AM–10:00 AM, **Nautilus 1**

Students at the University of Chicago are in a unique position to observe and engage in urban environmental issues. This presentation details three case studies of practicum-based learning in which students partnered with local practitioners to create highly-visible impacts in sustainability related to food, sports, and land use.

**Presenter(s): Sabina Shaikh, University of Chicago**

Strand: ●

##### **What's Up with Online Learning?**

9:20 AM–10:00 AM, **Marina 4**

EECapacity has learned a lot about what works and what doesn't by conducting over 25 online courses and professional learning communities. Our latest endeavor is training environmental educators to launch their own online learning initiatives. Learn how your organization can join existing—and create your own—online and hybrid learning experiences.

**Presenter(s): Marianne Krasny, Cornell University; Jose Marcos-Iga, Environmental Education Exchange; Anne Umali Ferguson, Cornell University**

Strand: ●



##### **Youth Engagement with the Natural World: Stances, Identity, and Interest**

9:20 AM–10:00 AM, **Marina 6**

This is a qualitative case study of participants' engagement with features of the natural world during a unique residential environmental education program. Three stances emerged: (a) engaging deeply with the place, (b) visitor/viewing of the place, and (c) socializing in spite of the place. Identity and interest influenced these stances.

**Presenter(s): Lia Wetzstein, University of Washington**

Strand:

## Bright Spots

### 9:20 AM–10:00 AM



Learn about two or three successful and loosely related programs in each 40-minute Bright Spots. Sessions are presented in the order listed.

#### Group A • Spinnaker 1

##### **A Study of the Effectiveness of Different Community Engagement Strategies**

We will present the results of a five-year study of the community engagement strategies of more than 350 conservation projects in the United States. We'll share insights about which engagement strategies were most powerfully linked to particular outcomes across diverse contexts, ranging from inner-city to rural settings.

Presenter(s): Nicole Ardoin, Stanford University  
Strand: ●

##### **My Los Angeles Wildlife Internship Experience**

Inner-city naturalists born and raised in Los Angeles, CA will discuss how they connected to nature and careers through a nonprofit internship. Environment for the Americas' former Latino interns share their stories from the perspective of youth just starting out their careers.

Presenter(s): Emily Cobar, Environment for the Americas; Carlos Jauregui, Environment for the Americas

Strand: ●

##### **seaHarmony: Compatibility Matching is No Longer Just for Dating**

A scientist needs help gathering data; a teacher sees the value in students participating in real-life research. Potentially a perfect match, but how do they find each other? Similar to online dating sites (but with the goal of professional collaboration), "seaHarmony" connects participants who share similar ocean science interests and needs.

Presenter(s): Jennifer Kaleouionalani Metz Kane, COSEE Island Earth

Strand: ● 🍏

#### Group B • Spinnaker 2

##### **Building Student Consumer Awareness Using the GoodGuide App**

The GoodGuide App is being used in conjunction with Goleman's "Ecological Intelligence" in a college environmental science course to help students build awareness of their consumer habits and how they can take action by exercising their purchasing power.

Presenter(s): Anne Kinney Stephens, California State University–Chico

Strand: ● 🍏



##### **DIY: Youth Directed Evaluation**

Evaluation can be an expensive, time intensive, and complex component, but a necessary one. In the California Academy of Sciences' TASC Force youth volunteer program, students are creating and implementing their own assessment tools to evaluate their public programs. With the TASC Force program, evaluation is transitioning to a learning opportunity.

Presenter(s): Neal Ramus, California Academy of Sciences

Strand: ●

##### **Grandparents Day—Cross Generation Connections to the Outdoors and Arts**

Learn how easy it is to create a special event program to combine elders, children, the outdoors, digital photography, and knowledge sharing. Grandparents Day has been a success for two years in a row at Kenai National Wildlife Refuge.

Presenter(s): Michelle Ostrowski, Kenai National Wildlife Refuge

Strand: ● 🍏 🎨

## Roundtable Discussions

### 9:20 AM–10:00 AM, Grande Ballroom C

#### Connecting Classroom Lessons to At-Home Energy Savings

##### Table 1

This roundtable discussion will present different methods being used to try to track the effectiveness that classroom instruction regarding behavior change and energy efficiency choices has on actual energy savings in communities. The *eesmarts energy-savings challenge* program and related research will be presented and participants will be asked for their experiences and ideas.

**Presenter(s):** Lisa Sarubbi, UIL Holdings Corporation; Gio Koch, Capitol Region Education Council (CREC); Rebecca Tonkinson, CREC

Strand: ●

#### Debate or Conversations: Looking at Opposing Viewpoints

##### Table 2

This session will compare and contrast the effectiveness of teaching environmental issues to preservice and in-service teachers through a traditional debate format or National Issues Forum discussion. Students' reflections on the two styles of looking at both sides of an issue will be shared.

**Presenter(s):** Melinda Wilder, Eastern Kentucky University; Billy Bennett, Eastern Kentucky University

Strand: ●

#### Improving "My Environmental Education Evaluation Resource Assistant"

##### Table 3

My Environmental Education Evaluation Resource Assistant ([www.meera.snre.umich.edu](http://www.meera.snre.umich.edu)) has served the evaluation needs of over 370,000 environmental educators from over 200 countries. MEERA's evaluation showed that it can support environmental educators' evaluations, but also revealed limitations. Let's discuss ways to improve the site to better meet environmental educators' needs.

**Presenter(s):** Michaela Zint, University of Michigan

Strand: ●

#### Landscape Shapes Mindscape: An Experience on Place-Based Outdoor Education

##### Table 4

This study investigates how place-based outdoor education reshapes pre-service science teachers' perspectives about their environment. Through content analysis of the field reports, these perspectives were evaluated after a 12-week place-based outdoor course. The results were in line with the claim, "landscape shapes mindscape."

**Presenter(s):** Guliz Karaarslan, Middle East Technical University, Department of Elementary Education

Strand: ●

#### NASA STEM Fellows: Undergraduate Perspectives on Using the Environment to Enhance STEM Instruction

##### Table 5

Undergraduate students involved in a collaborative NASA-funded program will highlight their work and experiences. The NASA project involved five state universities utilizing undergraduate education majors with an emphasis in science or math in the planning and implementation of environmental education for K-16 students.

**Presenter(s):** Sarah Hume, Northern Kentucky University; Elizabeth Anderson, Center for Environmental Education; Luke Matheny, Murray State University; Abby Perry, Eastern Kentucky University; Clay Tyler, Conner Middle School

Strand: ●

## Friday 10:00 AM

### Coffee Break

#### 10:00 AM–10:30 AM, Pavilion



#### Did you know?

**Little Italy** today represents downtown San Diego's oldest continuous neighborhood business district.



- Conservation and Education
- Inspiring Connections to the Outdoors
- Environmental Education in Urban Settings
- Research-Based Practice in EE

- Greening PreK–12, Higher Education, and Vocational Training
- Teaching About Environmental Issues and Systems Thinking

- Teachers
- Diversity, Equity and Inclusion



## Friday 10:30 AM

The following sessions are all 40-minute sessions that start at 10:30 AM and end at 11:10 AM.

### Traditional Presentations

#### 10:30 AM–11:10 AM

##### Addressing Loon Conservation Concerns in Alaska Using Traditional Knowledge

10:30 AM–11:10 AM, Marina 1

Traditional knowledge can be a powerful tool and help influence wildlife management decisions, as in the case of the yellow-billed loon. Come practice loon ID skills and learn how collaboration with indigenous residents of St. Lawrence Island, Alaska, helped keep the yellow-billed loon off the Endangered Species list.

**Presenter(s):** Tamara Zeller, U.S. Fish & Wildlife Service

Strand: ●

##### Brick by Brick: Building a Strong Program With Evaluation

10:30 AM–11:10 AM, Nautilus 4

Where does evaluation exist in your program? Evaluation is an integral part of the building process as your environmental education program grows. This session highlights the successful relationship between Yampatika and an outside evaluator to build a strong Environmental Literacy program for elementary students.

**Presenter(s):** Sonja Macys, Yampatika; Christina Stark, Inside Out Evaluation

Strand: ●

##### Collaboration for Greater Impact: A San Francisco Bay Area Case Study

10:30 AM–11:10 AM, Nautilus 3

Working collaboratively, we can achieve greater outcomes in the communities in which we work. Join us to explore how funders, practitioners, and researchers in the San Francisco Bay Area are working together to advance environmental education in their region. Examine collective impact strategies within an environmental education context.

**Presenter(s):** Kirk Anne Taylor, ChangeScale; Jason Morris, NatureBridge

Strand: ●

##### Creating an Environmental Education Collaborative

10:30 AM–11:10 AM, Marina 4

Looking to start a collaborative in your area? Learn how a group of Environmental Education providers and supporters worked to create a collaborative in an underserved area of Southern California. Lessons

learned and future steps will be discussed.

**Presenter(s):** Carrie M. Raleigh, CA Regional Environmental Education Community (CREEC); Dave Ficke, CREEC

Strand: ● 

##### Current Findings: Research You Can Use

10:30 AM–11:10 AM, Marina 2

This session provides a synopsis of emerging issues, solutions, methods, and theories from the 2015 NAAEE Research Symposium and this year's Research-Based Practice in EE conference strand. A panel of EE researchers will share their reflections and guide discussion on how these inform current and future EE practice.

**Presenter(s):** Cathlyn Styliniski, University of Maryland Center for Environmental Science; Ruth Kermish-Allen, Maine Mathematics and Science Alliance; Steve C. Kerlin, University of Wisconsin–Stevens Point

Strand: ●

##### EE Certification: Nuts, Bolts, and Challenges

10:30 AM–11:10 AM, Seabreeze 2

Looking for information relating to EE Certification Program development and implementation? Having difficulties with any accreditation hurdles? Then come to this session where state program leaders will share their experiences and stories on the nuts and bolts of an EE Certification program and strategies for clearing those hurdles.

**Presenter(s):** Brenda Weiser, University of Houston–Clear Lake; Elizabeth Schmitz, Kentucky Environmental Education Council (KEEC); Katie M. Navin, Colorado Alliance for Environmental Education; Jennifer Bucheit, Old Woman Creek National Estuarine Research Reserve (NERR); Thom Benedict, The Utah Society for Environmental Education



##### Facilitating Family Learning with Mobile Devices in the Outdoors

10:30 AM–11:10 AM, Seabreeze 1

How can environmental educators design mobile programs that engage learners with the outdoors rather than distract? An overview of research at an EE center in Pennsylvania with families that used a self-guiding, place-based “e-trailguide” along a nature trail and the design principles that were distilled from the project will be discussed.

**Presenter(s):** Lucy Richardson McClain, Shaver's Creek Environmental Center, Penn State University

Strand: ●

### **Innovation in Environmental Education: A San Francisco Success Story**

**10:30 AM–11:10 AM, Nautilus 2**

In San Francisco, youth from all backgrounds are exploring STEM careers and becoming environmental stewards, through an innovative partnership model with the Public Utilities Commission. Topics include career pathways, equity and inclusion, and culturally responsive programming, from the classroom all the way to the source of our water in Yosemite.

**Presenter(s): Laura Page, San Francisco Public Utilities Commission**

Strand: ● 

### **New PLT e-Units for Grades K–8**

**10:30 AM–11:10 AM, Nautilus 5**

Explore and receive access to new EE e-units that contain familiar, investigation-based PLT lessons with some new enhancements, all tied to current education standards and STEM, and made available on a new and innovative digital platform.

**Presenter(s): Jaclyn Stallard, Project Learning Tree; Kathy McGlaufflin, Project Learning Tree; Laura Downey, Kansas Association for Conservation and Environmental Education**

Strand: ●

### **What the Hellbender? Building Climate Literacy Through Wildlife**

**10:30 AM–11:10 AM, Marina 6**

Project WILD's soon-to-be released activities as well as old favorites from Project WILD can help build climate literacy (CL). Research studies on the development of CL through EE curriculum are underway at NCSU, including research that explores the use of technology and outdoor settings for strengthening cognitive and affective components of CL among students.

**Presenter(s): Marc LeFebre, Council for Environmental Education; Kathryn Stevenson, North Carolina State University**

Strand: ●

### **Working in Community: A New Set of Guidelines for Excellence**

**10:30 AM–11:10 AM, Marina 3**

EECapacity and NAAEE are developing a set of guidelines, focusing on community wellness, which will help environmental educators create inclusive environments that support effective partnership and collaboration building. The guidelines will describe key steps, and provide case examples, exercises,

and references. Come hear about how you can become involved.

**Presenter(s): Judy Braus, NAAEE; Jose Marcos-Iga, Environmental Education Exchange; Bora Simmons, National Project for Excellence in Environmental Education**

Strand: ●



### **Youth Mentoring in Environmental Education: Diversifying the Environmental Movement**

**10:30 AM–11:10 AM, Nautilus 1**

Our youth programs in Portland, Oregon are focused on diversifying the field of environmental education. We formed a Youth Mentoring Collaborative in 2013 to build our individual and collective capacity. This presentation will highlight our programs, our successes, and share ideas for replicating this powerful partnership in other settings.

**Presenter(s): Gladys Ruiz, Audubon Society of Portland; Jody Van Riper, Oregon Zoo/Metro**

Strand: ●

### **Bright Spots**

**10:30 AM–11:10 AM**



Learn about two or three successful and loosely related programs in each 40-minute Bright Spots. Sessions are presented in the order listed.

### **Group A • Spinnaker 1**

#### **Community-Based Climate Action: Middle School Students Tackle Petcoke**

Chicago's Field Museum engages middle school teachers and students in local environmental action projects through the Earth Force curriculum. Discover how this six-step problem solving curriculum, partnered with climate education and action tools, are empowering Chicago students.

**Presenter(s): Angela Viands, The Field Museum**

Strand: ● 

#### **Eight Tips for Translating Science Into Urban Conservation Action**

What does it take to inspire appreciation and care for nature in an industrial landscape? A joint program of the nation's third largest school district (Chicago Public Schools) and The Field Museum, the Calumet Is My Back Yard (CIMBY) program shares eight strategies that lead to true service-learning and on-the-ground conservation.

**Presenter(s): Laura Milkert, The Field Museum**

Strand: ●

### How Chicago Collectively Supports the Next Generation of Conservation Leaders

The Chicago Wilderness Next Generation Group is working together to try to best connect programs, universities, employers, and evaluation to ensure a diverse next generation of conservation leaders. Learn how an active partnership of 300+ organizations is working to support the next generation of conservation-minded folks in the Chicago region.

**Presenter(s): Alison Paul, The Field Museum**

Strand: ●

### Group B • Spinnaker 2

#### Environmental Research: A Platform for Integration Across Cultures

This bright spot focuses on the results of an international collaborative initiative between two institutions of higher education: EARTH University and Northwestern Michigan College. Two faculty and two female students from both institutions led a project-based learning experience that advances STEM knowledge and impacts local communities in Costa Rica and the United States.

**Presenter(s): Constanza Hazelwood, Northwestern Michigan College**

Strand: ●

#### Extending the Walls of the Classroom

Hear from Arizona State University education students about how the introduction of EE courses and the development of the EE Program of Distinction certificate changed their view and understanding of EE. These students will share how this new understanding has impacted their teaching philosophy and goals for their future students.

**Presenter(s): Molina Walters, Arizona State University**

Strand: ●

#### Lexicon of Sustainability in Higher Education

From new short films, to digital artworks on key sustainability terms, to an interactive new website — the Lexicon of Sustainability offers powerful tools for teaching core concepts, training teachers for Next Gen Science standards, and enhancing the pedagogy of our field. Come explore how the Lexicon could be used at your university!

**Presenter(s): Rocky J Rohwedder, Sonoma State University**

Strand: ●

## Roundtable Discussions

**10:30 AM–11:10 AM, Grande Ballroom C**

### Black, White, and Green: Inclusion Methods for Diversity in EE

#### Table 1

Providing career pathways to promote diverse EE workforces is only the first step. During this roundtable session participants will discuss ways to retain diverse interns and staff by creating hospitable organizational settings that nurture an atmosphere of welcome, support, and respect for differences that is inclusive rather than exclusive.

**Presenter(s): C. Parker McMullen Bushman, Chincoteague Bay Field Station**

Strand: ●

### California's Environmental Literacy Blueprint—A Look at Professional Learning Strategies

#### Table 2

In 2014-15, a team of EE leaders working with the California Department of Education developed an environmental literacy "blueprint." Hear how this plan addresses professional learning strategies for a diverse spectrum of CA educators.

**Presenter(s): Kay Antunez de Mayolo, CA Department of Forestry and Fire Protection; Anne Kinney Stephens, California State University—Chico**

Strand: ●

### Cultivating Partnerships in National Parks

#### Table 3

Building positive relationships with local businesses, nonprofits, corporations and other partners help National Parks achieve their mission. In this discussion we examine a successful partnership between Sequoia National Park, Delaware North Company, and the Sequoia Natural History Association to discuss how the National Park Service is moving forward during its Centennial in 2016.

**Presenter(s): Tara Marie Hostnik, Sequoia Natural History Association**

Strand: ●

### Developing California Light-Duty Vehicle Requirements to Support Climate Stabilization

#### Table 4

We have a climate crisis. Here in San Diego County, cars and light-duty trucks emit 41% of our greenhouse gas (GHG). Our metropolitan planning organizations are still planning to widen freeways. Will this work? Let's challenge our math and science students to get to the bottom of this important question.

**Presenter(s): Michael Bullock, San Diego Sierra Club**

Strand: ●

### eLearning and EE: An Uneasy But Beneficial Relationship Table 5

E-Learning has a tenuous relationship with EE. Explore some of the opportunities and the challenges of engaging underserved and reluctant learners; learners without access due to mobility, time, or location; or even just those who have a hard time breaking their connection with their phone.

**Presenter(s): Tai Munro, Yardstick**

Strand: ●

### Preparing Environmental Educators to Communicate About Climate Change Table 6

This study examined fifteen graduate students' capability to communicate about climate change after taking an innovative climate change education course. Because these students will pursue informal and formal environmental education careers, we will report results important to the communication of science in public environmental education and formal school settings.

**Presenter(s): Julie Lee Lambert, Florida Atlantic University; Robert E Bleicher, California State University Channel Islands**

Strand: ●

## Friday 11:30 AM

### Plenary Session

11:30 AM–12:30 PM

**Harry Boyte, Hahrie Han,  
J. Drew Lanham, and Jackie Ogden**

Moderated by Allison Chin



**EE and Social Movements: Connecting the Dots**  
11:30 AM–12:30 PM, Grande Ballroom A

See page 29 for more information.

## Friday 12:30 PM

### Exhibit Fair Celebration Luncheon with Affiliates Welcome

#### Poster Presentations

12:30 PM–2:15 PM, Pavilion

Chat with exhibitors, explore new products and services, pick up a new book, and learn more about the Affiliates and the many services they offer to their members on the state and provincial level. Luncheon included with Friday or full conference registration.

Exhibitors are listed on page 110.  
See page 36 for more information.

#### Poster Presentations

##### 1) An Interactive Poster: Youth Respond to Climate Change Through Co-Design

We'll break out the felt pens to demo how youth can respond to climate change through co-design: School gardens, libraries, museums, and urban environments have all been successfully co-designed. Learn field-tested co-design methods implemented in Vancouver, (Canada), Boulder, and Los Angeles. Websites: [youthmanual.blogspot.ca](http://youthmanual.blogspot.ca) and [co-designgroup.ca](http://co-designgroup.ca)

**Presenter(s): Susan Chung, co-designgroup.ca**

Strand: ●



##### 2) Investigating the Impacts of an Environmentally Conscious After-School Program on Students' Environmental Literacy

The freedom of curriculum and the power to potentially change behavior make after-school programs a useful avenue for environmental education. This investigation looked at one environmentally-conscious, art-based after-school program and its impacts on students' environmental literacy.

**Presenter(s): Erin Lineberger, Montreat College;  
Dottie Shuman, Montreat College**

Strand: ●

### 3) BEETLES: Findings From an Environmental Education Professional Development Program Evaluation

The BEETLES (Better Environmental Education Teaching, Learning, Expertise Sharing) project has developed a model of professional learning for OSP educators. This session summarizes findings of an evaluation study of the impact of BEETLES professional learning opportunities for outdoor science educators and subsequently for the youth who participate in their programs.

**Presenter(s):** Valeria Romero, University of California–Berkeley; Bernadette Chi, Lawrence Hall of Science–UC Berkeley

Strand: ●

### 4) Carbon Pocket Park

As part of the NOAA Climate Stewards project, a Carbon Pocket Park was developed to increase preservice teachers' climate and watershed knowledge, and their willingness to teach about climate issues. This presentation shares the development, design, implementation, and results of the Carbon Pocket Park project development on campus.

**Presenter(s):** April Haight, Graining Fork Nature Preserve

Strand: ●

### 5) Citizen Science as Curriculum—Cuyamaca Outdoor School

Have you ever thought that it would be cool to be a scientist but it is just too hard? This thought deters future scientists every day. See how Cuyamaca Outdoor School uses citizen science to empower students and get them involved in conservation throughout San Diego County.

**Presenter(s):** Angela Kemsley, California Association for Environmental and Outdoor Education (AEOE)

Strand: ●

### 6) Contemplating EE and ESD: How Are We Doing?

We explore the use of the term “sustainable development” among environmental educators in both the United States and Japan. Our surveys show that most educators have a firm grounding in the field of environmental education, and make only supplementary use of the notions of sustainable development/education for sustainable development (ESD).

**Presenter(s):** Kimiharu To, Aomori University; Sharon Moran, State University of New York College of Environmental Science and Forestry; Andrea Feldpausch-Parker, State University of New York College of Environmental Science and Forestry

Strand: ●

### 7) Curiosity Machine: Helping Children Appreciate the Science and Engineering in Nature

Learn to lead children through engineering design challenges that help them understand nature's awe-inspiring physics. Design octopuses that change color, flowers that open and close, or specialized bird beaks. Use an online platform, [www.CuriosityMachine.org](http://www.CuriosityMachine.org), to connect children with engineering mentors who support children at every stage of learning.

**Presenter(s):** Mariana Rutigliano, Iridescent

Strand: ●

### 8) Describing the Scale, Diversity, and Practice of EE in America

This EECapacity poster reports on the findings of multi-level national estimates of how many Americans are involved in environmental education today. The project seeks to describe the size and diversity in the field.

**Presenter(s):** John Fraser, New Knowledge Organization, Ltd.; Rupu Gupta, New Knowledge Organization, Ltd.

Strand: ●



### 9) Development of the Assessment Criteria for Green Community of Guangdong Province in China

The construction of green communities started in 2002 in Guangdong Province of China. By 2013, the number of green communities has reached 259 in Guangdong. However, due to several shortcomings of the current criteria, the new Assessment Criteria for Green Community is developed and will be implemented in 2015.

**Presenter(s):** Nan Chen, Guangzhou University

Strand: ●

### 10) Developmentally Appropriate Practice in PreK–5: Implications for Preservice Learning/Professional Development

This poster investigates the degree of developmentally appropriate practice for EE applied by PreK–5 teachers using an adapted NAAEE Early Childhood Education Rating Tool; follow up interviews conducted to explore associations between teachers' early childhood experiences in nature and confidence in teaching EE; and the implications for design of preservice learning and professional development.

**Presenter(s):** Kimberly Marshall McLean, George Mason University

Strand: ●  

### 11) Educating the Whole Child: A NatureBridge Approach to Interdisciplinary Instruction

NatureBridge provides interdisciplinary environmental science education for over 30,000 participants annually. We'll share our approach for fulfilling visiting schools' goals while also delivering on our Core Educational Framework outcomes of personal growth, interpersonal skills, and academic impact. Participants in this interactive session will receive an interdisciplinary instruction resource list.

**Presenter(s):** Reed Schneider, NatureBridge

Strand: ●

### 12) Environmental Sustainability Education for Preservice Teachers: Lessons Learned in One Year

We will describe progress made in the first year of an Environmental Sustainability Education program. We will describe the development and first round of implementation of a series of courses and a minor program, as well as a workshop series for practicing teachers. Successes, challenges, and future work will be shared.

**Presenter(s):** Lauren Madden, The College of New Jersey

Strand: ●

### 13) Equipping Preservice Teachers With Effective Strategies to Teach About Nature

This poster session identifies effective strategies to equip preservice teachers to teach about nature. Sharing the work of great naturalists, leading a nature art walk, and creating a nature e-book are some examples of the tried and true strategies, as well as the new and innovative projects included in this session.

**Presenter(s):** Ashley Campbell, West Texas A&M University

Strand: ● 🍏

### 14) Evidence-Based Pedagogy to Effectively Reconnect Learners With Nature in Outdoors

My poster introduces a four-day outdoor environmental education program in Taiwan that can significantly promote learners' sense of nature connection and environmental sensitivity. I will share analyzed evidence from this formative evaluation study and invite the audience to share their best pedagogical practices to promote nature connection in EE programs.

**Presenter(s):** Yu-Chi Tseng, National Academy for Educational Research

Strand: ●

### 15) Exploring Ethics and Values Manifested in "Primitive" Programs

Across the country, there has been a surge of interest in learning 'primitive' skills. Primitive skills entail mastering the use of natural materials for life's necessities, such as food, shelter, fire, cooking, cordage, etc. Our research explores the phenomenon to date, as well as its larger implications for environmental stewardship.

**Presenter(s):** Sharon Moran, State University of New York College of Environmental Science and Forestry

Strand: ●

### 16) Exploring University Mountaineering Clubs Members' Nature Relatedness in Taiwan

The purpose of this study is to employ the "Nature Relatedness scale," investigating university mountaineers' feelings, thoughts, and internalized identification with the nature environment in Taiwan; how mountaineers' backgrounds and hiking experiences affect their nature relatedness; and probing the relationship between nature relatedness and pro-environmental behavior.

**Presenter(s):** Tzu-Hui Hsu, Graduate Institute of Environmental Education, National Taiwan Normal University

Strand: ●

### 17) Extending the Engagement: An Action Research Project on Forestry Education

Some states provide multi-day professional development programs centered around teacher natural resource education, with forestry being a large focus. As part of an action research project at Lesley University, 17 programs across the United States were surveyed. This poster discusses the results and offers suggestions for future programming.

**Presenter(s):** Renee Strnad, North Carolina State University

Strand: ●

### 18) Food and Low-Income Communities: Justice and Sustainability?

In this poster, I will describe findings that emerged from a research collaboration to explore food issues in low-income urban schools with four veteran teachers. I will briefly describe the teachers' projects and facilitate a discussion about what food insecurity means for environmental educators.

**Presenter(s):** Sarah Riggs Stapleton, University of Oregon

Strand: ● 🍏 🍏

● Conservation and Education

● Environmental Education in Urban Settings

● Inspiring Connections to the Outdoors

● Research-Based Practice in EE

● Greening PreK–12, Higher Education, and Vocational Training

● Teaching About Environmental Issues and Systems Thinking

🍏 Teachers

🍏 Diversity, Equity and Inclusion

### 19) Fostering Community Water Conservation: An Online Project-Based Learning Community Approach

This summer, the L.A. Neighborhood Council Sustainability Alliance launched a pilot Project-Based Learning Community (PLC) to connect nearly 100 community organizations to drought action resources, partnership opportunities, and best practices related to community-scale water conservation education and action. Come learn about the project and share your feedback!

**Presenter(s):** Laura Mack, L.A. Neighborhood Council Sustainability Alliance

Strand: ●



### 20) Fostering Environmental Stewardship Through Service Learning

Service-learning opportunities can benefit students professionally, academically, and personally by promoting student leadership, team building, and community involvement. Learn how to guide students through the planning and implementation of a student-designed project using critical thinking skills inside and outside of the classroom to address real world, environmental concerns in urban settings.

**Presenter(s):** Josetta LeBoeuf, Baton Rouge Magnet High School; Laurie Font, Baton Rouge Magnet High School

Strand: ● 🍏

### 21) Fostering Healthy Habits for the Future: What Works

The most impactful education often takes place outside. We will examine best practices from "Healthy Habits Club," an after-school wellness and environmental program that engages elementary schoolers in outdoor learning spaces without a formal science curriculum. Come see how activities like veggie yoga can be an effective part of your program!

**Presenter(s):** Vanessa M. Ehrenpreis, The University of Virginia; Caroline Herre, Jefferson Public Citizens at the University of Virginia

Strand: ● 🍏 🍏

### 22) Greek Primary School Teachers' Views of School Gardens

This study presents the views of 232 Greek primary school teachers (50 men, 173 women) on school gardens: whether school gardens are considered useful as a teaching tool, factors that would encourage them or discourage them to start a garden, and whether answers differ according to sex, school experience, and environmental education experience.

**Presenter(s):** Marianna Kalaitzidaki, University of Crete

Strand: ●

### 23) Greening: Federal College of Education (Technical) Omoku, Nigeria Experience

This teacher education college is located in a community with oil exploration companies flaring gas. The temperature of the community is usually high. To deal with the heat and to be part of the effort to combat global warming and promote conservation education, the staff and students plant trees.

**Presenter(s):** Akuego Jane Madumere, Federal College of Education Omoku, River State, Nigeria

Strand: ● 🍏

### 24) Humboldt's Coastal Stewards: A Model for Community Supported Place-Based Education

The Humboldt Coastal Stewards Program is an innovative partnership between a nonprofit organization and a Montessori school. The project was designed to engage students in learning about coastal habitats and conservation while empowering them to become coastal ambassadors in their community, sharing what they have learned and promoting environmental stewardship.

**Presenter(s):** Suzanne Fortner, Friends of the Dunes

Strand: ● 🍏

### 25) Identity's Role in Elementary School Teachers' Self-Efficacy as Science Teachers

This research aims to understand how elementary school teachers' identities influence their attitudes toward the outdoors, science, and science teaching. It also examines teachers' sense of self-efficacy teaching science, particularly outdoors, following participation in an outdoor science education program.

**Presenter(s):** Sarah Luginbuhl, North Carolina State University

Strand: ● 🍏

### 26) Improving Environmental Literacy Through Outdoor, Hands-On, Inquiry-Based Programs

Ecology Project International developed and implemented a results assessment based on the NAAEE framework for the evaluation of environmental literacy. Through this assessment we show how outdoor, hands-on, inquiry-based programs have a positive overall effect in Ecological Knowledge, Dispositions, Competencies, and Behaviors of high school students in four countries, including the United States.

**Presenter(s):** Miguel Fuentes, Ecology Project International; Carlos Trejos, Ecology Project International

Strand: ●

### 27) Interdisciplinary Projects to Bring Environmental Concepts Into the Core Curriculum

Can you use English, history, math, and science to address environmental concepts with secondary school students? Come see how we use our Unit Design Cycle to generate hands-on, community-based projects to get our kids excited about local ecological issues AND meet rigorous, measurable academic Common Core and Next Generation standards.

**Presenter(s): Amy Frame, Environmental Charter Schools**

Strand: ● 🍏

### 28) Introducing: The Canadian Network for Ocean Education

The ocean is important to Canadians culturally, environmentally, and economically – yet low levels of “ocean literacy” have been identified and current marine education efforts are fragmented. The Canadian Network for Ocean Education aims to connect individuals and organizations to advance ocean literacy in Canada.

**Presenter(s): Haley Guest, Dalhousie University**

Strand: ●

### 29) Irrational Fishing in Nigeria, Implications for Environmental Education

Partners for Environmental Education in Nigeria (PEEN) moved to Niger Delta areas to create awareness on improper and irrational fishing methods. One hundred and twenty five fishermen attended the programme. Different environmental education strategies were used to effect conservation behavior change.

**Presenter(s): Akuego Jane Madumere, Federal College of Education Omoku, River State, Nigeria**

Strand: ●

### 30) Joint Editing of Asian EE Journal: Is it Possible?

In this presentation, the author makes a case for the relevance and feasibility of a jointly edited official journal of environmental education, representing nations across Asia. This journal would have the purpose of designing, developing, refining, and promoting environmental education programs.

**Presenter(s): Shinichi Furihata, Tokyo University of Agriculture and Technology**

Strand: ●

### 31) Large-Scale Public Art: Project SIT (Seawall Interpretive Trail)

Project SIT is a beautification program on Galveston’s (Texas) Historic Seawall. The program will transform 70 concrete benches with educational mosaics providing an interpretation of Galveston Island, Galveston Bay, and the Gulf of Mexico’s coastal and ocean processes, natural resources, recreational opportunities, coastal heritage, and multiple uses of our coast.

**Presenter(s): Karla Klay, The Artist Boat, Inc.**

Strand: ●

### 32) Living With Our Changing Climate

A new ebook from the American Meteorological Society, *Living With Our Changing Climate*, explores our interaction with the climate system and how climate affects us. It incorporates information from International Panel on Climate Change Fifth Assessment Report (IPCC AR5) and the Third National Climate Assessment and is an excellent option to rev up your environmental science course.

**Presenter(s): James Brey, American Meteorological Society**

Strand: ●

### 33) Longitudinal Learning: Connecting People With Nature Through Time

This poster depicts the journey of several of today’s environmental education leaders who started out as young learners in enduring pipeline programs at Audubon Canyon Ranch. The poster provides tactical details about multi-decade program sustainability, anecdotal accounts of measured impacts on participants, and a network inventory of the impacts of multi-generational, multi-decade EE programs.

**Presenter(s): Anne Burnett, Tahoe Expedition Academy**

Strand: ● 🍏

### 34) Meaningful Watershed Educational Experiences in the Upper Susquehanna River Watershed

Meaningful watershed educational experiences (MWEEs) enhance outdoor education and support STEM teaching capacity of K-12 teachers while increasing environmental literacy. Projects in the Upper Susquehanna River Watershed trained teachers in research methods for leading MWEEs in their classes and undertaking local restoration activities.

**Presenter(s): Tami LaPilusa, Hartwick College**

Strand: ● 🍏



### 35) NASA STEM Fellows: Using the Environment to Enhance STEM Instruction

This poster will engage attendees in a discussion about a collaborative effort between directors of Environmental Education Centers at five state universities. This NASA funded program involved utilizing undergraduate education majors with an emphasis in science or math in planning and implementing environmental education for K-16 students.

**Presenter(s):** Billy Bennett, Eastern Kentucky University; Terry Wilson, Western Kentucky University; Steve C. Kerlin, University of Wisconsin–Stevens Point; April Haight, Graining Fork Nature Preserve; David Allen, Murray State University; Rosie Santos, Northern Kentucky University, Center for Environmental Education

Strand: ●

### 36) Nature's Notebook Through the Years: Meaningful and Cumulative Nature Observations

This poster shares the science of plant and animal life cycles (or phenology) and their relationship to climate change. Learn how to develop a robust long-term phenology monitoring program at your site and how to use Nature's Notebook, the program sponsored by the USA National Phenology Network (USA-NPN).

**Presenter(s):** LoriAnne Barnett, USA National Phenology Network

Strand: ● 🍏

### 37) Observing Migratory Behavior Due to Phototaxis in Planktonic Communities

Phototaxis is the purposeful movement of freely moving organisms in relation to a light source in the environment. Through this laboratory exercise, students learn about the phenomenon of positive phototaxis in plankton species and investigate how habitat can influence community composition. Extension topics include statistical analysis and biomagnification of toxins.

**Presenter(s):** Melissa Symington, Pacific Ridge School

Strand: ● 🍏

### 38) One Million Conservation Kids: Conservation Education in New Zealand

The Department of Conservation aspires to connect one million "conservation kids" to nature and involve them in restoring New Zealand's natural and historic heritage. DOC works with partners and programmes that help kids understand and value nature's contribution to their quality of life, and help them develop as conservation advocates in their communities.

**Presenter(s):** Sarah Murray, Department of Conservation; Ben Reddiex, Department of Conservation

Strand: ●

### 39) One Person's Human Revolution and Creating a Sustainable World

For the past 25 years, Hamamatsu-Johoku Technical High School in Japan has used unique environmental education activities based on the philosophy of two Japanese educators, Tsunesaburo Makiguchi and Daisaku Ikeda. We teach about the value of our environment and how even one person can initiate steps toward creating a sustainable society.

**Presenter(s):** Yoshiyuki Iio, Hamamatsu Johoku Technical High School, Environment Club Director, Environmental Counselor-Japanese Ministry of the Environment

Strand: ● 🌍 🍏

### 40) Overcoming Biophobia: An Investigation Into Urban Children's Connectedness to Nature

Children love honey, but hate honeybees. In this study, honeybee is selected as the medium for an experiential environmental education program. The study suggests that environmental education programs that provide personal contact with honeybees can be effective in helping children overcome biophobia and, specifically, their fear of small insects.

**Presenter(s):** Yoori Cho, Seoul National University

Strand: ●

### 41) Pepperwood's TeenNat—Diverse Youth Contributing to Conservation Science

Pepperwood's TeenNat, a five-week summer internship, engages ethnically diverse teens in real science, provides them with technical skills, and exposes them to nature, an approach which has been shown to result in greater interest in careers in the natural sciences. We will also share bilingual recruitment fliers and evaluation metrics.

**Presenter(s):** Nicole Barden, Pepperwood Preserve

Strand: ●

### 42) Phenology: Changes in Your Natural World

Have you ever watched nature breathe through her seasons? Change cloaks from green to autumn to white? Seen birds come and go, with the lengthening of the night? Come learn how observing changes in nature can help develop a sense of place and better connect us to our outdoor world.

**Presenter(s):** Amelia Richards, Northern Michigan University

Strand: ●

#### 43) Positive Partnerships: Learning from Nemo and Wile E. Coyote

Looking to build long-lasting relationships that grow your programs and advance your goals? Understanding the stages of partnerships, from selection to conclusion, is crucial for organizations wanting to expand their reach outside their walls. Discover essential elements that engineered effective partnering between the San Diego Zoo and local nature reserves.

**Presenter(s):** Deirdre Ballou, San Diego Zoo

Strand: ●

#### 44) Promoting Conservation Education Through Citizen Science

This session will compare and contrast two different conservation education programs--one run by Ecology Project International in Costa Rica and the other by Eastern Kentucky University in the Appalachian mountains. Both programs use field science data collection to promote conservation efforts. The effectiveness of these programs will be discussed.

**Presenter(s):** Melinda Wilder, Eastern Kentucky University; Billy Bennett, Eastern Kentucky University; Miguel Fuentes, Ecology Project International

Strand: ● 🍏

#### 45) Revisiting Zoo and Aquarium Mission Statements

In a 2007 article by Patrick et al., the authors found that while AZA-accredited zoos identified conservation and education as critical goals, most did not explicitly connect these goals in their mission statements. We revisit these institutions' mission statements to explore how they are currently describing conservation and education goals.

**Presenter(s):** Patricia Patrick, Texas Tech University; Susan Caplow, University of Montevallo

Strand: ●

#### 46) SCA Builds Thriving Youth and Thriving Landscapes

Improved interpersonal and leadership skills, greater sense of social responsibility, stronger drive to thrive... Can a high school student come away from a conservation service experience with all of this and more? Yes! Learn about Student Conservation Association (SCA)'s research and the incredible potential of these experiences for youth development.

**Presenter(s):** Moleek Busby, Student Conservation Association

Strand: ●

#### 47) Securing Safety in Outdoor Environmental Education: A Case of Han River Educational Program

This study examines the status of safety management of environmental outdoor education with the case of the Han River Ecological Program in Korea. The Delphi survey with a comprehensive '5E' approach is employed and conducted. This research anticipates suggesting effective and appropriate approaches to prevent safety-related accidents in outdoor environmental education.

**Presenter(s):** Taeyeon Kim, Seoul National University; Yoori Cho, Seoul National University

Strand: ●

#### 48) Solar Energy Lessons in High School Curriculum

The Adventures in Solar Energy program teaches two types of solar energy: solar thermal energy (heat), and solar photovoltaic energy (electricity). The presentation will focus on a solar thermal inquiry and heat exchange inquiry, and alignment with NGSS and applications with the Common Core.

**Presenter(s):** Lisa Sarubbi, UIL Holdings Corporation; Gio Koch, Capitol Region Education Council (CREC); Rebecca Tonkinson, Capitol Region Education Council (CREC)

Strand: ● 🍏

#### 49) Statewide Surveys of EE Organizations Identify Needs: Examples from Wisconsin

The process of implementing state-wide status and needs surveys will be discussed. Results from the Wisconsin 2014 and 2015 surveys will be provided as examples. Results can be used by state affiliates and others to focus professional development and services to increase the capacity of environmental education organizations.

**Presenter(s):** Steve C. Kerlin, University of Wisconsin-Stevens Point

Strand: ●

#### 50) Stream Crime Investigation (SCI) Lab

Participants will be introduced to the Fairfax County dry weather monitoring program through a high school lab activity entitled Stream Crime Investigation (SCI). The lab demonstrates the connection between activities on land and impact to receiving waters using kitchen chemistry reactions to track pollutants in a stormwater drainage network.

**Presenter(s):** Danielle Wynne, Stormwater Planning

Strand: ● 🍏

**51) Student Teaching in the Woods: Does It Work?**

What does a pre-service teacher preparation program look like when blending both formal and non-formal teaching experiences over 36 weeks? What do past participants say about how this program influences the way they teach EE in the formal classroom? Come learn the answers to these questions about the Wolf Ridge Student Teacher Program.

**Presenter(s):** Mary Beth Factor, University of Minnesota–Duluth; Kevin Zak, University of Minnesota  
Strand: ●

**52) Teacher Workshops in Conservation Science with San Diego Zoo Global**

Our teacher workshops in conservation science engage teachers with hands-on, lab- and field-based conservation research techniques focused on the role of zoos in conservation, and encourage students to apply their textbook knowledge of chemistry and biology to real world scenarios in wildlife conservation, with the ultimate goal of inspiring environmental stewardship.

**Presenter(s):** Kimberly Kutina, San Diego Zoo Institute for Conservation Research; Megan Reinbold, San Diego Zoo Institute for Conservation Research; Josie Fox, San Diego Zoo Global

Strand: ● 🍏

**53) Teaching Climate Change to Younger Students**

A 4th–8th grade teacher’s workshop addressed concepts of global climate change using Next Generation Science Standards. Mammoth Cave National Park, used as a local context, showed teachers how animals found in the unique cave environment can be affected. NASA’s Global Precipitation Measurement (GPM) satellite information gave teachers current information on climate change.

**Presenter(s):** Jeanine Huss, Western Kentucky University

Strand: ● 🍏

**54) Teaching Sustainability to Elementary Students—the Manzo School Model**

Manzo Elementary School in Tucson, AZ is doing groundbreaking work, accomplishing environmental learning, developing a connection to nature, and improving academic performance in underserved Hispanic youth using lots of love and an award-winning integrated garden space. Come share your experiences and join the discussion!

**Presenter(s):** Frank Zadroga, University of Arizona

Strand: ● 🌍 🍏

**55) The Coastal Heritage Preserve: A Platform for Experiential Environmental Education**

The Coastal Heritage Preserve (Galveston Island, Texas) is a 367-acre tract of undeveloped coastal habitat, including assemblages of wetland, coastal prairie, and open bay habitat. Because these habitats are ecologically and economically important, the land serves as an important platform for learning about conservation on the Gulf Coast.

**Presenter(s):** Karla Klay, The Artist Boat, Inc.  
Strand: ●

**56) The Effect of Visits to Dickerson Park Zoo on Guest’s Conservation Mindedness and Behavior**

We will compare guests’ conservation mindedness between two surveys before and after their visit to Dickerson Park Zoo. Interactive presentations from zoo representatives will be given to guests using animals involved in the Species Survival Plan.

**Presenter(s):** Sarah Foster, Missouri State University; Janice Schnake Greene, Missouri State University

Strand: ●

**57) The Heart of Turtle Island in the Turtle Mountains**

“Place” describes who we are by where we’re from. The Turtle Mountains are located in the geographic centre of North America—also known as “Turtle Island”. This poster session will introduce you to the Heart of the Turtle Mountains—The International Peace Garden. It will explore the relationship between this place and peace.

**Presenter(s):** Francis G. (Garry) Enns, The International Peace Garden

Strand: ● 🌍

**58) The Integration of Conservation and Education Goals Through Ecosystem Restoration**

Florida Atlantic University Pine Jog Environmental Education Center resides on a 135-acre nature preserve adjacent to an environmentally focused elementary school. This presentation explores how Pine Jog integrates its conservation and educational initiatives through ecosystem restoration. Through involvement of community partners, volunteers, and students, habitat restoration becomes a meaningful learning experience.

**Presenter(s):** Kristi Moyer, Florida Atlantic University, Pine Jog Environmental Educational Center; Grant Fischer, Florida Atlantic University, Pine Jog Environmental Educational Center

Strand: ● 🍏

**59) The Pine Jog Fellowship: Addressing Environmental Issues through Service-Learning**  
Florida Atlantic University Pine Jog Environmental Education Center's Fellowship Program provides a platform for high school students to investigate and address environmental issues through service-learning projects. This interactive presentation will focus on the evolution and mechanics of this successful program, its impacts on students' environmental literacy, and the community impacts of their projects.

**Presenter(s):** Kristi Moyer, Florida Atlantic University, Pine Jog Environmental Educational Center; Melissa Courtney, Florida Atlantic University, Pine Jog Environmental Educational Center

Strand: ●

**60) Through a Child's Eyes: EE from the Student Perspective**

View EE from the learner perspective. Urban students share their thoughts towards learning environmental concepts. Through videos, photographs, and vignettes, gain an inside look into what works for teaching students located in an urban area and how their outlook on EE has changed as a result of this education.

**Presenter(s):** Juliann Dupuis, Notre Dame of Maryland University; Scott Hartman, Baltimore City Public Schools; Kristine Buls, Baltimore City Public Schools; Ashley Demski, Baltimore City Public Schools

Strand: ● 🍏

**61) To Know the Rivers: Environmental Education Out of the Classrooms**

The "To Know the Rivers" program conducts environmental education outside of the classroom using resources with which students are familiar. It can help students realize their environmental responsibilities, raise their environmental literacy, and understand the relationship between city's development and its rivers. Is pollution unavoidable?

**Presenter(s):** Qingna Jin, University of Alberta

Strand: ● 🌍 🍏

**62) Urban Complexity and Environmental Education: A Masters Program in Urban Environmental Education at IslandWood**

The new IslandWood Masters program in Urban Environmental Education degree is designed to prepare environmental leaders who understand that education is a powerful means to transform the way people live in urban areas by revealing the complexities of social and ecological systems and using that awareness to guide engagement and action.

**Presenter(s):** Cynthia Thomashow, IslandWood

Strand: ●

**63) Urban Environmental Education: EECapacity's e-Book**

In 2014, EECapacity organized 60 environmental educators to write an e-book, *Urban Environmental Education* (<http://www.naaee.net/publications/UEE>). This poster presents conceptual and case study chapters from this e-book—which explore different goals, settings, and audiences of urban environmental education, and help readers reflect on their own educational practices.

**Presenter(s):** Alex Kudryavtsev, Cornell University; Marianne Krasny, Cornell University; Alicia Frances King, U.S. Fish & Wildlife Service Migratory Bird Program; Mandy Breuer, Environmental Charter Schools; Candice Russell, TreePeople; Cynthia Thomashow, IslandWood; Ilya Shmulenson, Keep Austin Beautiful; Monica Elser, Arizona State University; Robert Sean Withrow-Clark, University of California, Cooperative Extension

Strand: ●



**64) Urban Food Systems, the Circular Economy, and the Classroom**

Sustainable solutions are those that provide the best outcomes for people and nature. Learn how systems thinking is used by the sustainability scientists at Arizona State University to understand both what constitutes a sustainability problem and how to create sustainable solutions. Learn how we apply these techniques with K-12 students.

**Presenter(s):** Monica Elser, Arizona State University; Erin Nicole Redman, Walton Sustainability Solutions Initiative; Robert McGehee, Arizona State University

Strand: ●

**65) Using Biological Model Husbandry to Teach STEM in High School**

High school students thrive learning how to breed organisms. Engagement in biological model husbandry links them to practical applications of the Engineering Design model and the Scientific Method. Learn about innovative techniques to engage students in exploring life cycles using STEM principles.

**Presenter(s):** Chuck Lawrence, Upper Cape Cod Regional Technical School Environmental Science and Technology Program

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**66) Zoo Troop—Our Conservation Education Legacy**

Zoo Troop—a sequential 14-year program that starts and sustains children on their journey toward developing the skills needed to become optimistic, productive, forward thinking, action oriented, ecologically aware citizens.

**Presenter(s):** Sarah Navarro, Cincinnati Zoo & Botanical Garden

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## Friday 2:15 PM

The following sessions all start at 2:15 PM. The end times vary with the type of session as indicated. Ninety-minute sessions are listed first, followed by 40-minute sessions.

### Symposia

#### 2:15 PM–3:45 PM

##### **Building Resilient Youth From Underserved Communities: From the Hoods to the Woods**

2:15 PM–3:45 PM, Nautilus 4

The California Consortium is a unique program that serves as a bridge between underserved communities in California and the USDA Forest Service. The program has three main components: community, environmental education, and employment. These components are incorporated into its Generation Green (GG) program, which serves youth from elementary school through high school, college, and beyond.

**Presenter(s):** Natosha Mauer, U.S. Forest Service; Houa Vang, U.S. Forest Service; Julissa Gonzalez, U.S. Forest Service

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##### **EPA Education Office Strategic Planning Process: Engaging Experts and Stakeholders**

2:15 PM–3:45 PM, Nautilus 5

EPA's Office of Environmental Education (OEE) will host a panel discussion with experts on important issues and trends in EE. We will then engage our stakeholder audience in an open discussion about how these may inform the strategic planning process currently being undertaken by OEE.

**Presenter(s):** Sarah Sowell, U.S. Environmental Protection Agency; Ginger Potter, U.S. Environmental Protection Agency

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### Hands-On Presentations

#### 2:15 PM–3:45 PM

##### **Evaluation Resources Available Through NOAA's Bay Watershed Education and Training Program**

2:15 PM–3:45 PM, Nautilus 1

NOAA B-WET, a national grant program supporting Meaningful Watershed Education Experiences, has developed an evaluation system to assess its grant funded projects' outcomes and identify "best practices." Learn about the evaluation system's resources and how they may help your evaluations.

**Presenter(s):** Michaela Zint, University of Michigan

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##### **Fight the Drought with Student-Led Curriculum!**

2:15 PM–3:45 PM, Nautilus 2

Learn how 120 students from Environmental Charter High School worked in teams to organize the Water Symposium, a student-led water conservation event. You'll leave with a better understanding of California's drought and gain tools to empower your students to create a workshop that educates their community on solutions to any environmental issue.

**Presenter(s):** Sammy Lyon, Environmental Charter Schools; Betsy Rivera, Environmental Charter High School

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##### **Navigating Through the Diversity Divide in EE**

2:15 PM–3:45 PM, Nautilus 3

Environmental education (EE) organizations struggle to recruit and retain people of color (POC) as active members. This interactive session will outline solutions and possible EE organizational changes needed to engage POC, informed through a research study with POC who work in EE but are not active in EE organizations.

**Presenter(s):** Shelby Gull Laird, Stephen F. Austin State University; Timia D Thompson, Riverbanks Zoo & Garden

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##### **Supporting English Language Learning in Environmental Education**

2:15 PM–3:45 PM, Seabreeze 1

How can we design environmental education activities that fully engage English Language Learners (ELLs)? Come experience environmental education activities that are specially designed to support ELLs, and discuss specific strategies that can be applied to any activity to increase comprehension and engagement for all students.

**Presenter(s):** Whitney Cohen, Life Lab

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### Did you know?

The University of California, San Diego's Geisel Library in La Jolla houses the world's largest collection of original Dr. Seuss manuscripts and other materials. **Dr. Seuss (Theodor Geisel)** was a one-time resident of La Jolla.



## Traditional Presentations

2:15 PM–2:55 PM

### Climate Change Education in Kentucky: Assessing Our Knowledge and Beliefs

2:15 PM–2:55 PM, Seabreeze 2

This presentation reviews the findings of 2015 research that surveyed Kentuckians about opinions and attitudes on climate change, where they learn about it, and what they understand about basic climate science. A discussion with attendees will ensue about how results can guide educational efforts to contribute to a climate literate citizenry.

**Presenter(s):** Jennifer Hubbard-Sanchez, Kentucky State University; David Allen, Murray State University

Strand: ●

### EECapacity's Community Climate Change Fellowship: A Mosaic of Approaches

2:15 PM–2:55 PM, Marina 2

Learn about the incredible diversity of approaches and innovative ideas that the 26 Community Climate Change Fellows have used to address climate change at the community level. This group of leaders has been learning from each other as they create a legacy that demonstrates the power of collaboration in environmental education.

**Presenter(s):** Judy Braus, NAAEE; Anne Umali Ferguson, Cornell University; Jose Marcos-Iga, Environmental Education Exchange

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### From the Appalachians to Alaska—Building Tomorrow's Stewards

2:15 PM–2:55 PM, Marina 1

Multi-faceted partnerships between communities and federal land managing agencies can result in highly effective place based service-learning that centers students' energy and learning on real life stewardship opportunities. This workshop will engage participants in exploration of the lessons currently being learned from partnerships focused on teacher professional development.

**Presenter(s):** Delia Clark, Confluence; Annette Heckart, U.S. Forest Service—Alaska Region; Rita Hennessy, National Park Service

Strand: ●

### Maryland Case Study Demonstrating an Innovative and Integrated Approach to Environmental Literacy

2:15 PM–2:55 PM, Spinnaker 2

Maryland school systems and nonprofit providers have forged an innovative partnership to support high school environmental literacy and issues investigations. The resulting framework and method can be applied to any subject as a means to fostering in-depth understanding of complex ecological and social relationships needed for effective problem solving.

**Presenter(s):** Aleeza Oshry, Howard Hughes Medical Institute

Strand: ●

### Set Your Nonprofit Up for Success! Principles of Nonprofit Management

2:15 PM–2:55 PM, Marina 4

Clearly defined roles, responsibilities, and transparent operations will set your nonprofit up with the foundations for success. Build a solid governance structure, proper financial management, strategic partnerships, and an inclusive organizational culture. Learn how community and political engagement around EE strengthens your organization and promotes your mission.

**Presenter(s):** Barbara Garrity, Environmental Education Association of New Mexico; Laura Downey, Kansas Association for Conservation and Environmental Education



### Tracking Preservice Educators' Use of WILD and PLT Curriculum

2:15 PM–2:55 PM, Marina 3

Using EE as a springboard for the development of lessons in an initial teacher education course, how often do candidates continue using EE? Is EE integrated into other coursework? And if yes, which courses? Findings from this study will be presented along with a discussion on how to encourage faculty to support integrating EE into courses.

**Presenter(s):** Brenda Weiser, University of Houston—Clear Lake; Jana M. Willis, University of Houston—Clear Lake

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## Bright Spots

2:15 PM–2:55 PM



Learn about two or three successful and loosely related programs in each 40-minute Bright Spots. Sessions are presented in the order listed.

### Spinnaker 1

#### Beyond Facts: Using Social Psychology to Educate San Diego Leaders About the Changing Climate

The San Diego Climate Education Partnership (CEP) (<http://www.sandiego.edu/climate/>) educates San Diego community leaders on climate science using an innovative approach. Educational materials and activities utilize science knowledge that also increases efficacy, identity, and values, resulting in greater engagement in conservation behaviors consistent with a concerned community.

**Presenter(s):** Christiana DeBenedict, University of San Diego

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#### Latino Family Summer Camp

This program encourages Latino families to utilize the many natural resources and outdoor recreational opportunities available in Colorado. For many families, this program is their first experience in the outdoors. Learn what it takes to start an outdoor education program for Latino families.

**Presenter(s):** Rafael Salgado, Cal-Wood Education Center

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#### The Color of Nature

Lehigh Gap Nature Center has engaged in an outreach effort to connect people of color to nature in our region. Instead of delivering programs to these communities, we seek to build the capacity within the communities for leadership of their own programs. People enjoying and conserving nature should be “colorful.”

**Presenter(s):** Dan R. Kunkle, Retired

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## Roundtable Discussions

2:15 PM–2:55 PM, Grande Ballroom C

### Blogging: Creating Space for Non-Traditional Educators

#### Table 1

Blogging allows many to join the environmental education “conversation” in a way that is not currently available to individuals or organizations that don’t fall under the normal environmental education umbrella. Participants will discuss and receive material that will encourage blogging in a local and global manner that welcomes the nontraditional educator.

**Presenter(s):** Ameshia Morris, EarthMeetsMan

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### Building a Climate Education and Community Engagement Collective Impact Strategy

#### Table 2

This symposium and panel discussion will explore how climate education and community engagement innovations and effective practices—including place-based education, K–12, higher education, and other related fields—can be supported and accelerated for collective impact to prepare the nation for the challenges and opportunities climate change presents.

**Presenter(s):** Frank Niepold, NOAA Climate; Tamara Shapiro Ledley, TERC; Jason Morris, NatureBridge

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### Coming to Terms With Including Spirituality in EE

#### Table 3

Spirituality is regarded as a key component of sustainability yet it is rarely discussed, partly because of its vague nature and often because of a perceived connection to new-age eccentricity or religious fervor.

**Presenter(s):** Richard R. Jurin, University of Northern Colorado

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● Conservation and Education

● Environmental Education in Urban Settings

● Inspiring Connections to the Outdoors

● Research-Based Practice in EE

● Greening PreK–12, Higher Education, and Vocational Training

● Teaching About Environmental Issues and Systems Thinking

Teachers

Diversity, Equity and Inclusion

### Inspiring and Inviting Families to Spend Time in Nature Table 4

Explore successes and “failures” (learning opportunities) in offering outdoor experiences through Family Nature Clubs, family-based programs at nature centers, youth groups, and school-sponsored activities. Get ideas for redesigning nature programs to increase confidence, skills, relevance, and accessibility for families.

**Presenter(s):** Anne Fege, San Diego Children and Nature Collaborative

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### Success and Stumbles: Building Training Networks for Early Childhood EE Table 5

How do we reach those who lead underserved early learners? Join us to share success and stumbles as we discuss challenges and accomplishments involved in establishing training networks for early childhood EE. Reaching local Head Start grantees will be a priority topic for discussion.

**Presenter(s):** Josetta Hawthorne, Council for Environmental Education

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## Friday 3:05 PM

The following sessions are all 40-minute sessions that start at 3:05 PM and end at 3:45 PM.

### Traditional Presentations

#### 3:05 PM–3:45 PM

#### Assessing Environmental Literacy in the United States: A Meta-Analysis

3:05 PM–3:45 PM, Marina 2

Several environmental literacy assessments have been developed and tested with various subsets of the K–12 population in the past decade. This presentation is a meta-analysis, conducted as a systematic review of the literature pertaining to environmental literacy assessments to evaluate the strengths and weaknesses of the research and of particular instruments.

**Presenter(s):** Karena Ruggiero, University of Tennessee

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#### EcoSTARS: Environmental Education as Fieldwork for Preservice Teachers

3:05 PM–3:45 PM, Marina 3

In higher education, environmental education is generally seen as an “add on” rather than an integrated part of teacher education. But what if all teacher candidates were supported in learning how to use

the environment to teach? Learn how two Minnesota universities engage preservice and practicing teachers in field-based environmental education that has proven results.

**Presenter(s):** Patty Born-Selly, National Center for STEM Elementary Education, St. Catherine University

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#### Everglades Literacy Professional Development: An Action Research

3:05 PM–3:45 PM, Seabreeze 2

Learn about an environmental education action research study that sought to determine the effects of Everglades Literacy professional development workshops on teacher content knowledge, fidelity of implementation of online lessons, and student learning.

**Presenter(s):** Melissa Courtney, Florida Atlantic University, Pine Jog Environmental Educational Center; Anne Margaret Henderson, Florida Atlantic University, Pine Jog Environmental Educational Center

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#### Following Success: Evaluation Strategies in Underrepresented Youth Programs

3:05 PM–3:45 PM, Spinnaker 2

Measuring program outcomes and impacts often depends on program structure. During this session, three institutions will highlight evaluation techniques and methodologies for programs focused on underrepresented youth. The panel will feature rebuilding alumni databases, pre- and post-surveys, and alumni engagement strategies followed by a discussion about challenges, limitations, and successes.

**Presenter(s):** Neal Ramus, California Academy of Sciences; Kimberly Swan, Monterey Bay Aquarium; Jenny de la Hoz, U.S. Fish & Wildlife Service

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#### H<sub>2</sub>O to Go! Connecting Youth to Research in Environmental Issues

3:05 PM–3:45 PM, Marina 1

A dynamic residential model, H<sub>2</sub>O to Go! is a new way to study. High school students are immersed in a summer institute of learning that is a nationally replicable model. Learn about accessing research practices and field-based scientific data collection opportunities required to address current and future environmental issues.

**Presenter(s):** Ray Coleman, Florida Atlantic University, Pine Jog Environmental Educational Center; Christopher Hill, Florida Atlantic University, Pine Jog Environmental Educational Center; Hao Pan, Florida Atlantic University, Pine Jog Environmental Educational Center

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### The Basics of Nonprofit Board Governance

3:05 PM–3:45 PM, Marina 4

Join the NAAEE Affiliate Network to review the basics of nonprofit board governance including: board composition, relationships between volunteer boards and paid staff, board responsibilities, and board effectiveness. Facilitators will share practical, low-cost solutions for starting a board and also peer reviewed research for bringing your board on track.

**Presenter(s):** Michelle Gorham Jones, Hawaii Environmental Education Alliance; Ashley Hoffman, Kentucky Association for Environmental Education

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### Bright Spots

3:05 PM–3:45 PM



Learn about two or three successful and loosely related programs in each 40-minute Bright Spots session. Sessions are presented in the order listed.

### Spinnaker 1

#### Learning Legacies: Merging Art and Science with Interpretative Murals

Artist Boat's Eco-Art Residencies educate campuses about native flora/fauna and natural processes, while delighting the eyes! Eco-Art Residencies are delivered to students through after-school programs, summer programs, or in classrooms. Eco-Art residencies result in a work of art that serves as an interpretative tool for native wildlife and processes.

**Presenter(s):** Karla Klay, The Artist Boat, Inc.

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#### Recovering a Maya Ancient Tradition While Conserving the Environment

More than 100 years ago, the traditional processes of extraction and use of vegetable dyes disappeared from the Mayan region of the State of Quintana Roo. The project Rescue Vegetable Dyes aims to revive this ancient activity in the Mayan area, by using herbs, trees, fruits, and barks.

**Presenter(s):** Carolina Montalvo Espinoza, Instituto Tecnológico de Felipe Carrillo Puerto

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### The Waterbeat Music and Movement-Based Water Education

Come and participate in a very innovative and dynamic 7-minute water education exercise. The Waterbeat Workout teaches water conservation, watershed protection, water ecology, the water cycle, and properties of water through highly rhythmic music and movement. The movements are easy and fun to do. Everyone will be successful! Developed for K-6 grades. In Spanish and English.

**Presenter(s):** Stephen Snyder, ZunZun

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### Roundtable Discussions

3:05 PM–3:45 PM, Grande Ballroom C

#### EcosySTEM!™ – Taking a Systems-Based Approach to E-STEM and NGSS

Table 1

EcosySTEM!™ is a multi-year, sequential program model for elementary and middle schools that focuses on field ecology, ecosystem exploration, and permaculture for authentic applications of 21st Century STEM skills. Interactions between the scientific process, the use of technology, and the application of the Next Generation Science Standards are also addressed.

**Presenter(s):** Drew Dumsch, The Ecology School

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#### Finding Unexpected Success Through Homeschool Programming

Table 2

Hoping for 20 students in the pilot semester, the Santa Barbara Zoo launched an 8-week homeschool science program and over 100 students registered—some commuting more than 2 hours for class. This presentation shares what we're learning from the successes and ongoing challenges as the program grows and adapts.

**Presenter(s):** Hannah Kistner, Santa Barbara Zoo

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#### From Me to We: Advancing Environmental Education Through Collaboration

Table 3

Collaboration among organizations is essential in order to solve complex problems or take effective practices and programs in environmental education to scale. We'll explore why and how state, regional, and local institutions, including schools, work together for mutual benefit and a greater good. Contribute/learn about examples, new ideas, and useful resources.

**Presenter(s):** Mary Whitmore, Great Lakes Stewardship Initiative; Lisa Marckini-Polk, Civic Research Services, Inc.

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## If Anthropocentrism Exists in EE, is Deep Ecology the Answer?

### Table 4

The deep ecology worldview embraces an ecocentric philosophy and a lifestyle that is central to the debate in EE about planet earth as a finite resource. Now more than ever, we need to address neophilia, our relationship to nature, and the social milieu of EE providers.

**Presenter(s):** William Smith, RMIT University

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## Undergraduate Students' Understanding of Climate Change: Implications for Teaching and Learning of EE

### Table 5

Over the past many decades, our environment has been and is still being threatened with various challenges which have affected the general ecosystem in many ways. Climate change is one such challenge and it is mainly due to anthropogenic activities such as combustion of fossil fuels like coal.

**Presenter(s):** Adejoke Christianah Olufemi, Tshwane University of Technology, Pretoria, South Africa; Andile Mji, Tshwane University of Technology, Pretoria, South Africa; Murembiwa Stanley Mukhola, Tshwane University of Technology, Pretoria, South Africa

Strand: ●



### Did you know?

San Diego County has the **most missions** in the state, with four in all: Mission San Diego de Alcalá, Mission San Luis Rey, Mission San Antonio de Pala, and Mission Santa Ysabel. Mission San Antonio de Pala is the only California mission still used as a school and place of worship by Native Americans.

## Friday 4:00 PM

The following sessions all start at 4:00 PM. The end times vary with the type of session as indicated. Ninety-minute sessions are listed first, followed by 40-minute sessions.

### Symposium

#### 4:00 PM–5:30 PM

#### International EE Intersections: Identifying Emerging Questions to Help Guide Practitioners

4:00 PM–5:30 PM, Nautilus 4

A panel of experienced international EE practitioners will explore current and emerging issues and their intersection with international environmental education: environmental and social justice, health, diversity, indigenous knowledge, climate change, and sustainability.

**Presenter(s):** A Michael Marzolla, University of California; Jose Marcos-Iga, Environmental Education Exchange; Daniel Dominguez, Comunidades Verdes

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### Hands-On Presentations

#### 4:00 PM–5:30 PM

#### Developing Culturally Relevant Environmental Education Programs: Recommendations From Portland, Oregon

4:00 PM–5:30 PM, Nautilus 3

In order to be effective, environmental education must be integrated within diverse communities and community-based organizations. Join this session to learn about and apply findings from interviews with leaders from the Portland-Metro region. Explore report recommendations and the implications for the development and implementation of more inclusive and relevant programs.

**Presenter(s):** Traci Price, 3 Ways to Change

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#### Family Nature Clubs: An Inclusive and Innovative Approach to EE

4:00 PM–5:30 PM, Nautilus 1

Family Nature Clubs provide a unique and inclusive way to foster deep connections to and respect for the natural world and each other. Learn how and why during this interactive session that will emphasize cultural diversity and special needs inclusion through a unique, hands-on experience in unstructured nature play.

**Presenter(s):** Janice Swaisgood, Children & Nature Network; Heather Kuhlken, Families in Nature

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### Interactive, Hands-On Climate Change Lessons to Develop Stewardship and Understanding

4:00 PM–5:30 PM, Nautilus 2

What do you get by combining dry ice, Alka-Seltzer tablets, and charcoal? An engaging climate change unit is what! Engage every learner with nine innovative, hands-on activities to help your K-12 students visualize and conceptualize topics including the greenhouse effect, the carbon cycle, land and sea ice, and more!

Presenter(s): Barry Scott, NEED Project

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### Interested in Becoming an NAAEE Accredited College/University Program?

4:00 PM–5:30 PM, Seabreeze 1

This session will provide answers to your questions about becoming recognized through NAAEE Accreditation: Distinguished College and University Programs. The full third-party, standards-based process will be described by faculty members who have completed applications. Faculty will be available to answer your questions related to organizing your application and how we evaluate programs.

Presenter(s): Dottie K. Shuman, Montreat College; Terry Wilson, Western Kentucky University; Yash Bhagwanji, Florida Atlantic University; Billy Bennett, Eastern Kentucky University; Jeanine Huss, Western Kentucky University; Melinda Wilder, Eastern Kentucky University; Becca Lee Franzen, University of Wisconsin–Stevens Point; Joe A. Baust, Longwood University

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## Traditional Presentations

4:00 PM–4:40 PM

### Building Community Through Collective Impact in the Puyallup Watershed

4:00 PM–4:40 PM, Marina 3

The severity and interconnectedness of threats like climate change, pollution, and poverty demand that environmental educators act in a more comprehensive, system-wide manner. A collaborative working group in Washington State came together to find common ground across 40 environmental education organizations to better serve diverse community needs.

Presenter(s): Breanna Trygg, Trygg Consulting; Jennifer Chang, The Russell Family Foundation; Fabiola Greenawalt, The Russell Family Foundation

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### Environmental Literacy in Higher Education: Results of a Quantitative Assessment

4:00 PM–4:40 PM, Seabreeze 2

This presentation will explore the results of a quantitative assessment of environmentally-themed higher education courses, which showed significant gains in environmental literacy over the course of a semester. Participants will help to ask and answer what the proper role of environmental education in higher education can be.

Presenter(s): Jordan King, University of Wisconsin–Stevens Point, Central Wisconsin Environmental Station; Becca Lee Franzen, University of Wisconsin–Stevens Point

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### Environmental Literacy Plans: Measuring Success

4:00 PM–4:40 PM, Marina 2

How are you measuring the success of environmental literacy plans? Learn how Colorado and the District of Columbia are using online tools and building capacity to evaluate gaps and access to EE at state and community levels. Discuss, brainstorm, and share successes that help evaluate and communicate the impact of EE.

Presenter(s): Katie M. Navin, Colorado Alliance for Environmental Education; Grace Manubay, DC Office of the State Superintendent of Education

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### More Than Good Intentions: The Role of Conditions in Personal Transportation Behavior

4:00 PM–4:40 PM, Marina 1

Results from a yearlong research study on personal transportation behavior will be presented to illustrate how educational strategies can be designed for behavior change in everyday life. In efforts to create more widespread pro-environmental behavior, environmental education should consider how to incorporate supportive real life conditions to better bridge intention with behavior.

Presenter(s): Matt Biggar, Stanford University

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**Opening the Outdoors to Middle School Students****4:00 PM–4:40 PM, Marina 4**

Getting kids outdoors, engaging them in motivating tasks, supervising accountability, and following NGSS is a daunting task. Now add the unique characteristics of the middle school student! This workshop will give specific lessons, management strategies, and research-backed practices to teachers wanting an urban campus to experience and implement NGSS.

**Presenter(s): Susan Scott, Rincon Middle School**

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**State Approaches to the Integration of E-Lit and NGSS****4:00 PM–4:40 PM, Spinnaker 2**

In a changing educational climate, environmental education can support implementation of NGSS. As these standards challenge schools to reach beyond content proficiency, students will be expected to engage in more critical thinking, analysis, and problem solving. Hear examples from NGSS states about leveraging EE to implement NGSS.

**Presenter(s): Sarah Bodor, NAAEE; Laura Downey, Kansas Association for Conservation and Environmental Education**

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**Urban Planning in a Virtual World: Community-Based Urban EE for Civic Learning and Engagement****4:00 PM–4:40 PM, Nautilus 5**

Urban Planning is a core disciplinary area in Urban EE, yet it is difficult to teach. Learn about how one program is utilizing virtual simulations paired with real-world experiences to introduce youth to the socio-ecological systems of cities, the role urban planning plays in the development of sustainable cities, and the importance of civic engagement.

**Presenter(s): Jennifer Klein, Lesley University; Kris Scopinich, Mass Audubon**

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San Diego Sweet Pea

**Did you know?**

Spanning a range of habitats from the Pacific coast to mesas, foothills, mountains, and desert, **over 1,500 native plant species** and almost 500 non-native species have been identified in San Diego County. It is the most botanically diverse county in the contiguous United States.

**Bright Spots****4:00 PM–4:40 PM**

Learn about two or three successful and loosely related programs in each 40-minute Bright Spots session. Sessions are presented in the order listed.

**Spinnaker 1****A New Way of Seeing Stuff: Small Assignment Big Impact**

Learn about a mixed methods analysis of the effect of a homework module for preservice teachers based on the *Story of Stuff*. Although the assignment focuses on the educational technology aspect of *Stuff*, a subset of the participants experience a significant change in worldview, which shows up in qualitative coding.

**Presenter(s): Bryan H. Nichols, Florida Atlantic University**

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**City to Sea Citizen Science: Engaging Urban Communities in Science**

Using citizen science to increase participation of underserved audiences, participants in this program gained scientific knowledge of the importance of decreasing litter, increased their understanding of the implications of this plastic debris, both locally and globally, and were able to interact and learn from a knowledgeable scientist and gain valuable research, computer, and communication skills.

**Presenter(s): Rochelle Mothokakobo, Ocean Discovery Institute; Lindsay Goodwin, Ocean Discovery Institute**

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**Finding the Route: Getting to the Program Summit Through Evaluation**

How do you find the right path for program success? Let evaluation be your compass! This case study highlights how evaluation has successfully shaped Yampatika's environmental literacy program. The relationships between external evaluator, program staff, and participating school districts will be explored and lessons learned will be shared.

**Presenter(s): Sonja Macys, Yampatika; Christina Stark, Inside Out Evaluation**

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## Roundtable Discussions

### 4:00 PM–4:40 PM, Grande Ballroom C

#### Beginning With the End in Mind—Start with Assessments! Table 1

Join a structured conversation on assessment with opportunities to try out leveled quiz questions on diverse environmental topics (free online), to play an environmental literacy board game (free download), and to start developing assessment ideas for your own program or class.

**Presenter(s):** Jan C. Weaver, Missouri Environmental Education Association

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#### Building Community Partnerships for Watershed Education Table 2

The Coastal Watershed Alliance is a program funded by the Toyota TogetherGreen Fellowship Program, which brings together local community and environmental organizations in a partnership to support teachers in water conservation goals. Learn about program development, TogetherGreen funding, and receive a copy of the watershed curriculum developed by CWA.

**Presenter(s):** C. Parker McMullen Bushman, Chincoteague Bay Field Station

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#### Building Youth Leadership in Your Program Table 3

Join a conversation with youth leaders about how they engage peers in building the climate movement at their high schools by incentivizing behavior change and a more sustainable lifestyle. Discuss service-learning projects and best practices for building youth leadership in your program.

**Presenter(s):** Paola Alvarado, The Center for Climate Protection; Amy B. Jolly, Climate Protection Campaign; Shivani Kumar, Center for Climate Protection

Strand: ●

#### Ecological Handprints: Lifting Humanity While Lowering Our Footprint Table 4

Are there successful examples of people lifting themselves out of poverty while simultaneously lowering their ecological footprint? The answer is a resounding yes—and they're called "Ecological Handprints." Through success stories and innovative practices from all over the world, we'll explore place-based community action that links social justice and ecological resilience.

**Presenter(s):** Rocky J. Rohwedder, Sonoma State University

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#### Researching Children's Knowledge and Skills in Science—Implications for NAAEE

##### Table 5

Researchers share outcomes and implications from four years of NSF-funded research looking at what four year olds know and can do in science. Join us in a brainstorming session on how the activities and findings can be utilized by environmental educators to provide children NGSS-aligned learning experiences.

**Presenter(s):** Mary Elizabeth Hobbs, University of Texas–Austin; Bob Williams, University of Texas–Austin

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#### The Ways in Which Communities Value Nature Centers Table 6

Our nation-wide study of 16 U.S. nature centers found that communities believed centers provided four sets of values: environmental connection, leisure provision, civic engagement, and community resilience. We will summarize our study and facilitate a discussion on how nature center professionals and researchers might apply our results to their work.

**Presenter(s):** Matthew H. Browning, Virginia Tech; Nicole Ardoin, Stanford University; Joe E. Heimlich, Lifelong Learning Group/COSI

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## Friday 4:50 PM

The following sessions are all 40-minute sessions that start at 4:50 PM and end at 5:30 PM.

### Traditional Presentations

#### 4:50 PM–5:30 PM

##### California Greening: Our Environmental Literacy Plan and Green Ribbon Lessons

##### 4:50 PM–5:30 PM, Marina 2

As an innovator in environmental education, California has created a Blueprint for Environmental Literacy that models effective partnerships between the State Department of Education and a variety of stakeholder groups to advance environmental education and sustainability. The state's Green Ribbon Schools program also incorporates an efficient and effective recognition program.

**Presenter(s):** Paul Chapman, Inverness Associates; Nate Ivy, Alameda County Office of Education; Deborah Moore, Green Schools Initiative; Craig Strang, Lawrence Hall of Science

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### Collective Impact: A Summative Evaluation of Gray Family Foundation Grantmaking

4:50 PM–5:30 PM, Marina 3

Awarding over \$4.8 million to schools, agencies, and nonprofits, the Gray Family Foundation has provided targeted, competitive grants to support EE in Oregon since 2008. To better understand their reach and impact, and to consider future funding priorities, GFF conducted a summative evaluation of their grantmaking. Come hear the results.

**Presenter(s):** Steven Braun, Portland State University; Bora Simmons, National Project for Excellence in Environmental Education

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### Department of the Interior Inspires and Engages the Next Generation

4:50 PM–5:30 PM, Marina 4

Come learn how to tap into key programs; current initiatives; and funding, technical, and other assistance available through the Department of the Interior. While we don't offer much funding, we do offer world-class outdoor classrooms, scientists, and cultural resources you can use to inspire, motivate, and educate your students.

**Presenter(s):** Maria E. Arnold, U.S. Fish & Wildlife Service; Drew Burnett, U.S. Fish & Wildlife Service

Strand: ●

### Education Outside: Building Evaluation Capacity Within an EE Organization

4:50 PM–5:30 PM, Nautilus 5

This session focuses on how a multi-phase partnership can build evaluation capacity of EE organizations by clarifying how to improve programming and critically examining program implementation to set up a rigorous outcomes study. This session encourages researchers and practitioners to share challenges and best practices in supporting evaluation capacity building.

**Presenter(s):** Bernadette Chi, Lawrence Hall of Science–UC Berkeley; Valeria Romero, University of California–Berkeley; Lisa Newton, Lawrence Hall of Science

Strand: ●

### Environmental Literacy of Undergraduate Students in China: Constructing a Measure

4:50 PM–5:30 PM, Seabreeze 2

In this session, we will describe steps taken to develop and validate a researcher-constructed instrument for a recent environmental literacy assessment of undergraduate students in the Hubei Province of China. Unique aspects of the development and translation process, final scales, and validity and reliability of each scale will be discussed.

**Presenter(s):** Yan Zhu, Florida Institute of Technology

Strand: ● 

### Natural STEPS: An Innovative Approach to Teaching Teachers and Students

4:50 PM–5:30 PM, Marina 1

The Natural STEPS program is an innovative EE delivery method that combines the best of great program delivery for students, with hands-on experience for teachers. The each-one-teach-one concept can be adapted to any program, and is a great way to get teachers up, engaged, and confident.

**Presenter(s):** Rachel Werling, Oregon State University

Strand: ●

### Researching Students' Environmental Awareness, Attitudes, and Behaviour in the Iranian Context

4:50 PM–5:30 PM, Spinnaker 2

This session will report on a study into the environmental awareness, attitudes, and behaviour of secondary school students in Tehran, Iran. The aim was to explore these three key aspects of environmental education (EE) among Iranian students, with a view to considering how to improve EE programmes for these students.

**Presenter(s):** Farshad Hashemzadeh, University of Waikato

Strand: ●

● Conservation and Education

● Environmental Education in Urban Settings


● Inspiring Connections to the Outdoors

● Research-Based Practice in EE

● Greening PreK–12, Higher Education, and Vocational Training

● Teaching About Environmental Issues and Systems Thinking

 Teachers

 Diversity, Equity and Inclusion

## Bright Spots

### 4:50 PM–5:30 PM



Learn about two or three successful and loosely related programs in each 40-minute Bright Spots session. Sessions are presented in the order listed.

### Spinnaker 1

#### Affiliates: Are You Considering a Certification Program for Environmental Educators?

EE certification programs provide environmental educators with essential skills, increase professionalism in the field of EE, and are based on the *Preparation and Professional Development of Environmental Educators: Guidelines for Excellence*. If your state does not have an EE Certification program, stop in to learn how to get one started!

**Presenter(s):** Elizabeth Schmitz, Kentucky Environmental Education Council (KEEC); Susan McGuire, McGuire Consulting; Katie M. Navin, Colorado Alliance for Environmental Education

Strand: ●



#### EE Recertification: I Am a Guinea Pig

My certification as an environmental educator expires in 2015. Unless I recertify, that is. So, what does recertification look like? The Colorado Alliance for EE wrote a recertification protocol and I was its first test subject. I'll share our results.

**Presenter(s):** Donny E. Roush, Earth Force

Strand: ●



#### Why Be EE Certified? Testimonials From Graduates of EE Certification Programs

From networking to learning best practices in environmental education, EE Certification has many personal and professional benefits. Stop by to hear from environmental education leaders about how their EE Certification program experience has helped them advance personally and professionally.

**Presenter(s):** Ashley Hoffman, Kentucky Association for Environmental Education

Strand: ●



## Roundtable Discussions

### 4:50 PM–5:30 PM, Grande Ballroom C

#### How Does Colonization Affect Approaches to Environmentalism and Environmental Education?

##### Table 1

How often do we recognize the impact that historical and modern colonialism has on our current environmental status? This roundtable discussion will encourage discussion on defining colonialism, its effect on environmental education in urban settings, and how we can explore these issues further with our students.

**Presenter(s):** Brenda Yancor, Los Angeles Rooted; Johanna Iraheta, Los Angeles Rooted

Strand: ●

#### Is the Carrying Capacity Exceeded? Preservice Teachers' Beliefs on Human Population Growth

##### Table 2

Teachers' beliefs are among the factors having an influence on students' conceptions, attitudes, and beliefs. Thus, this study aimed to examine preservice teachers' beliefs towards human population growth within the context of sustainability, and intended to inspire researchers and educators to explore the holistic nature of this topic within a sustainability perspective.

**Presenter(s):** Sinem Demirci, Middle East Technical University

Strand: ●

#### Safe Water in a Peri-Urban Settlement: Role of Environmental Education

##### Table 3

Household water treatment and safe storage systems are proven interventions for providing safe water. However, most women involved in this process do not know the importance of safe storage and filtration on water quality. Environmental education is essential for improving lives and provision of safe water.

**Presenter(s):** Oyewale Morakinyo, Tshwane University of Technology, Pretoria; Matlou Mokgobu, Tshwane University of Technology, Pretoria

Strand: ●

### Schools and Outdoor Learning Environments: Connecting Schools to Environmental Education

#### Table 4

Learn how S.O.L.E. plays “matchmaker” to connect schools and families to existing environmental education programs. Get a peek into its inception and how it provides multiple contacts with the outdoors through field trips, family events, and teacher development. We will also discuss the challenges and benefits involved in this program.

**Presenter(s):** Tracy Gripp, Colorado Parks and Wildlife  
Strand: ●

### Understanding Psychology to Communicate about Climate Change With Diverse Audiences

#### Table 5

Communicating about climate change can be difficult, as the issue remains controversial and highly politicized. This roundtable conversation will use the results of a recent survey among science educators to discuss how to effectively communicate climate information to diverse audiences through instructional materials and in-service training.

**Presenter(s):** Kristen Kunkle, NAAEE  
Strand: ●

## Friday 5:15 PM

### Special Event

5:15 PM–6:45 PM

#### Film Screening: *The Guide* by HHMI BioInteractive

5:15 PM–6:45 PM, Grande Ballroom A

Join us for a special screening of HHMI BioInteractive’s inspiring short film, *The Guide*. **RSVP required.**

See page 36 for more information.



## Friday 5:30 PM

### Meeting

5:30 PM–7:30 PM

#### Community Climate Change Fellows Meeting

5:30 PM–7:30 PM, 411

By invitation.

## Friday 6:45 PM

### Informal Gatherings

6:45 PM

#### Diversity Gathering

6:45 PM, Meet at Quinn’s Ale House (Sheraton)

Informal no-host dinner for those interested in networking with others about diversity, equity, and inclusion in environmental education. Please RSVP at the registration desk.

**Coordinator:** Darryl Ramos-Young

#### University of Michigan Gathering

6:45 PM–8:30 PM, Meet at the Sheraton entrance to walk to the Boathouse Restaurant

Networking dinner for University of Michigan School of Natural Resources alumni, faculty, students, and staff.

**Coordinator:** Michaela Zint

#### Young Professionals Networking at C Level

6:45 PM, Meet at Sheraton entrance to walk to C Level Lounge

Network with other young professionals at C Level Lounge. Meet in the lobby of the Sheraton at 6:45 PM and we’ll walk one-half mile to C Level, where you can enjoy spectacular views of the Pacific Ocean and meet new friends. (Note: Beverages and dinner are available for purchase.) Please RSVP at the registration desk.

**Coordinator:** Marie Rychlik





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# Saturday

## Saturday 8:00 AM

### Networking

**8:00 AM–9:10 AM**

#### Natural Start Alliance Morning Networking

**8:00 AM–9:10 AM, Spinnaker 1**

Bring your breakfast, and start your morning networking with early childhood environmental educators. This informal gathering will give you an opportunity to meet others who work with young children, share ideas, and learn about some of the things that are happening throughout the Natural Start Alliance.

**Coordinators:** Christy Merrick, Natural Start Alliance, NAAEE; Betty Olivolo, Natural Start Alliance, NAAEE

Strand: ● 🍏

## Saturday 8:30 AM

The following sessions all start at 8:30 AM. The end times vary with the type of session as indicated.

Ninety-minute sessions are listed first, followed by 40-minute sessions.

### Special Session

**8:30 AM–10:00 AM**

#### NAAEE Evaluation Clinic

**8:30 AM–10:00 AM, Nautilus 2**

Do you have questions about evaluation or assessment? Bring them to NAAEE's second annual Evaluation Clinic, where you can ask questions of the experts and contribute your own relevant experience. Learn from evaluation experts as well as your peers through informal, roundtable conversations.

**Presenter(s):** Michaela Zint, University of Michigan; Nicole Ardoin, Stanford University; Dave Chase, DRC Consulting, LLC and PEER Associates, Inc.; Joe E. Heimlich, Lifelong Learning Group/COSI; Thomas J. Marcinkowski, Florida Institute of Technology; Martha C. Monroe, University of Florida; Kathleen M. O'Connor, Stanford University; Tracey Ann Ritchie, University of Florida; Bora Simmons, National Project for Excellence in Environmental Education; Yu-Chi Tseng, National Academy for Educational Research

Strand: ●

### Strands

- Conservation and Education
- Environmental Education in Urban Settings
- Greening PreK–12, Higher Education, and Vocational Training
- Inspiring Connections to the Outdoors
- Research-Based Practice in EE
- Teaching About Environmental Issues and Systems Thinking
- 🌍 Addresses Diversity, Equity, and Inclusion
- 🍏 Appropriate for Teachers

### Symposia

**8:30 AM–10:00 AM**

#### Education Equity Through Citizen Science

**8:30 AM–10:00 AM, Nautilus 5**

In 2015 the National Science Teachers Association and U.S. Fish and Wildlife Service convened a diverse group of stakeholders to explore how to enhance equity for all learners through citizen science. Hear about evidence and elements of success, and shared resources to incorporate in new areas with new learners.

**Presenter(s):** Janelle M. Johnson, Equity Assistance Center, Metropolitan State University of Denver; Maria E. Arnold, U.S. Fish & Wildlife Service; Janet Ady, U.S. Fish & Wildlife Service

**Moderator:** Juliana Texley, National Science Teachers Association

Strand: ● 🌍 🍏

### From Research to Implementation: Inspiring E-STEM With the UL Innovative Education Award

8:30 AM–10:00 AM, Marina 6

Research into using EE to aid STEM led to the creation of the UL Innovative Education Award to honor and support extraordinary programs. Hear from inaugural year award recipients about these inspiring efforts, and learn how UL and NAAEE are working together to change the E-STEM landscape through funding, mentorship, and peer-to-peer networking.

**Presenter(s):** John Fraser, New Knowledge Organization; Cara Gizzi, Underwriters Laboratory; Thea Sahr, Future Cities; Kelly Keena, Blue Lotus Consulting  
**Moderator:** Christiane Maertens, NAAEE

Strand: ● 🍏

### Hands-On Presentations

8:30 AM–10:00 AM

#### Agents of Discovery: Outdoor Education Through Mobile Gaming

8:30 AM–10:00 AM, Nautilus 1

Video games have left youth disconnected from nature and the best remedy is...a game? Agents of Discovery is a mobile game that gets kids outdoors learning about nature and science in their local environment. Find out how the game is helping youth connect with nature all over North America.

**Presenter(s):** Mary Krupa-Clark, Agents of Discovery; Dennis Merkel, U.S. Forest Service; Michiko Martin, U.S. Forest Service

Strand: ● 🍏

#### Cultivating Community Resiliency Through Learning About Regional Food and Agriculture

8:30 AM–10:00 AM, Nautilus 3

Nourishing ourselves with food is an everyday act, yet we rarely consider the ways our food system affects climate change and the climate solutions possible through transforming our food and agricultural systems. The Center for Ecoliteracy helps transform school meals and educate students about creating regional, resilient food systems.

**Presenter(s):** Carolie A. Sly, Center for Ecoliteracy

Strand: ● 🍏

#### Environmental Literacy Plans, Professional Development, and Guidelines—A Perfect Match

8:30 AM–10:00 AM, Marina 4

Building environmental literacy takes a collective of educators, agencies, organizations, tribes, and businesses, as well as a common understanding of EE best practices. In this session we will examine the

NAAEE guidelines as pivotal to the success of building environmental literacy throughout statewide networks and examine the strategy employed in Oregon.

**Presenter(s):** Susan Sahnaw, Oregon Natural Resources Education Program; Alison Heimowitz, Clackamas Community College

Strand: ●



#### Neighborhood Problems, Neighborhood Solutions: One-Minute Climate Change Films

8:30 AM–10:00 AM, Seabreeze 1

The project introduced a group of District of Columbia (DC) teachers and students to filmmaking as a tool to explore Climate Change. See elementary, middle, and high school students' films, learn from DC's successes and challenges, and start creating a one-minute film on climate change using stop motion.

**Presenter(s):** Rebecca N. Davis, District of Columbia Environmental Education Consortium (DCEEC)

Strand: ● 🍏

### Traditional Presentations

8:30 AM–9:10 AM

#### Is Climate Change Changing the Face of EE?

8:30 AM–9:10 AM, Marina 2

After Hurricane Sandy in New York and catastrophic floods in Colorado, environmental educators incorporated terms like "resilience" and practices like engaging youth in restoration. But did their practices change or did they simply leverage new funding opportunities? And how did youth conceptual frames regarding climate and disturbance change as a result of participation in these programs?

**Presenter(s):** Marianne Krasny, Cornell University; Justin Griffis Smith, Cornell University

Strand: ●



#### Nature City: Strategies for Connecting Urban Youth with Nature Experiences

8:30 AM–9:10 AM, Marina 3

Participate in lively discussion and activities as we explore strategies for engaging urban communities in environmental education. This presentation will include innovative ideas for creating urban outdoor learning spaces, techniques for engaging students across economic and cultural boundaries, and strategies for connecting urban students with nature.

**Presenter(s):** Juliann Dupuis, Notre Dame of Maryland University; Scott Hartman, Baltimore City Public Schools; Kristine Buls, Baltimore City Public Schools; Ashley Demski, Baltimore City Public Schools

Strand: ● 🍏

### Providing Tools: A New Network, Gear Libraries, and Kids Outdoors!

8:30 AM–9:10 AM, Marina 1

Outdoors Empowered Network founder Kyle Macdonald, and co-creators of the growing network will share their learning about Gear Libraries and the power of building community capacity for outdoor education. The session will explore the exponential power of this train-and-support model, as well as how it promotes a culturally inclusive approach.

**Presenter(s):** Kyle Macdonald, Outdoors Empowered Network; Jessica Parsons, Circle The City, Emerald Necklace Conservancy; Alison Paul, fieldmuseum.org

Strand: ●  

### Teaching Environmental Sustainability

8:30 AM–9:10 AM, Seabreeze 2

Model My Watershed application provides students with access to scientifically valid and easy-to-use watershed tools to examine their neighborhoods, to define local environmental problems or challenges, and to develop solutions to improve their environment. Effectiveness is measured by its ability to promote critical incidents in terms of students' engagement with watershed ideas.

**Presenter(s):** Nanette Ivory Marcum-Dietrich, Millersville University of Pennsylvania; Susan E. Gill, Stroud Water Research Center; Carolyn Staudt, Concord Consortium

Strand: ● 

### Transforming Spaces, Transforming Lives: Nature-Rich Outdoor Classrooms for Underserved Children

8:30 AM–9:10 AM, Nautilus 4

Increasing access to nature for underserved children and families through nature-rich outdoor classrooms is a holistic, mindful way of creating early developmental avenues towards a robust connection with nature. Successful outdoor classrooms are being created through engaging youth and volunteers. See examples of nature-based play/learning spaces in diverse settings.

**Presenter(s):** Susan H. Wirth, Dimensions Educational Research Foundation and Arbor Day Foundation; Tamberly Conway, U.S. Forest Service; Sue Cummings, U.S. Forest Service

Strand: ● 

## Bright Spots 8:30 AM–9:10 AM



Learn about two or three successful and loosely related programs in each 40-minute Bright Spots session. Sessions are presented in the order listed.

### Spinnaker 2

#### Partners for Polar Bears: An Intergenerational Program for Climate Change Action

How do you get a socioeconomically and age diverse group committed to climate change action? Polar bears! We will share how polar bears enabled a diverse group of youth and seniors to identify common values that evolved into a joint climate change action project and a new perspective on environmental conservation.

**Presenter(s):** Karen Lind, Assiniboine Park Conservancy

Strand: ●  

#### Saying 'No' to Field Trips May Be Good for Conservation

As environmental educators we want to reach as many students as feasibly possible. Learn how conservation behavior change can increase when you turn down one-time field trip requests. Find out why White Oak Conservation decided to say "no" to one-time field trips and "yes" to something a little different.


**Presenter(s):** Lauren Watkins, White Oak Conservation

Strand: ● 

#### Working Effectively with Communities: How Community Engagement Drives Conservation Action

While each community has distinct biological and cultural differences, we can share approaches on how to create or maintain environmental programs. Join in a conversation on how to improve human and ecological communities through authentic community engagement and conservation action.

**Presenter(s):** Joshua Ronald York, Five Rivers MetroParks; Lauren Asquith, Five Rivers MetroParks

Strand: ● 

## Roundtable Discussions

8:30 AM–9:10 AM, Grande Ballroom C

### Addressing Barriers and Engaging Urban Audiences in Environmental Education

#### Table 1

With the majority of Americans living in cities, how do we teach a new, diverse generation to love the land when pavement is what they usually see? The U.S. Fish & Wildlife Service is addressing this question and many more with their Urban Wildlife Conservation Program.

**Presenter(s):** Lisa Cox, U.S. Fish & Wildlife Service

Strand: ● 🌱 🍏

### An Assessment of Environmental Literacy of Undergraduate Students in China

#### Table 2

What is the level of environmental literacy of Chinese students? Following a brief summary of an environmental literacy assessment of undergraduate students at two national universities in China, major findings, implications, and recommendations will be discussed for advancing practices in environmental education at the tertiary level.

**Presenter(s):** Yan Zhu, Florida Institute of Technology

Strand: ● 🌱 🍏

### Collaboration: Bridging University Science Research and Science Education

#### Table 3

Using a Big Sky Watershed Nutrient Cycling PhD Research and Education project as an example, this discussion centers on how collaboration among university research scientists, public school classes, and teacher education programs can bridge the gap between scientific research at the university level and science education in K–12 school settings.

**Presenter(s):** Rose R. Vallor, Montana State University

Strand: ● 🍏

### Embracing Climate Change Skeptics

#### Table 4

Learn to listen to climate change skeptics and utilize their information as a way of making your teaching practice stronger and more effective.

**Presenter(s):** Kimberly Ann Dixon, University of Maryland Extension Service

Strand: ● 🍏

### Interpreting Big Ideas WITH Your Audience, Not Just FOR Them

#### Table 5

Interpreting big ideas for 21st century audiences requires a fundamental change in approach, using engagement strategies that involve visitors/students/ participants as co-creators of their education/ interpretive experiences. Learn how to make BIG conservation topics, like the Amazon, accessible for formal/informal audiences.

**Presenter(s):** Teresa Randall, Oklahoma City Zoo; Christa Dillabaugh, Amazon Rainforest Workshops; Amanda Dworak Rowland, NPS–Lake Mead NRA

Strand: ●

## Saturday 9:20 AM

The following sessions are all 40-minute sessions that start at 9:20 AM and end at 10:00 AM.

### Traditional Presentations

9:20 AM–10:00 AM

#### Content and Pedagogy of Critical Importance in Preservice Early Childhood Environmental Education

9:20 AM–10:00 AM, Spinnaker 1

Preservice programs can better enhance the preparation of professionals by integrating the foundations in theory and practice relevant to both early childhood and environmental education. This session will highlight content and teaching strategies of significant importance in the delivery of effective higher education courses.

**Presenter(s):** Yash Bhagwanji, Florida Atlantic University

Strand: ● 🍏

#### Teach Inquiry-Based Ecology With a Citizen Science Trail Camera Project

9:20 AM–10:00 AM, Seabreeze 2

HHMI BioInteractive presents an online citizen science platform where students are scientists identifying animals in trail camera images from researchers tracking lions for a wildlife restoration project in Gorongosa National Park, Mozambique. Participants will work through a free hands-on activity to model using trail camera data to engage in scientific inquiry.

**Presenter(s):** Bridget Conneely, Howard Hughes Medical Institute

Strand: ● 🍏

### Teaching EE Programs to Linguistically Diverse Students

9:20 AM–10:00 AM, Marina 3

This presentation will offer the participants the skills needed to teach EE programs to linguistically diverse students. Come and participate in demonstrations of teaching methods for English learners and practice using rubrics for evaluating and modifying your EE lessons for ESL students.

**Presenter(s):** Rafael Salgado, Cal-Wood Education Center

Strand: ●   

### The Progress and Implication of Taiwan Outdoor Environmental Education Movement

9:20 AM–10:00 AM, Nautilus 4

In 2012, Taiwan initiated an outdoor environmental education movement, just like the No Child Left Inside movement in the United States. This presentation shares a story about how a group of people fought against the prevailing state that young people learned less and less outside the classroom and lost contact with nature.

**Presenter(s):** Yu-Chi Tseng, National Academy for Educational Research

Strand: ●

### Transforming Youth Outdoors: A Community Committed to Getting Youth Outdoors

9:20 AM–10:00 AM, Marina 1

Learn about recently launched TYO: Transforming Youth Outdoors. TYO is an online learning community created for outdoor youth program leaders and designed to provide all of the tools and resources needed to build and grow programs while allowing users to connect and collaborate with other leaders across the country.

**Presenter(s):** Christopher Rutgers, Transforming Youth Outdoors

Strand: ●  

### WWF Wildlife and Climate Change: New Teaching Resources

9:20 AM–10:00 AM, Marina 2

Want to better understand how climate change is affecting wildlife? How we help species adapt to new conditions? World Wildlife Fund (WWF) has developed engaging learning materials that help high school and college students and the general public explore this issue. They include an online learning platform with lesson plans, PowerPoint presentations, and more.

**Presenter(s):** Nikhil Advani, World Wildlife Fund; Shaun Martin, World Wildlife Fund

Strand: ●

## Bright Spots

9:20 AM–10:00 AM



Learn about two or three successful and loosely related programs in each 40-minute Bright Spots session. Sessions are presented in the order listed.

### Spinnaker 2

#### Celebrate Shorebirds—Engaging Youth in Scientific Research and Environmental Education

Former interns from a nonprofit, Environment for the Americas, will share their experiences in wildlife conservation and environmental education. They will discuss how they engaged inner-city youth, mostly from underrepresented communities into the natural sciences. The presentation explores how hands-on scientific research enhanced an environmental education initiative in Los Angeles, California.

**Presenter(s):** Carlos Jauregui, Environment for the Americas

Strand: ●

#### Reading Camp and Environmental Education for Low Income Children

Reading Camp Knoxville offers a week-long camp experience for low-income children who also are at least one grade behind their peers in reading skills. Reading Camp Knoxville will also offer environmental education to children growing up in an urban area with hikes, hands-on gardening activities, and use of books related to nature and the environment.

**Presenter(s):** Cynthia Coe, The Episcopal Church

Strand: ●

#### Saving a School Through Agroecology

This presentation explores how a public school serving a Latino, low SES population that was ready to be closed down by the school district because of low enrollment and low test scores, comes back to life thanks in part to an integrated curriculum around hands-on agroecology projects.

**Presenter(s):** Frank Zadroga, University of Arizona; Alberto Arenas, University of Arizona

Strand: ● 

## Roundtable Discussions

9:20 AM–10:00 AM, Grande Ballroom C

### Connecting Diverse Urban Audiences Through Innovative Environmental Education Activities

#### Table 1

This session shares innovative ideas for leveraging partnerships to connect diverse urban audiences with nature. It explores strategies that develop and implement inclusive environmental education programs by bringing messages where diverse urban audiences live, creating a network of nature friendly habitats in municipal parks, schoolyards, vacant lots, and yards.

**Presenter(s):** Alicia Frances King, U.S. Fish & Wildlife Service Migratory Bird Program

Strand: ● 🍏

### Establishment of a New Professional Association for Environmental Educators in Virginia

#### Table 2

A strategic planning initiative, needs assessment, and ambitious work on an Environmental Literacy Plan, are all identified as critical needs for better representation for environmental educators in Virginia. Learn more about an initiative to create a new EE professional association that may eventually become a natural fit for NAAEE Affiliate status.

**Presenter(s):** Greg K. Eaton, Claytor Nature Center of Lynchburg College

Strand: ●

**naaee**  
Affiliate

### I'll Meet You Online—Today's Professional Development Delivery Methods

#### Table 3

Online platforms for learning and teaching continue to develop, evolve, and completely change. Engage in a conversation around using online platforms for professional development (PD) in EE. The story of the Wisconsin Center for EE's evolution from face-to-face traditional EE to online sustainability PD will provide a springboard for discussion.

**Presenter(s):** Susan Schuller, University of Wisconsin—Stevens Point

Strand: ● 🍏

### Schools and Nature Centers as Partners

#### Table 4

Is your nature center struggling to retain schools as customers? Has your school cut field trips for environmental education programs because of tight budgets and principals who are pressured by standards achievement tests? Join a discussion on how nature centers and schools can partner to positively impact student achievement.

**Presenter(s):** Dan R. Kunkle, Retired

Strand: ● 🍏

### Sense of Wonder—Nature Journaling

#### Table 5

Come be inspired to rekindle your sense of wonder by making your own nature journal and learning innovative ways to use that journal. Connections to the Common Core Standards, trade books, and 5E lesson plans will be shared.

**Presenter(s):** Molina Walters, Arizona State University; Teresa Schretter Coker, Green Mountain College

Strand: ● 🍏

## Saturday 10:00 AM

### Coffee Break

10:00 AM–10:30 AM, Pavilion

## Saturday 10:30 AM

The following sessions are all 40-minute sessions that start at 10:30 AM and end at 11:10 AM.

### Traditional Presentations

10:30 AM–11:10 AM

#### Bridging EE and Agricultural Education Communities Through Project Learning Tree

10:30 AM–11:10 AM, Marina 1

Although the agriculture and natural resources communities are both reliant on healthy agro-ecosystems, EE is rarely used in agricultural education, and environmental topics are a low priority. We will present preliminary findings on how Project Learning Tree may successfully improve low levels of environmental literacy among agriculture teachers and students.

**Presenter(s):** Kathryn Stevenson, North Carolina State University; Renee Strnad, North Carolina State University; Kevin Curry Jr, North Carolina State University

Strand: ● 🍏

### Creating a Diverse and Representative Environmental Workforce

10:30 AM–11:10 AM, Nautilus 4

The Foundation for Youth Investment is taking action to address the “Green Ceiling” problem identified by the Green 2.0 report. Join us in discussing FYI’s programs: the triumphs, challenges, and strategies for creating a more diverse and representative outdoor workforce.

**Presenter(s): Rena Payan, Foundation for Youth Investment**

Strand: ● 

### Dirt Piles and Mud Pits (and Everything In-Between)

10:30 AM–11:10 AM, Spinnaker 1

From challenges and conundrums to solutions and successes, hear how this urban preschool’s outdoor classroom is taking learning to a new level. This session will look at design elements that engage teachers and early learners alike with appropriate risk, open exploration before modeling, valuing process over product, and child-driven inquiry.

**Presenter(s): Nikki Julien, University of Arizona, Maricopa County Cooperative Extension**

Strand: ●  

### EE and Molecular Storytelling: Genomics in a Museum Setting

10:30 AM–11:10 AM, Nautilus 5

Learn how the Reuben H. Fleet Science Center and Life Sciences Foundation partnered to create a unique volunteer program that gave local scientists tools to communicate the wonders of genomics and our molecular environment with visitors of diverse ages and backgrounds.

**Presenter(s): Ian Signer, Life Sciences Foundation; Mary French, Reuben H Fleet Science Center**

Strand: ●

### Engaging People in Civic Deliberations: NAAEE’s New Environmental Issues Forums

10:30 AM–11:10 AM, Marina 6

Learn how you can be involved in an exciting partnership between NAAEE and the Kettering Foundation. The new Environmental Issues Forums’ discussion guides, training, and research efforts promote public and classroom deliberation on important issues such as climate change.

**Presenter(s): Bora Simmons, National Project for Excellence in Environmental Education; Amy Lee, Kettering Foundation; Michele Archie, The Harbinger Consulting Group**

Strand: ●

### Food Too Good to Waste: From Farm to Fork

10:30 AM–11:10 AM, Nautilus 3

Learn about a unique partnership between Oakland Unified School District and StopWaste, to Prevent and Reduce Wasted Food in Alameda County schools. This hands-on session will guide participants from farm to fork through district, classroom curriculum, and community approaches to reducing wasted food. Take-home resources and curriculum provided.

**Presenter(s): Cassandra Bartholomew, StopWaste.org; Angelina Vergara, StopWaste.org; Nancy Deming, Oakland Unified School District**

Strand: ●

### Inquiry Backpack: Using Low-Cost Materials and Outdoor Experiences to Promote EE and NGSS

10:30 AM–11:10 AM, Seabreeze 1

Based on international best practices, Ecology Project International (EPI) has designed and implemented a program that uses low-cost materials (research backpack) and field investigations to promote inquiry, science education, and environmental literacy with high school students in the United States and Latin America. We will share evaluation results, examples, and resources to allow you to replicate.

**Presenter(s): Miguel Fuentes, Ecology Project International; Carlos Trejos, Ecology Project International**

Strand: ● 

### School System Change Through Place- and Culturally-Based Education

10:30 AM–11:10 AM, Marina 2

The North Slope Borough School District is reforming its curriculum by incorporating academic standards with the Inupiaq language, history, and culture. The content area standards are a combination of state and national standards. The Inupiaq understandings are articulated through the Inupiaq Learning Framework, which has four realms including Environmental, Community, Historical, and Individual.

**Presenter(s): Margaret Cowan, North Slope Borough School District**

Strand: ●  



**Teaching Approaches Promoting Diversity, Equity, Inclusion in Urban Environmental Education**

10:30 AM–11:10 AM, Marina 4

This presentation will focus on teaching approaches that engage and meet the needs of “at-risk” students in urban communities and that reach across socio-economic divides. Audience members will leave the session understanding these approaches in detail so they can implement them in their schools and other work settings.

**Presenter(s): Raquel Pinderhughes, Roots of Success**

Strand: ●  

**Telling our EE Stories with the Nature’s Voices Project**

10:30 AM–11:10 AM, Marina 3

Do you feel like your EE program is spectacular but no one knows about it? Join the Nature’s Voices Project in learning how to use inspirational student stories to evaluate and promote your program. We’ll share our standards-based lessons, annual contest, and strategies to broaden support for EE through stories.

**Presenter(s): Susan Silber, Green Schools Initiative**

Strand: ● 

**Tracking the Impact and Efficacy of Innovation in EE**

10:30 AM–11:10 AM, Seabreeze 2

As EECapacity crosses its midpoint, the evaluation focus has transitioned to track indicators of its effectiveness and legacy. The session will present results documenting its long-term impact on the field of EE. The implications of this innovative project for the professional development of environmental educators will be discussed.

**Presenter(s): Rupu Gupta, New Knowledge Organization; John Fraser, New Knowledge Organization; Marianne Krasny, Cornell University**

Strand: ● 



**We Can’t Talk About Water Without Talking About . . .**

10:30 AM–11:10 AM, Nautilus 2

Tomorrow’s demographic majority are today’s “minority” groups, many of whom live in communities disproportionately impacted by climate change. How do we ensure that the voice and leadership of these residents inform how their communities address these challenges? We’ll use our “hyperlocal” stormwater education model as a vehicle for this discussion.

**Presenter(s): Erika Rodriguez, Earth Force; Donny E. Roush, Earth Force**

Strand: ●  

**Bright Spots**

10:30 AM–11:10 AM



Learn about two or three successful and loosely related programs in each 40-minute Bright Spots session. Sessions are presented in the order listed.

**Spinnaker 2**

**Conservation Educators in New Zealand: Educating for People and Place?**

As conservation practice moves towards more inclusive views of people in the landscape, it is imperative to understand how this is reflected in conservation education pedagogy. A study is underway to find out how this manifests for New Zealand’s Department of Conservation educators in order to identify possible professional development needs.

**Presenter(s): Valerie Bianchi, University of Waikato**

Strand: ●

**Integrating Environmental Literacy Into Public Education: The Ocean and PreK–5**

Local school district specialists, state EE policy makers, and a federal natural resource agency (NOAA) collaborate to help educators gain confidence in teaching ocean science in a developmentally appropriate manner and make connections “from the schoolyard to the ocean” through place-based, hands-on lessons that are aligned with existing standards.

**Presenter(s): Kimberly Marshall McLean, George Mason University**

Strand: ● 

**Wetland Development and Nature Trails**

The Center for Environmental Education worked with various groups to increase awareness and participation in addressing local water quality issues. Groups of high school and college students and adults were involved with the development of nine wetlands in an urban setting. The area also features nature trails.

**Presenter(s): April Haight, Graining Fork Nature Preserve**

Strand: ●

● Conservation and Education

● Environmental Education in Urban Settings

● Greening PreK–12, Higher Education, and Vocational Training

 Teachers

● Inspiring Connections to the Outdoors

● Research-Based Practice in EE

● Teaching About Environmental Issues and Systems Thinking

 Diversity, Equity and Inclusion

## Roundtable Discussions

### 10:30 AM–11:10 AM, Grande Ballroom C

#### Fostering Change in the Places We Live: Sustainability Education in Cities

##### Table 1

As part of the National Sustainability Teachers' Academy, held at Arizona State University (ASU) in June, 2015, sustainability scientists worked collaboratively with K–12 educators to develop project- and solutions-based education activities focused on creating change and promoting action for sustainability in the cities in which we dwell.

**Presenter(s):** Erin Nicole Redman, Walton Sustainability Solutions Initiative; Monica Elser, Arizona State University

Strand: ● 🍏

#### Greening Our Schools: A Green Schools Recognition Program That's Working

##### Table 2

Florida Atlantic University Pine Jog Environmental Education Center's Green Schools Recognition Program rewards K-12 schools for taking a holistic approach to 'going green' that incorporates practices such as school grounds enhancement, resource conservation, curriculum connections, and community involvement. This session highlights the success of this program and how it can be replicated.

**Presenter(s):** Anne Margaret Henderson, Florida Atlantic University, Pine Jog Environmental Educational Center; Andrea Lazzari, Florida Atlantic University, Pine Jog Environmental Educational Center; Hao Pan, Florida Atlantic University, Pine Jog Environmental Educational Center

Strand: ● 🍏

#### Tell Your Story: Marketing and Branding in EE Affiliates

##### Table 3

How well are you telling your affiliate's story? How could you improve your marketing to attract new members and supporters? Join us to explore challenges, ideas, and strategies to effectively market and brand your affiliate locally and align to regional and national branding efforts.

**Presenter(s):** Katie M. Navin, Colorado Alliance for Environmental Education

Strand: ●

**naaee**  
Affiliate

#### Things for Young Children to Do in an Established Garden

##### Table 4

We'll explore activities that young children can do in a garden or landscaped area. Attention has been given to how to plant and harvest gardens, but old school gardens get neglected. Activities near home may be needed to replace costly field trips.

**Presenter(s):** Esther Railton Rice, California State University–East Bay

Strand: ● 🍏

#### Using Your Photography to Inspire Your Students

##### Table 5

Use your personal photographs of the natural world to illustrate lectures and pique student curiosity, and, when possible and appropriate, include students in your pictures to make them part of the lecture.

**Presenter(s):** Rick Wellbeloved-Stone, Charlottesville City Schools

Strand: ● 🍏

## Saturday 11:30 AM

### Keynote



#### Andy Goodman

Change the Story, Change the World

11:30 AM–12:30 PM,  
Grande Ballroom A

See page 31 for more information.



### Did you know?

San Diego County is home to bobcats, also known as wildcats. Bobcats are most likely to be seen in remote, rugged country during early morning or late afternoon feeding times. They are expert tree climbers and swimmers and powerful fighters.



## Saturday 12:45 PM

### Community Service Project 12:45 PM–2:45 PM, Meet at Sheraton Entrance

Volunteer for NAAEE's annual community service project at Loma Portal Elementary School. See page 23 for more information.

Coordinator: Chantel Jimenez, U.S. Fish and Wildlife Service

## Saturday 1:00 PM

### eePRO Group Meetings 1:00 PM–2:00 PM

Help launch NAAEE's new eePRO groups by attending one of these inaugural meetings. See page 17 for more information.

Advocacy, [Nautilus 2](#)  
Climate Change Education, [Seabreeze 1](#)  
Diversity, Inclusion, and Equity, [Nautilus 1](#)  
EE in Urban Settings, [Nautilus 3](#)  
Green Schools, [Grand Ballroom C](#)  
Higher Education, [Room 514](#)  
International EE, [Marina 2](#)

### More Brown Bag Sessions 1:00 PM–2:00 PM

#### Introduction to Fundraising for Young Professionals 1:00 PM–2:00 PM, [Nautilus 3](#)

One of the biggest challenges faced by environmental educators is how to secure program funding. Spend your lunch hour with a fundraising mentor as you explore various ways to secure project support, including volunteers, in-kind donations, and funding.

Coordinator: Marie Rychlik, [Inside the Outdoors](#)

#### Certification Forum

#### Saturday, 1:00 PM–2:00 PM, [Room 511](#)

Representatives from states and provinces with active certification programs, or an interest in developing one, are welcome to join in this informal discussion of trends, challenges, and opportunities for collaboration.

## Saturday 2:15 PM

The following sessions all start at 2:15 PM. The end times vary with the type of session as indicated. Ninety-minute sessions are listed first, followed by 40-minute sessions.


### Symposium 2:15 PM–3:45 PM

#### Advancing Diverse Participation: Lessons From UC California Naturalist

#### 2:15 PM–3:45 PM, [Nautilus 5](#)

Diversity, equity, and inclusion are critical to conservation, yet engaging underserved populations is a challenge. UC California Naturalist fosters a community to steward California's resources. We studied barriers to inclusion and developed an approach to involve a younger, more diverse membership by working with community colleges and conservation corps who work in undeserved populations.

Presenter(s): Sabrina Drill, UC Cooperative Extension/California Naturalist; Adina Merenlender, University of California; Carrie M. Raleigh, CA Regional Environmental Education Community (CREEC); Collin O'Mara-Green, Mountains Recreation and Conservation Authority (MRCA); Maria Madrigal, The SEA Lab, a program of the Los Angeles Conservation Corps  
Moderator: Shayna Foreman, University of California Division of Agriculture and Natural Resources

Strand: ● 

### Hands-On Presentations 2:15 PM–3:45 PM

#### EIF Common Ground for Action: Deliberating About Controversial Issues Online

#### 2:15 PM–3:45 PM, [Marina 6](#)

Climate change, drought, energy, biodiversity...How can we facilitate civic deliberation about controversial issues like these? In partnership with the Kettering Foundation, NAAEE created the Environmental Issues Forums to help. Learn about EIF, and participate in a Common Ground for Action online forum.

Presenter(s): Amy Lee, Kettering Foundation; Bora Simmons, National Project for Excellence in Environmental Education; Michele Archie, The Harbinger Consulting Group

Strand: ●

**Green Design Lab: Inspiring Students in STEM, Emerging Clean Technologies, and Green Careers**  
2:15 PM–3:45 PM, Nautilus 3

How can we prepare our students to build a more energy-efficient and sustainable future? This session presents Green Design Lab, an innovative K-12 curricular guide that uses hands-on, NGSS-aligned activities to strengthen STEM skills, while exploring emerging green technologies. Conduct an energy audit, design wind turbines, build batteries, and more.

**Presenter(s): Karen Alsen, Solar One; Sarah Pidgeon, Solar One**

Strand: ● 🍏

**How Do EE Experts Describe EE, and Do You Agree?**  
2:15 PM–3:45 PM, Nautilus 1

Come participate in a research study that is all about you! This interactive workshop will share initial results from a study with diverse EE experts who were asked to describe key outcomes, strategies, and tactics in the field. Participants will be asked to contribute their perspectives.

**Presenter(s): Charlotte Clark, Duke University; Joe E. Heimlich, Lifelong Learning Group/COSI; Nicole Ardoin, Stanford University; Judy Braus, NAAEE**

Strand: ●

**Oysters as Teachers: An NGSS Story**  
2:15 PM–3:45 PM, Seabreeze 1

A regional education partnership developed a K-12 learning sequence of lessons and practices reflective of the Next Generation Science Standards (NGSS) on a locally relevant species, the Eastern Oyster. Participants in this session will learn about the process and best practices that were employed and a sample of hands-on activities for K-12 educators.

**Presenter(s): Peggy Steffen, NOAA National Ocean Service**

Strand: ● 🍏

**Project Localize: Empowering Local Sustainability by Students For Communities**  
2:15 PM–3:45 PM, Nautilus 2

Project Localize, focused on science and language arts, is engaging schools in local food systems reform across North America. Empowering students with a sense of place builds economic, cultural, and social progress in local communities. Project Localize teaches powerful digital communication skills and important local lessons in sustainability.

**Presenter(s): Rocky J. Rohwedder, Sonoma State University**

Strand: ● 🍏

**Traditional Presentations**  
2:15 PM–2:55 PM

**Forest Service Partnership With Houston East End Latino Legacy**

2:15 PM–2:55 PM, Marina 1

Exciting, innovative urban environmental education program! Sponsored by the U.S. Forest Service and partners, the Houston East End Latino Legacy/Green Ambassadors program connects 13 area schools through conservation education, promoting not only STEM studies and careers, but also creating a food forest in an area identified as an urban food desert.

**Presenter(s): Tamberly Conway, U.S. Forest Service; Sue Cummings, U.S. Forest Service; Michiko Martin, U.S. Forest Service**

Strand: ● 🌍 🍏

**Grad 2016: Connecting 2016 Graduates to the National Park Service**

2:15 PM–2:55 PM, Marina 2

Learn about a seven-year partnership between the National Park Service and Southern Nevada schools linking students with real experiences outside the classroom.

**Presenter(s): Amanda Dworak Rowland, NPS–Lake Mead NRA; Cheryl Wagner, Clark County School District; Ellen Anderson, Lake Mead NRA**

Strand: ● 🌍 🍏

**Green Schools Alliance: Accelerating Change Through a Diverse School Network**

2:15 PM–2:55 PM, Seabreeze 2

The Green Schools Alliance (GSA) is a global network of 5,000+ schools which fosters connections and inspires action within and between school communities. Educators from member schools will describe how GSA programs empower all schools (public and private, urban and rural, large and small) to be transformational hubs for sustainability.

**Presenter(s): Arlae Castellanos, Green Schools Alliance; Jennifer Cheng, San Pedro High School; Hank Stelzl, The Bella Garden Project at Bella Mente Montessori Academy Charter School; Melissa Symington, Pacific Ridge School**

Strand: ● 🍏

### Hands on the Land: Learning Outdoors in America's Largest Classroom!

2:15 PM–2:55 PM, Marina 3

Hands on the Land is a national network of field classrooms stretching from Alaska to Florida. At this session, learn the benefits to field and classroom educators, how to access our comprehensive environmental monitoring network, find lesson plans designed to get students learning outside, and much more!

**Presenter(s):** Josh Falk, National Environmental Education Foundation; Maria E. Arnold, U.S. Fish & Wildlife Service; Derrick Baldwin, U.S. Bureau of Land Management

Strand: ● 🍏

### Place-Based Environmental Education: Let's Get Kids Outdoors!

2:15 PM–2:55 PM, Nautilus 4

Place-based education is a portal to overcoming challenges and increasing student interest in getting outdoors. We'll share our experiences and discuss how they have transformed our teaching to include using nature to teach. Place-based teaching can be used in any type of environment to benefit student learning.

**Presenter(s):** Molina Walters, Arizona State University; Hilary Goodine, Arizona State University; Abby Grebb, Arizona State University

Strand: ● 🍏

### Preschool Early Learning Programs—Stories, Games, and Crafts...Oh My!

2:15 PM–2:55 PM, Spinnaker 1

Learn how to successfully create a preschool program for ages 2-5 that involves story time, active games, crafts, and snacks based on a monthly theme. Curriculum ideas provided.

**Presenter(s):** Michelle Ostrowski, Kenai National Wildlife Refuge; Shelly Lawson, Kodiak National Wildlife Refuge

Strand: ● 🍏

### Strengthening and Diversifying Your Network

2:15 PM–2:55 PM, Marina 4

Participants will hear lessons-learned in identifying, selecting, recruiting, and establishing lasting relationships with stakeholders across sectors. A diverse assemblage of these critical networks are required to provide funding, outreach, volunteers, board members, and legislative support. Participants will create a plan for engagement by identifying ways to leverage your organizational assets.

**Presenter(s):** Sarah Livesay, Environmental Education Association of Illinois; Michelle Gorham Jones, Hawaii Environmental Education Alliance

Strand: ● 🍏

**naaee**  
Affiliate

## Bright Spots

2:15 PM–2:55 PM



Learn about two or three successful and loosely related programs in each 40-minute Bright Spots session. Sessions are presented in the order listed.

### Spinnaker 2

#### District-ISI Partnerships: Co-Developing Standards-Based Units for Environmental Literacy

How can school districts partner with classroom teachers and informal science institutions (ISIs) to achieve environmental literacy goals, while meeting Common Core and NGSS standards? We share the process and future plans for a unit-development project of San Francisco Unified School District and the California Academy of Sciences.

**Presenter(s):** Emily Crouch, San Francisco Unified School District; Bernadette Chi, Lawrence Hall of Science–UC Berkeley; Emily Harris, UC Davis, California Academy of Sciences

Strand: ●

#### Guiding Middle School Students in Designing a Solar Master Plan for a Campus

This presentation will showcase a Solar Master Plan lesson for middle school students. The presenter will share a successful instructional model in which teachers, district utility managers, and STEM professionals collaborated in order to guide students in learning and applying green career skills when designing a solar master plan for their school campus.

**Presenter(s):** Alyssa Austin Davis, The Energy Coalition

Strand: ● 🍏

#### Sitting Spot Journaling

Come discover how having students use a "sitting spot" in a natural area over the course of a school year can help build observation skills, generate curiosity, and reinvigorate their sense of wonder.

**Presenter(s):** Rick Wellbeloved-Stone, Charlottesville City Schools

Strand: ● 🍏

## Roundtable Discussions

### 2:15 PM–2:55 PM, Grande Ballroom C

#### #SmokiesCOOL: Empowering Students and Teachers to Experience Subjects and Create

##### Table 1

A project-based model that empowers students and teachers to bring a subject to life, while also conveying essential content. Through the creation of a music video that explores a subject hands-on, students become the teachers, having produced an educational resource their peers will be inspired by and learn from.

**Presenter(s):** Caleb Carlton, Great Smoky Mountains Institute at Tremont

Strand: ● 🌱 🍏

#### Creating and Implementing an Engaging Online PD Experience for Educators

##### Table 2

Project Learning Tree is working with its network to develop and implement an online professional development workshop for educators. In this presentation, we share examples of learning materials, discuss best practices for development and implementation, and provide useful resources.

**Presenter(s):** Jennifer Pic, Project Learning Tree; Shawna Crocker, Colorado State Forest Service; Ashley Hoffman, Kentucky Association for Environmental Education

Strand: ●

#### Creating Natural Learning Childcare Centers: The New Environmental Education Frontier

##### Table 3

Eleven million U.S. children with fresh, open minds attend childcare year round. Raising the next generation of planetary stewards is supported by NAAEE Guidelines for Excellence but adopted by few states. Exciting developments in NC, TX, and CA enabling the creation of natural outdoor learning environments will be presented.

**Presenter(s):** Ilisa Goldman, Rooted In Place Landscape Architecture and Consulting

Strand: ● 🍏

#### Frogs Won't Give You Warts, But They Can Engage Students!

##### Table 4

Learn how to use snakes, salamanders, turtles, lizards, and frogs to address the Next Generation Science Standards in your classroom with our FREE online curriculum resources that can easily be implemented in K–12 classrooms. Discover how school grounds can house field biology studies and provide students with authentic research experiences.

**Presenter(s):** Lacey Denise Huffling, Georgia Southern University; Aerin Benavides, Immersion for Language Spanish Acquisition; Catherine Matthews, University of North Carolina at Greensboro (UNCG); Terry Tomasek, Elon University

Strand: ● 🍏

#### Inclusive Knowledge and Pedagogies in Urban Environmental Studies

##### Table 5

As an urban research collective, we believe that knowledge encompasses the complex lived experiences of the interactions between people and the natural and built environments. Our session will include shared dialogues around our convergent interests in informal learning environments, sustainability education, urban teaching and learning, and critical pedagogy.

**Presenter(s):** Marissa Bellino, The Graduate Center, City University of New York; Pieranna Pieroni, City University of New York–Brooklyn College; Jennifer Stoops, The Graduate Center, City University of New York; LaToya Strong, The Graduate Center, City University of New York

**Moderator:** Jennifer Adams, City University of New York–Brooklyn College

Strand: ● 🌱 🍏

#### PreK–12–University Partnerships Connecting Children and Nature: Ideas, Challenges, Solutions

##### Table 6

The presenters will share experiences working with a Title 1 elementary school to involve children in nature photography activities, including challenges and solutions. They will also discuss a photovoice project designed to introduce high school youth to local ecosystems. Exploration of ideas for PreK–12– university partnerships to immerse children in nature will be facilitated.

**Presenter(s):** Wendy Chambers, Georgia Southern University; Lacey Denise Huffling, Georgia Southern University

Strand: ● 🌱 🍏

## Saturday 3:05 PM

The following sessions are all 40-minute sessions that start at 3:05 PM and end at 3:45 PM.

### Traditional Presentations

#### 3:05 PM–3:45 PM

##### **Building a Movement: Affiliate-Driven Collective Impact in Environmental Education**

3:05 PM–3:45 PM, Marina 4

Collective impact initiatives are springing up across North America. How can affiliates learn from this model and growing body of research to elevate the impact of EE locally, regionally, and nationally? Join us to discuss challenges, successes, and possible strategies to advance the work of affiliates individually and collectively.

**Presenter(s):** Katie M. Navin, Colorado Alliance for Environmental Education; Adrian Ayson, New England Environmental Education Alliance

Strand: ●

**naaee**  
Affiliate

##### **Climate Story Interviews in Education**

3:05 PM–3:45 PM, Marina 2

Climate Stories Project is an innovative educational forum in which students learn to speak openly about their responses to climate change, record interviews with members of “frontline” climate change communities, and create artistic projects using the recorded interviews.

**Presenter(s):** Jason Davis, Climate Stories Project

Strand: ●

##### **Conservation’s Your Mission? Then Give Your Audience an International Connection**

3:05 PM–3:45 PM, Marina 3

Do you ever wonder if your field trips are making an impact in conservation? During this session, learn how one zoo is exploring long-term international connections, original research, and systems thinking approaches to provide students with a chance to learn more about their place abroad and at home.

**Presenter(s):** Lauren Watkins, White Oak Conservation

Strand: ●  

##### **Nature Play for Children with Sensory Processing Disorders: Working Toward Inclusion**

3:05 PM–3:45 PM, Spinnaker 1

Learn best practices when including children with sensory processing disorders in outdoor play and EE! Educators at Chicago Botanic Garden overcome barriers with programs that immerse children with sensory processing disorders and other special needs in plant rich environments to promote learning, health, and wellness. Supporting research will also be presented.

**Presenter(s):** Alicia Green, Chicago Botanic Garden

Strand: ●  

##### **Sing for the Planet**

3:05 PM–3:45 PM, Nautilus 4

Pete Seeger’s last Grammy was for his work with elementary children, who sing for the planet and their future. Come see an amazing video, receive materials that can be used to extend Pete’s music to environmental education, and sing for the planet in his memory.

**Presenter(s):** Juliana Texley, National Science Teachers Association


Strand: ● 

##### **Teaching About Climate Change Using Polar Science Activities**

3:05 PM–3:45 PM, Marina 1

Climate change is happening most rapidly in the polar regions, affecting us all. Using a systems approach, learn how polar regions affect global temperatures, ocean levels, atmosphere, and weather. Attendees will receive lesson ideas, resources for databanks, references for connecting to scientists in the field, and examples of hands-on labs.

**Presenter(s):** Regina Brinker, Granada High School

Strand: ● 

##### **Teaching Systems Thinking Skills**

3:05 PM–3:45 PM, Seabreeze 2

Come explore several systems thinking exercises that accompany Project Learning Tree activities on forests and climate change. It is not always intuitive, but once you start seeing systems, they are everywhere! Tips for helping teachers and students think in systems will be shared, along with the materials.

**Presenter(s):** Martha C. Monroe, University of Florida; Tracey Ann Ritchie, University of Florida; Kristen Kunkle, NAAEE

Strand: ● 

## Bright Spots

3:05 PM–3:45 PM



Learn about two or three successful and loosely related programs in each 40-minute Bright Spots session. Sessions are presented in the order listed.

### Spinnaker 2

#### EECapacity Project-Based Learning Communities: Collaborative Generation of EE Resources

Come explore the many resources generated by fellow environmental educators including: climate change education, urban EE, measuring EE outcomes, engaging Latino audiences, and collaborative online learning opportunities that allow for the creation of these and future resources.

**Presenter(s):** Jose Marcos-Iga, Environmental Education Exchange; Alex Kudryavtsev, Cornell University

Strand: ● 



#### EECapacity: Insights From Four Years of Professional Development in Urban EE

EECapacity has as its foundation connecting EE and youth and community development professionals to explore innovations in urban EE. What have we learned from our experience linking diverse professionals? Hear about some “bright spots” from EECapacity participants.

**Presenter(s):** Marianne Krasny, Cornell University; Anne Umali Ferguson, Cornell University

Strand: ● 



#### T3 Accelerator: An Online Learning Opportunities Booster for EE Organizations

EECapacity provides professional development for environmental educators—including through online courses and project learning communities. To meet an emerging need for EE professionals to conduct their own online courses, webinars, and learning communities, the T3 Online EE Learning Accelerator trains EE organizational leaders to conduct online learning experiences.

**Presenter(s):** Anne Umali Ferguson, Cornell University; Marianne Krasny, Cornell University; Jose Marcos-Iga, Environmental Education Exchange

Strand: ●



## Roundtable Discussions

3:05 PM–3:45 PM, Grande Ballroom C

### Braiding Decolonization and Reinhabitation in Place-Based Education

#### Table 1

This roundtable session will discuss one of the challenges faced by the Environmental School Project in Maple Ridge, British Columbia, namely, the careful intertwining of “decolonization” and “reinhabitation.” How do we adequately entwine decolonization and reinhabitation in an outdoor place-based educational setting?

**Presenter(s):** Yi Chien (Jade) Ho, Faculty of Education, Simon Fraser University


Strand: ●  

### Early Childhood Environmental Education: A Moral Imperative

#### Table 2

Is it time for environmental education to be more intentional and forthcoming about our moral and ethical imperative, even with our youngest learners? Where are your programs along the spectrum of early childhood environmental education and what are the best practices for developing future conservation leaders?

**Presenter(s):** Kristin Scopinich, Mass Audubon

Strand: ● 

### Effective Outdoor Learning: Nature Center Partnerships for PreK–12 Teachers

#### Table 3

The school of the future, like the school of the not-so-distant past, will extend beyond the classroom and playground into the neighborhood. Hear from teachers and Missouri Botanical Garden staff about partnerships that support effective use of schoolyards as learning environments. Resources to help you get started will be provided.

**Presenter(s):** Eddie Jones, Missouri Botanical Garden; Laura Johnson, Saul Mirowitz Jewish Community School; Lizzie Berkowitz, Saul Mirowitz Jewish Community School

Strand: ●  

● Conservation and Education

● Environmental Education in Urban Settings

● Inspiring Connections to the Outdoors

● Research-Based Practice in EE

● Greening PreK–12, Higher Education, and Vocational Training

● Teaching About Environmental Issues and Systems Thinking

 Teachers

 Diversity, Equity and Inclusion



**Understanding How California Funds Environmental Education Programs and Projects**

**Table 4**

Participants will gain an understanding of how environmental education is funded in California. Attendees will have a grasp on how California’s Environmental License Plate Funds are dispersed and discuss how we can develop our own Environmental License Plate to fund Environmental Education in our state.

**Presenter(s):** Dave Ficke, California Regional Environmental Education Community (CREEC)

Strand: ● 🍏

**Urban Naturalist: Exploring the Urban Landscape With Middle School Youth**

**Table 5**

Discover how Urban Naturalist, an after school program, used the urban landscape to inspire environmental stewardship among middle school youth. We will explore various pathways the Audubon Society of Rhode Island took to design a student directed environmental education program for urban youth. Successes and challenges will be shared.

**Presenter(s):** Kristen Swanberg, Rhode Island Environmental Education Association

Strand: ●

**Saturday 4:00 PM**

**Meetings and Special Sessions  
4:00 PM–5:00 PM**

**Accreditation Advisory Board and Accreditation Review Panel Business Meeting**

**4:00 PM–5:00 PM, 415**

Working meeting for members of the Accreditation Advisory Board and Accreditation Review Panel. By invitation.

**Coordinator:** Thomas J. Marcinkowski

**Community Climate Change Fellows Follow Up**

**4:00 PM–5:00 PM, Marina 3**

By invitation.

**Coordinator:** Anne Ferguson

**Environmental Issues Forum Working Group**

**4:00 PM–5:00 PM, Seabreeze 1**

By invitation.

**Coordinator:** Bora Simmons

**Social Media Roundtable for Young Professionals**

**4:00 PM–5:00 PM, Nautilus 1**

Continue to network as you explore the role social media plays in promoting environmental education. This roundtable session will allow young professionals to share how they use social media and gather new ideas from each other.

**Coordinator:** Marie Rychlik, Inside the Outdoors

**Southeastern EE Alliance Meeting**

**4:00 PM–5:00 PM, Marina 6**

Members of SEEA and other affiliates in the southeastern United States meet to discuss current activities.

**Coordinator:** Ashley Hoffman, Kentucky Association for Environmental Education

**Saturday 6:00 PM**

**Annual Gala and Auction  
6:00 PM–8:30 PM  
Meet at Sheraton Entrance**

Enjoy this year’s gala reception and Stapp Scholarship Auction at the historical and beautiful Fiesta de Reyes within Old Town San Diego State Historic Park.

Please note:

- Your conference name tag is required for admittance.
- While included with full conference or weekend registration, you must have signed up for this event during your registration process in order to attend.
- Guest tickets may be available if you wish to add the event at this time; check at the registration desk.

See page 37 for more information.





# Sunday

## Sunday 9:00 AM

The following sessions all start at 9:00 AM. The end times vary with the type of session as indicated. Meetings are listed first, followed by 40-minute sessions that end at 9:40 AM.

### Meetings

#### 9:00 – 11:50 AM

##### NAAEE Business Meeting

9:00 AM–9:40 AM, Nautilus 5

Join NAAEE's president, executive director, board, and staff for a discussion on the current state of the organization and future directions for NAAEE. Topics will include strategic planning, a financial report, and your questions. We welcome your input!

**Coordinators:** Jose Marcos-Iga, Environmental Education Exchange; Judy Braus, NAAEE

##### Accreditation Advisory Board and Accreditation Review Panel

9:00 AM–11:50 AM, 511

Working meeting for members of the Accreditation Advisory Board, Accreditation Review Panel, and State EE Certification Program representatives. By invitation.

### Traditional Presentations

#### 9:00 AM–9:40 AM

##### Breaking Barriers and Building Leadership

9:00 AM–9:40 AM, Nautilus 2

Ocean Discovery Institute engages, educates, and inspires young people from urban and diverse backgrounds through exploration of the ocean and nature, preparing them to be tomorrow's scientific and environmental leaders. Come learn more about this model, our successes, challenges, and outcomes related to building a more diverse workforce.

**Presenter(s):** Lindsay Goodwin, Ocean Discovery Institute

Strand: ● 🍏

## Strands

- Conservation and Education
- Environmental Education in Urban Settings
- Greening PreK–12, Higher Education, and Vocational Training
- Inspiring Connections to the Outdoors
- Research-Based Practice in EE
- Teaching About Environmental Issues and Systems Thinking
- 🌍 Addresses Diversity, Equity, and Inclusion
- 🍏 Appropriate for Teachers

### Connecting to Place and Environment Through Farm-Based Education

9:00 AM–9:40 AM, Nautilus 4

Farm-based education brings inquiry-based learning and exploration of natural systems together, and provides tasty, transformational experiences for learners of any age. Learn how Suzie's Farm is exploring social, economic, and environmental food and farm systems with community partners, connecting to Next Generation Science Standards and inspiring connections to environment!

**Presenter(s):** Lauren Gagliano, Suzie's Farm

Strand: ● 🌍 🍏



### Did you know?

San Diego County has the largest number of farms (almost 7,000) in the U.S. and ranks first in the nation for value of floriculture, nursery, greenhouse, and sod products.



### **Integrating Place-Based Secondary Curriculum to Foster Lake Tahoe Stewardship**

9:00 AM–9:40 AM, Marina 3

Lake Tahoe students have access to one of the world's most pristine outdoor learning environments, yet most curriculum teaches textbook-based material. In response, Keep Tahoe Blue launched a curriculum infusion program that utilizes Tahoe as a laboratory for place-based learning to inspire student community engagement while conforming to Common Core standards.

**Presenter(s): Aaron Hussmann, League to Save Lake Tahoe**

Strand: ● 🍏

### **Linking Environmental Literacy and the Standards: NGSS, C3, and CCSS**

9:00 AM–9:40 AM, Marina 2

With the publication of the Next Generation Science Standards (NGSS), Common Core State Standards, C3 Social Studies Standards, and Global Competency Standards, educators are mapping their curriculum and developing strategies for implementation. But how do environmental literacy and these standards intersect? Hear about a set of tools that highlight linkages with environmental literacy.

**Presenter(s): Bora Simmons, National Project for Excellence in Environmental Education**

Strand: ●



### **Lost Carnivores: Middle School Service Learning Using Wildlife Cameras**

9:00 AM–9:40 AM, Marina 1

Middle school students engage in service learning in Saguaro National Park by setting wildlife cameras to collect field data images of mammals in the park. Data collected helps park managers in conservation efforts for small carnivore species and students receive a real life experience of ecological principles.

**Presenter(s): Emily Devereaux, U.S. National Park Service**

Strand: ● 🍏

### **Make It Easy for Volunteers and Participants**

9:00 AM–9:40 AM, Marina 6

How do you remove barriers for your community to get involved in conservation? We focused on providing user-friendly activity registration, simple online volunteer applications, streamlined scheduling, automatic evaluations, and easy reporting. Learn about a NAAEE award winning program and the technology we use.

**Presenter(s): Zoe Shark, City of Fort Collins Natural Areas Program**

Strand: ●

### **Teaching Gardening at a Boys and Girls Club**

9:00 AM–9:40 AM, Marina 4

3rd through 5th grade students in a Boys and Girls garden club learned gardening knowledge using the Junior Master Gardening Guide. Students' knowledge improved after preservice teachers taught them weekly.

**Presenter(s): Jeanine Huss, Western Kentucky University**

Strand: ●

### **Teen-Driven Open Science: Remapping the Everyday Experience**

9:00 AM–9:40 AM, Seabreeze 2

Hive Mapping Cooperative is a cross-organizational effort to facilitate collaborative teen-driven inquiry into human ecology and urban ecosystems using open-source mapping, data collection, and data sharing tools, enabling teens to collect, visualize, and share georeferenced data. See the results of the project and how to incorporate these free tools.

**Presenter(s): David Bild, Peggy Notebaert Nature Museum, The Museum of the Chicago Academy of Sciences; Emmanuel Pratt, Sweet Water Foundation; Carina Ruiz, The Student Conservation Association; Kyla Williams, Smart Chicago Collaborative**

Strand: ● 🍏 🍌 🍌

### **Wait, That's My Baloney Sandwich! Lunchroom Composting, Kansas City Style**

9:00 AM–9:40 AM, Seabreeze 1

Reducing waste before running out of landfill space is critical. Schools waste a tremendous amount of food, but it wasn't known just how much. Kansas City-area students are helping answer that question and change behavior (institutional and their own) through a new lunchroom composting program incorporating waste audits, curriculum components, and yes, worms!

**Presenter(s): Shari L. Wilson, Project Central**

Strand: ● 🍏

### **We're All in This Together: Greening Sustainable Schools Collaboratively**

9:00 AM–9:40 AM, Nautilus 1

Twenty percent of Maryland's schools participate in the Maryland Green School/Eco-Schools USA sustainable schools program. We will look at successful examples and discuss how collaboration supports teachers and encourages environmental student actions. We will highlight benefits of becoming a sustainable school and look at ways to engage the other 80%.

**Presenter(s): Laura Johnson Collard, Maryland Association for Environmental and Outdoor Education; Kim Martinez, National Wildlife Federation**

Strand: ● 🍏 🍌 🍌

## Bright Spots

### 9:00 AM–9:40 AM



Learn about two or three successful and loosely related programs in each 40-minute Bright Spots session. Sessions are presented in the order listed.

### Spinnaker 1

#### A Six-Year Evaluation of Multi-Year, Sequential Ecology School Programming

The Ecology School's EcosySTEM! program provides elementary and middle schools sequential, cumulative learning opportunities (outreach, field trips, teacher workshops, and residential programs). Since 2009 ongoing PEER Associates evaluation combines pre- and post-program surveys, interviews, concept maps, and Most Significant Change methodologies to gauge impact, systems change, and improve program delivery.

**Presenter(s):** Drew Dumsch, The Ecology School

Strand: ●

#### Ocean Science Explorers: Using Evaluation to Create Strong School Relationships

Ocean Science Explorers is able to provide hands-on science education in an underserved "schoolshed" using an evaluation process that incorporates student assessments, teacher surveys, and teacher focus groups. This suite of evaluation tools increases teacher and school buy-in and student learning, and strengthens alignment with standards.

**Presenter(s):** Rochelle Mothokakobo, Ocean Discovery Institute; Lindsay Goodwin, Ocean Discovery Institute

Strand: ●  

### Roundtable Discussions

#### 9:00 AM–9:40 AM, Grande Ballroom C

#### A Practical Moral Framework for Using Wildlife in Environmental Education

##### Table 1

Wildlife provides one of our most powerful connections to the natural world; many informal education organizations rely on animals to attract and engage participants. A wildlife ecologist will introduce a practical moral framework to help organizations clarify and improve the distinctions between entertainment, education, and exploitation in their wildlife activities.

**Presenter(s):** Bryan H. Nichols, Florida Atlantic University

Strand: ●

#### Expanding the Reach of Environmental Literacy to ALL

##### Table 2

Join a roundtable discussion about state Environmental Literacy Plans and efforts to reach more students and communities of all backgrounds. California's new Blueprint for Environmental Literacy contains strategies aimed at reaching underserved schools and ensuring all students have access to culturally relevant environmental, experiential, and outdoor education and place-based learning.

**Presenter(s):** Deborah Moore, Green Schools Initiative; Raquel Pinderhughes, Roots of Success; Tracey Weiss, Exploring New Horizons

Strand: ●

#### Honeybees, Worms, and Dirt: Kid-Tested PBL Projects for Elementary Educators

##### Table 3

The world's declining bee population, the epic drought in California, and the Dead Zone in the Gulf of Mexico have one thing in common: our global food system. Join educators as they share resources and strategies for empowering elementary students as informed, conscientious consumers and changemakers.

**Presenter(s):** Elizabeth Outlaw Crawford, University of North Carolina at Wilmington (UNCW); Stephanie Dean, Northwoods Elementary School; Claire Roehl, Franklin County Schools

Strand: ●  

#### Inspiring and Empowering Students with Grades of Green

##### Table 4

Grades of Green will teach educators how they can utilize our program free of cost to inspire and empower students and the broader school community to care for the environment. Through over 40 fun, interactive activities, any K–12 school can go green and make environmental protection second nature for students!

**Presenter(s):** Lauren Muller, Grades of Green

Strand: ● 

#### Water Education for All, Promoting Stewardship for the Next Generation

##### Table 5

Formal and informal educators are invited to share experiences and hands-on demonstrations about current environmental issues such as California drought, runoff pollution, marine debris, and/or animal adaptations. They will work in small groups to model lessons for K-12 students. These lessons will allow students to do environmental science experiments.

**Presenter(s):** Sandra Lebron-Garcia, San Diego Coastkeeper

Strand: ● 

## Sunday 9:40 AM

### Coffee Break

9:40 AM–10:20 AM

Grande Foyer and Nautilus Foyer

## Sunday 10:20 AM

The following sessions all start at 10:20 AM. The end times vary with the type of session as indicated. Ninety-minute sessions are listed first, followed by 40-minute sessions.

### Symposium

10:20 AM–11:50 AM

#### Fortifying the Pipeline—Inclusive EE Programming for Diverse Youth in Southern California

10:20 AM–11:50 AM, Nautilus 5

How can we fortify the environmental career pipeline? How can we meet the needs of diverse, urban teens? In this interactive symposium we will hear from organizations that meet conservation and youth development targets through inclusive, culturally appropriate programming. Discussion topics will cover best practices in program design, outreach, engagement, and evaluation.

**Presenter(s):** Antonio Solorio, National Park Service; Candice Russell, TreePeople; Viviana Vallin, EPOC LA (Environmental Professionals of Color)

**Moderator:** Sandi Funke, Pepperwood Preserve

Strand: ● 

### Hands-On Presentations

10:20 AM–11:50 PM

#### Adapting an Expeditionary Learning Model to EE and Nature Education

10:20 AM–11:50 AM, Nautilus 2

This hands-on presentation will build expertise in creating an effective scope and sequence of EE content using an expeditionary learning construct. Long valued in formal education settings, both formal and informal EE providers will benefit from using an expeditionary learning lens in crafting 3 to 7 day programs for K–12 learners.

**Presenter(s):** Anne Burnett, Tahoe Expedition Academy

Strand: ● 

#### A Multidisciplinary, Integrative Approach to STEM Teaching and Learning

10:20 AM–11:50 AM, Nautilus 3

We will present a hands-on teaching and learning session that integrates science, technology, engineering, and mathematics around a central theme of adaptations of mammals in North America. The workshop will promote interdisciplinary environmental science education.

**Presenter(s):** Adriana de Carvalho, Google–Google for Education; Douglas DiStefano, Fordham University; William Schuster, Black Rock Forest Consortium

Strand: ● 

#### Environmental Education in Your Backyard

10:20 AM–11:50 AM, Marina 6

Make your site an outdoor classroom! Participants will learn about turning their outdoor space into a STEM learning laboratory using simple strategies that combine play and learning. You will leave this workshop with a variety of ideas and curriculum to implement at your site.

**Presenter(s):** Erin Foster, Inside the Outdoors


Strand: ● 

#### Kids “Making” Sense of Environmental Principles Through Community Science Workshops

10:20 AM–11:50 AM, Nautilus 1

Learn how to design an environmental education program that fosters learning, creativity, innovation, and experimentation while effectively implementing NGSS and the scientific and engineering practices through “making.” Participants will experience how “making” is an effective learning strategy and provides rich language context for English Learners and underserved students.

**Presenter(s):** Jerry Valadez, Central Valley Science Project

Strand: ● 

#### School Energy Auditing: Applied, Transferable Career Skills Training

10:20 AM–11:50 AM, Seabreeze 1

Gain the skills and strategies to lead student energy auditing projects to identify energy saving opportunities in your classroom and school. Explore energy fundamentals and the importance of conservation during this hands-on energy auditing session. Provide your students with skills training directly applicable to the expanding green career sector.

**Presenter(s):** Sophia Zug, Strategic Energy Innovations

Strand: ● 

### Soak It All In: K–6 Strategies for Teaching About Water 10:20AM–11:50 AM, Marina 2

Dive right into an absorbing interactive session for K-6 teachers focusing on the water cycle, water quality, and water conservation. Engage in hands-on activities and demonstrations with experienced educators who are practically dripping with ideas, strategies, and resources adaptable to different grade levels and geographical areas.

**Presenter(s):** Tim Decker, Agua Hedionda Lagoon Foundation; Robyn Hill, National University

Strand: ● 🍏

### Traditional Presentations

#### 10:20 AM–11:00 AM

#### Green and Smart: Creating Pathways for Sustainability Programming in K–12 Schools

##### 10:20 AM–11:00 AM, Seabreeze 2

This session presents an overview of the Montana Green Ribbon and SMART School Challenge initiatives aimed at promoting sustainability programming within the K-12 educational setting. Through the use of a Professional Learning Community approach participants are empowered to create sustainability programming from the ground up, building coalitions for support through innovative nongovernmental mechanisms.

**Presenter(s):** Ryder Delaloye, University of Montana; Fletcher Brown, University of Montana

Strand: ● 🍏

#### Launching Environmental Literacy Statewide: Oregon’s “Lift-Off” Into Action

##### 10:20 AM–11:00 AM, Nautilus 4

The Oregon Environmental Literacy Plan (2011) has rapidly evolved into a dynamic program to grow K-12 environmental literacy throughout Oregon. Oregon State University Extension Service with partners is using a framework for administration, leadership, and implementation based on shared responsibility and collaboration. Join us in exploring & applying the concepts.

**Presenter(s):** Susan Sahnaw, Oregon Natural Resources Education Program; Alison Heimowitz, Oregon Zoo; Steven Braun, Portland State University

Strand: ●

### One Million Conservation Kids: Conservation Education in New Zealand

#### 10:20 AM–11:00 AM, Marina 1

The Department of Conservation aspires to connect one million “conservation kids” to nature and involve them in restoring New Zealand’s natural and historic heritage. DOC works with partners and programmes that help kids understand and value nature’s contribution to their quality of life, and help them develop as conservation advocates in their communities.

**Presenter(s):** Sarah Murray, Department of Conservation; Ben Reddiex, Department of Conservation

Strand: ●

#### Taking STEM Outdoors

##### 10:20 AM–11:00 AM, Marina 4

Creating water filters, designing wind mills or engineering designs that mimic nature, getting STEM outdoors will inspire students to tackle real world challenges. This session will share a couple of STEM activities that will engage upper elementary to middle school students in critical thinking and engineering design challenges.

**Presenter(s):** Hilary Goodine, Arizona State University; Abby Grebb, Arizona State University; Molina Walters, Arizona State University

Strand: ● 🍏

#### U.S. Fish and Wildlife Service Monarch Conservation Curricula and Resources

##### 10:20 AM–11:00 AM, Marina 3

The U.S. Fish and Wildlife (FWS) is promoting monarch butterfly conservation through formal and non-formal conservation education. We’ll share monarch curricula and resources; discuss the application, adaptability, and utility of the resources for participants’ needs; and provide a thumb drive with all the resources we present to participants.

**Presenter(s):** Michelle Donlan, U.S. Fish & Wildlife Service; Janet Ady, U.S. Fish & Wildlife Service

Strand: ● 🍏

● Conservation and Education

● Environmental Education in Urban Settings

● Inspiring Connections to the Outdoors

● Research-Based Practice in EE

● Greening PreK–12, Higher Education, and Vocational Training

● Teaching About Environmental Issues and Systems Thinking

🍏 Teachers



Diversity, Equity and Inclusion

## Bright Spots

10:20 AM–11:00 AM



Learn about two or three successful and loosely related programs in each 40-minute Bright Spots session. Sessions are presented in the order listed.

### Spinnaker 1

#### Inspiring Action Through Invasive Species: Large-Scale Community-Based Conservation

When new invasive species move in, ecological disaster can set in, and moods of conservationists can plummet. Explore how Five Rivers MetroParks utilized the onset of the Emerald Ash Borer to garner support of over 1,000 volunteers to collect seed, grow, nurture, and plant over 28,000 trees to protect biodiversity.

**Presenter(s):** Joshua Ronald York, Five Rivers MetroParks; Lauren Asquith, Five Rivers MetroParks

Strand: ●

#### One Region, One Vision: Working Together for the Most Impact

10:20 AM–11:00 AM

Discover how over 20 partners and over 100 schools work together in three states to implement an innovative environmental education program called Mighty Acorns. Learn how the Mighty Acorns Partnership model has operated for 21 years in order to have the most collective impact and success across the Midwest.

**Presenter(s):** Meghan Forseth, The Field Museum

Strand: ● 🍏

### Roundtable Discussions

10:20 AM–11:00 AM, Grande Ballroom C

#### Can NGSS Be a Platform for Scaling-Up Environmental Education?

Table 1

We explore whether and how the present policy environment allows for scaling-up the reach of education that affects students' civic and personal environmental behaviors. Should we reconsider the way EE is framed in order to achieve broad scale adoption of curricula that inspires students as environmental stewards?

If so, how?

**Presenter(s):** Brenda Gail Bergman, Michigan Tech University

Strand: ● 🍏

#### Learning and Living Green Through Project Learning Tree's GreenSchools! Program

Table 2

Learn about Project Learning Tree's (PLT) GreenSchools! program—a program that connects PLT with service learning, professional development, and environmental action. Hear from local Green Team student leaders as well as new program developments.

**Presenter(s):** James Riley McGirt, Project Learning Tree; Meera A. Varigonda, Project Learning Tree and Poway Unified School District; Tamberly Conway, U.S. Forest Service; Sue Cummings, U.S. Forest Service; Michiko Martin, U.S. Forest Service

Strand: ● 🍏

#### Staffing Your Affiliate: Are You Ready to Take the Leap?

Table 3

This session is geared toward affiliates that are run by volunteers or part-time staff who are looking to move to hiring full-time, permanent staff members. Learn from other affiliates who have successfully hired and sustained staff and receive the tools, resources, and knowledge you will need to make the transition.

**Presenter(s):** Laura Downey, Kansas Association for Conservation and Environmental Education; Ashley Hoffman, Kentucky Association for Environmental Education

Strand: ●

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Affiliate

#### Using Nature Photography to Engage Students in EE

Table 4

Join a discussion on how to use photography to engage students with nature and local environmental issues. Lessons learned from educational research on youth participation in a photovoice project that focused local amphibian and reptile populations will be presented. Resources on how to design projects will be shared.

**Presenter(s):** Lacey Denise Huffling, Georgia Southern University; Terry Tomasek, Elon University; Wendy Chambers, Georgia Southern University

Strand: ● 🍏

## Sunday 11:10 AM

The following sessions are all 40-minute sessions that start at 11:10 AM and end at 11:50 AM.

### Meeting

#### 11:10 AM–11:50 AM

##### **NAAEE 2016: Share Your Ideas!**

11:10 AM–11:50 AM, **Nautilus 4**

How can we improve on this year? We'd love to hear your thoughts. Come share your ideas and suggestions for our 45th annual conference, scheduled for October 18–22, 2016 in Madison, Wisconsin.

Coordinator: **Lori Mann, NAAEE**

### Traditional Presentations

#### 11:10 AM–11:50 AM

##### **Enhancing Urban Schools Using Environmental Education and Community Partnerships**

11:10 AM–11:50 AM, **Marina 1**

Florida Atlantic University's Pine Jog Environmental Education Center is partnered with Pine Jog Elementary, a national Green Ribbon School. This partnership demonstrates how we can move young learners from urban backgrounds towards environmental literacy. Many of the practices on which this partnership is based can be replicated to benefit other communities.

**Presenter(s):** **Andrea Lazzari, Florida Atlantic University, Pine Jog Environmental Educational Center; Suzanna Musalin, Florida Atlantic University, Pine Jog Environmental Educational Center**

Strand: ● 🍏

##### **Generation Zero Waste—Integrating K–12 Sustainability Education Into Citywide Policy**

11:10 AM–11:50 AM, **Seabreeze 2**

Hands-on K-12 education must be considered an integral part of successful implementation of zero-waste initiatives. Learn about a highly successful education program being implemented in schools in Austin, TX by Keep Austin Beautiful and Austin Resource Recovery to ensure that the city achieves and sustains its zero-waste goal.

**Presenter(s):** **Ilya Shmulenson, Keep Austin Beautiful**

Strand: ● 🍏

##### **Interdisciplinary Field Experiences: Integrating Science, Environmental Literature and Recreation**

11:10 AM–11:50 AM, **Marina 4**

An interdisciplinary field experience has been created that combines biology, earth, and environmental sciences with environmental literature and outdoor recreation. Using place-based pedagogy, we linked scientific experiments, observations, and new recreation experiences with environmental literature discussions to encourage a deeper understanding of the interrelationships of the sciences and human experiences of nature.

**Presenter(s):** **Kelly Bringhurst, Dixie State University; Theda Wrede, Dixie State University**

Strand: ● 🍏

##### ***The Lorax* in a High School Setting**

11:10 AM–11:50 AM, **Marina 3**

Dr. Seuss is not just for younger audiences! Learn how to bring the magic of *The Lorax* into your lessons as an anchor to teaching about deforestation, pollution, and the power of sustainability. Lessons, plans, and enrichment activities will be presented.

**Presenter(s):** **Laurie Font, Baton Rouge Magnet High School; Joretta LeBoeuf, Baton Rouge Magnet High School**

Strand: ● 🍏



### Did you know?

In its lifetime, an average **gray whale** swims the distance to the moon and back.



## Bright Spots

### 11:10 AM–11:50 AM



Learn about two or three successful and loosely related programs in each 40-minute Bright Spots session. Sessions are presented in the order listed.

### Spinnaker 1

#### Achieving Stewardship—More Than Just the Facts

A 3-year evaluation of programs delivered by the Environmental Volunteers and a group of collaboration partners showed we are successfully teaching environmental facts, but not teaching empathy or stewardship. Our organization is now conducting a complete curriculum review guided by our evaluation and research related to behavior change strategies.

**Presenter(s):** Brittany Joy Sabol, Environmental Volunteers

Strand: ● 🍏

#### Preservice Training Affects How Practicing Teachers Include Environmental Education

How does teacher education in environmental education affect classroom practice? Through a survey and follow-up interviews, this Wisconsin-based study sought to understand how teachers include environmental education in their classrooms. Practical applications of preservice education were investigated and will be shared, linking teacher training to teacher practice.

**Presenter(s):** Becca Lee Franzen, University of Wisconsin—Stevens Point

Strand: ●



#### Self-Study on Identity as an Environmental Educator in Science Education

This presentation will focus on an investigation of identity conflicts experienced by an environmental educator entering a doctoral program in science education. Using self-study methodology, this study seeks to provide suggestions for all educators in building bridges through pedagogy across differing subject areas or educational fields.

**Presenter(s):** Jenna M. Gatzke, Indiana University—Bloomington

Strand: ● 🍏

## Roundtable Discussions

### 11:10 AM–11:50 AM, Grande Ballroom C

#### District-Wide Implementation of Environmental Education: Sharing Lessons and Successes

##### Table 1

Grand Valley State University's Groundswell program has helped two school districts implement environmental education through a National Oceanic and Atmospheric Administration Bay Watershed Education Training grant. Learn about strategies, challenges, and successes of bringing environmental education and meaningful watershed education experiences to some of the largest school districts in western Michigan.

**Presenter(s):** Michael Posthumus, Center for Educational Partnerships

Strand: ● 🍏 🍏

#### Engaging Student Learners in Urban Ecology and Conservation

##### Table 2

In this session, we will discuss two programs through which the Wildlife Conservation Society engages student learners in Urban Ecology themes through various field research and technology based platforms. Bring a laptop with you to engage in authentic inquiry-based learning activities that we do with student learners.

**Presenter(s):** Dave Liam Johnston, Wildlife Conservation Society; Jason Aloisio, Wildlife Conservation Society

Strand: ● 🍏 🍏

#### Sustainable DC Model Schools: Implementing NGSS Through Environmental Literacy

##### Table 3

What does it look like when a school integrates environmental literacy at every grade level? Learn how eight schools piloted the District of Columbia's Environmental Literacy Framework to teach Next Generation Science Standards (NGSS) through individual curriculum plans. Discuss and share ideas on how NGSS and EE work together in your state.

**Presenter(s):** Grace Manubay, DC Office of the State Superintendent of Education; Rebecca N. Davis, District of Columbia Environmental Education Consortium (DCEEC)

Strand: ●

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**Teachers’ Perspectives on Outdoor Classrooms**

**Table 4**

The focus of this study is middle school science teacher’s perspectives on outdoor classrooms. Teachers participated in a survey aimed at gaining a better understanding of teacher’s perceptions of outdoor classrooms, how they are used, and what barriers teachers face in using outdoor spaces.

**Presenter(s): Kimberly Yates, Northern Kentucky University**

Strand: ●

**The Work That Reconnects: Overcoming Despair and Activating Hope**

**Table 5**

This workshop employs interactive exercises in Joanna Macy’s “Work that Reconnects” process to explore how participants can work through emotions associated with ecological issues like climate change and species extinction—including fear, denial, and despair. In so doing, they can rediscover hope and community and become empowered agents for change.

**Presenter(s): Mark Hathaway, University of Toronto**

Strand: ●

**Sunday 12:00 PM**

**NAAEE Awards Luncheon**

Help us recognize NAAEE award recipients at the closing luncheon of the conference, followed by this year’s final, inspiring plenary panel.

**PLENARY PANEL:**

**Ta’Kaiya Blaney, Vincent Culliver, David Flores, Charles Orgbon III**

**Moderated by Juan Martinez**

**Game Changers Under 25: What Can We Learn?**

**12:00 PM–2:30 PM, Grande Ballroom A**



See pages 31 and 37 for more information.





North American Association  
for Environmental Education

## Past Conference Venues

1972 Hot Springs, Arkansas	1986 Eugene, Oregon	2001 Little Rock, Arkansas
1973 St Louis, Missouri	1987 Quebec City, Quebec	2002 Boston, Massachusetts
1974 San Francisco, California	1988 Orlando, Florida	2003 Anchorage, Alaska
1975 New Orleans, Louisiana	1989 Estes Park, Colorado	2004 Biloxi, Mississippi
1976 Atlanta, Georgia	1990 San Antonio, Texas	2005 Albuquerque, New Mexico
1977 Estes Park, Colorado	1991 St. Paul, Minnesota	2006 St. Paul, Minnesota
1978 Chicago, Illinois	1992 Toronto, Ontario	2007 Virginia Beach, Virginia
1979 Blacksburg, Virginia	1993 Big Sky, Montana	2008 Wichita, Kansas
1980 Albuquerque, New Mexico	1994 Cancun, Quintana Roo	2009 Portland, Oregon
1981 Kentucky Dam Village SP, Kentucky	1995 Portland, Maine	2010 Buffalo-Niagara, New York
1982 Silver Bay, New York	1996 Burlingame, California	2011 Raleigh-Durham, North Carolina
1983 Ypsilanti, Michigan	1997 Vancouver, British Columbia	2012 Oakland, California
1984 Lake Louise, Alberta	1998 Atlanta, Georgia	2013 Baltimore, Maryland
1985 Chevy Chase, Maryland	1999 Cincinnati, Ohio	2014 Ottawa, Ontario
	2000 South Padre Island, Texas	



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North American Association  
for Environmental Education

## NAAEE Staff, Board, & Advisory Council

### Board of Directors

#### Executive Committee

Pepe Marcos-Iga, President  
Susan McGuire, Secretary  
Mary Ford, Treasurer

Lizabeth Fogel  
Brenda Metcalf  
Jason Morris  
Flisa Stevenson

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Bora Simmons, Co-Chair  
Janet Ady  
Nicole Ardoin  
Dave Chase  
Paul Hart  
Ashley Hoffman  
J. Drew Lanham  
Pepe Marcos-Iga  
Gus Medina  
Brenda Metcalf  
Darryl Ramos-Young  
Danni Washington

### Staff & Consultants

Judy Braus, Executive Director  
Christiane Maertens, Deputy Director  
Sarah Bodor, Director, Affiliate Relations  
and Policy  
Alicia Dimaio, Conference Planning  
Bob Ertter, Human Resources  
Regina Fong, Administrative and  
Program Assistant  
Chris Hutton, Program Administrator  
Suzanne Krop, Intern  
Kristen Kunkle, Environmental Education Specialist  
Lori Mann, Program and Conference Manager  
Haley McGlaufflin, Communications Specialist  
Christy Merrick, Director, Natural Start Alliance  
Sahithi "Sai" Muddasani, Communication  
and Program Consultant  
Mary Ocwieja, Technology and  
Member Services Manager  
Betty Olivolo, Assistant Director,  
Natural Start Alliance  
Drew Price, Operations and Program Manager  
Rob Stewart, Technology  
Katrina Sweeney, Accounting  
Melissa Hopkins Taggart, Global Environmental  
Education Partnership, Fellow  
Maria Walker, Conference Assistant



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North American Association  
for Environmental Education

## The Affiliate Network

### Working together—from Alberta, Canada to Coyoacán, Mexico

- Environmental Education Association of Alabama
- Alberta Council for Environmental Education
- Alaska Natural Resources and Outdoor Education Association
- Arizona Association for Environmental Education
- Arkansas Environmental Education Association
- California Association for Environmental and Outdoor Education
- Canadian Network for Environmental Education and Communication (EECOM) /Le réseau canadien pour d'éducation et de communication relatives à l'environnement
- Colorado Alliance for Environmental Education
- Delaware Association for Environmental Education
- District of Columbia Environmental Education Consortium
- League of Environmental Educators in Florida
- Environmental Education Alliance of Georgia
- Hawaii Environmental Education Alliance
- Idaho Environmental Education Association
- Environmental Education Association of Illinois
- Environmental Education Association of Indiana
- Iowa Conservation Education Coalition
- Kansas Association for Conservation and Environmental Education
- Kentucky Association for Environmental Education
- Louisiana Environmental Education Association
- Maine Environmental Education Association
- Maryland Association for Environmental & Outdoor Education
- Massachusetts Environmental Education Society
- Mexico Centro de Información y Comunicación Ambiental de Norte América
- Michigan Alliance for Environmental and Outdoor Education
- Minnesota Association for Environmental Education
- Mississippi Environmental Education Alliance
- Missouri Environmental Education Association
- Montana Environmental Education Association
- Nebraska Alliance for Conservation and Environmental Education
- New England Environmental Education Alliance
- New Hampshire Environmental Educators
- Alliance for New Jersey Environmental Education
- Environmental Education Association of New Mexico
- New York State Outdoor Education Association
- Environmental Educators of North Carolina
- North Dakota Coalition for Conservation and Environmental Education
- Environmental Education Council of Ohio
- Oklahoma Association for Environmental Education
- Environmental Education Association of Oregon
- Pennsylvania Association of Environmental Educators
- Rhode Island Environmental Education Association
- Saskatchewan Outdoor and Environmental Education Association
- Environmental Education Association of South Carolina
- Environment Education Connections of South Dakota
- Tennessee Environmental Education Association
- Texas Association for Environmental Education
- Utah Society for Environmental Education
- Virginia Resource-Use Education Council
- Vermont Statewide Environmental Education Programs
- Environmental Education Association of Washington
- West Virginia Environmental Education Association
- Wisconsin Association for Environmental Education
- Wyoming Association for Environmental Education

# Getting Around Town

## Things to Do



### Walking Distance

#### San Diego Bay and Marina Walk



### Driving Distance

- Balboa Park Museums** (Carousel, Spanish Village Art Center, gardens, play areas, trails)—5.7 miles
- Cabrillo National Monument** (Hiking, tide pools, museum)—8.2 miles
- Gaslamp District** (Haunted San Diego tours)—4.4 miles
- La Jolla Cove and Shores** (Walking, shops)—12.4 miles
- La Jolla Kayaks** (Hiking, biking, & water sports)—13.4 miles
- Mission Beach Boardwalk** (Walking, shops, restaurants, amusement park)—7.7 miles
- Ocean Beach Main Street** (Shops, food)—4.3 miles
- San Diego Natural History Museum** (In Balboa Park)—5.7 miles
- San Diego Zoo**—5.9 miles
- San Diego Zoo Wild Animal Park**—34 miles
- Torrey Pines State Reserve** (Hiking)—6.3 miles
- USS Midway Museum**—3.4 miles

## Places to Eat



### Walking Distance

- C Level** 880 Harbor Island
- The Boathouse** 2040 Harbor Island
- Tom Ham's Lighthouse** 2150 Harbor Island

### Driving Distance

- El Charko Grill**, 2415 San Diego Avenue, Old Town—4.9 miles
- Quad Alehouse**, 868 5th Street, Gaslamp District—4.4 miles
- Stone Brewing Tap Room**, J Street—3.7 miles
- Stone Brewing World Bistro**, 2816 Historic Decatur Road—2.8 miles
- The Mission Café**, 3795 Mission Boulevard, Mission Bay—7.7 miles

For reduced prices at multiple San Diego attractions, visit

- [www.citypass.com/southern-california](http://www.citypass.com/southern-california)
- [www.smartdestinations.com/san-diego](http://www.smartdestinations.com/san-diego)



**A note about the drought.** With the current severe drought conditions, California restaurants serve water only on request.

## Suggested Destinations

Take Bus 923 (or drive) along Harbor Drive to Ocean Beach, where there are great small non-chain restaurants and a mile of beach sand—5 miles



Gaslamp District

Take Bus 923 to Broadway Avenue in downtown. Get off at Fifth Avenue and Broadway, and walk south in the Gaslamp District, where there are dozens of restaurants and limited/expensive parking—3 miles

Walk northeast along Harbor Drive for San Diego Bay views, turn left on Grape and then right on India Street to find many fabulous restaurants in Little Italy, limited on-street parking and no parking structures—2 miles

Walk southeast along Harbor Drive (or drive), then right on Laning Road to the Liberty Station area, for Harbor Greek Cafe, Oggi's Pizza and Brewing, Issara Thai, Sushia Japanese, Los Primos Mexican, and Smash Burger—2 miles

Take a cab to Stone Brewing Bistro and Gardens, 2816 Historic Decatur Boulevard (corner of Sims Road at the eastern end of Liberty Station)—3 miles



San Diego Avenue, Old Town

Drive to Old Town State Park, where there are eight Mexican restaurants and others, most on San Diego Avenue and Juan Street—3 miles

Drive to Pacific Beach, where there are informal restaurants facing the sand on the beach, south of the intersection of Mission Boulevard and Garnet Avenue, and there are many restaurants on Garnet Avenue east of this intersection—8 miles



Shelter Island Gazebo

Drive or take a cab to Shelter Island for about a dozen seafood and other restaurants—4 miles

### Taxi Services

**Airport Yellow Cab of San Diego** 619-444-4444

**American Cab** 619-234-1111

**Orange Cab** 619-291-3333

**San Diego Cab** 619-226-8294 or 800-368-2947

**USA Cab** 619-231-1144



### Biking

With more than 1,340 miles of bikeways in the San Diego region, riding a bike is an easy and green way to get around San Diego. To help plan your bike routes, visit [www.icommutesd.com/bike/bikemap.aspx](http://www.icommutesd.com/bike/bikemap.aspx)

The Sheraton offers bike rentals on a first-come, first-served basis. Located at the Lanai Lawn near Shoreline.

## Greenest Hotel in San Diego

The Sheraton San Diego Hotel & Marina is the most sustainable convention hotel in San Diego and the largest hotel to be certified at the most distinguished Gold level for the Green Seal Environmental Standard for Lodging Properties.



A leader in green initiatives for many years, the Sheraton was the first hotel in North America to be powered by electricity generated on-site from fuel cell power technology, an “ultra-clean” source of electricity that requires no combustion reaction. The hotel also recaptures the heat byproduct to heat its swimming pools and hot water. It was the second hotel in San Diego to start a food-waste composting program with the Miramar Greenery, and achieves an **83% waste diversion rate**.

You'll probably notice many of the **Sheraton's sustainability practices in action**, including

- Guestrooms outfitted with **low flow toilets**, faucets, and showerheads
- Guest linen and towel reuse
- **Recycled paper products** with post-consumer recycled content
- Recycling containers in guest rooms and common areas
- Sustainable food and beverage choices using seasonal availability of **locally grown and organic food**
- **Compostable** to-go cutlery, dishware, and containers



But there's a lot going on behind the scenes, too. To name just a few:

- Abiding by **Seafood Watch purchasing guidelines**
- Using low VOC paints
- **Roofing materials that reflect heat** and lower the demand hotel air conditioning system
- Filtering and recycling used fryer oil into biodiesel fuel
- Ergonomically-friendly and **energy-efficient cleaning equipment**
- 35% reduction in conventional commuting transportation by staff

There's more information about the Sheraton's commitment to sustainability on their website.

## Reduce your carbon footprint



NAAEE is working with Renewable Choice Energy to reduce the environmental impact of our conference. You can purchase verified emission reductions (VERs) at the NAAEE office to help balance the carbon dioxide emissions associated with your travel to the conference and use of resources during your stay in San Diego. Renewable Choice Energy supports a variety of domestic and international carbon projects that conform to leading standards.

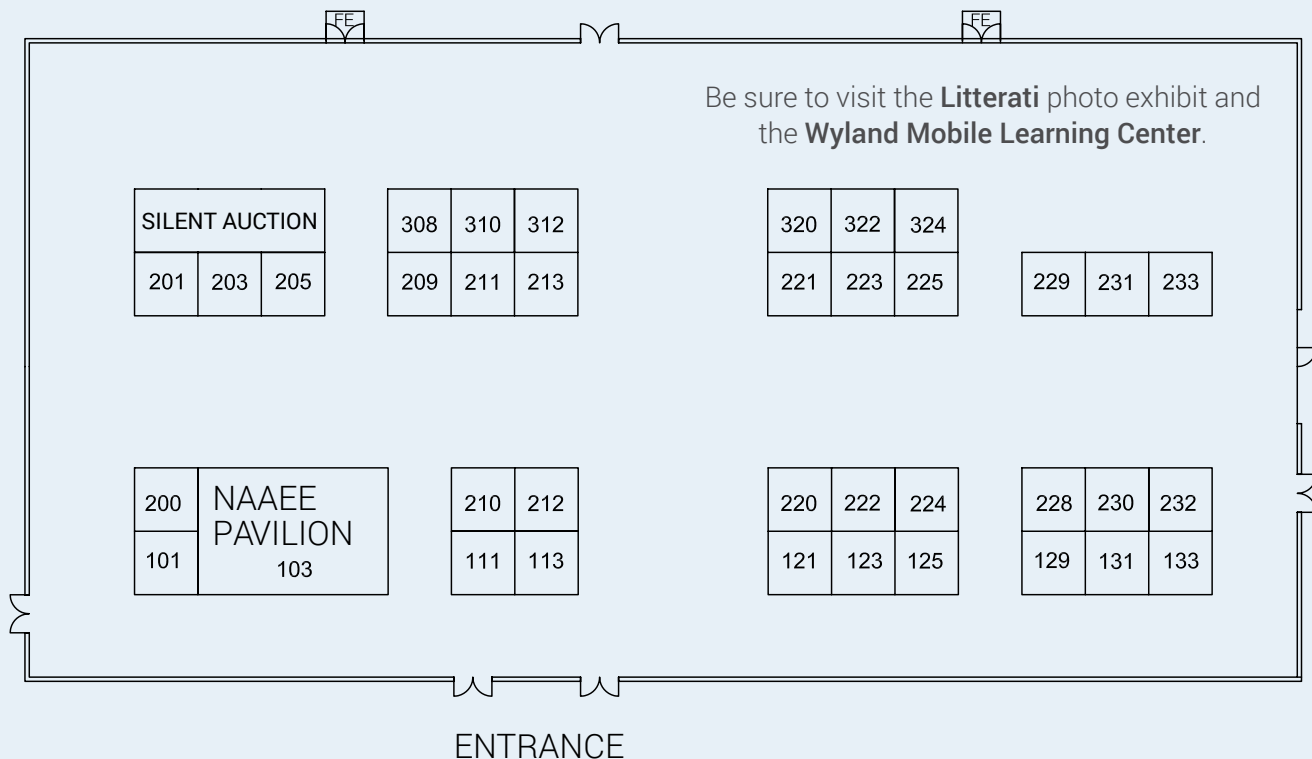
This program is printed on FSC post-consumer-waste recycled paper with environmentally-friendly inks.



# 2015 Exhibitors

**Exhibit Fair Hours: Friday 8:00 AM–5:00 PM • Saturday 8:00 AM–4:00 PM**

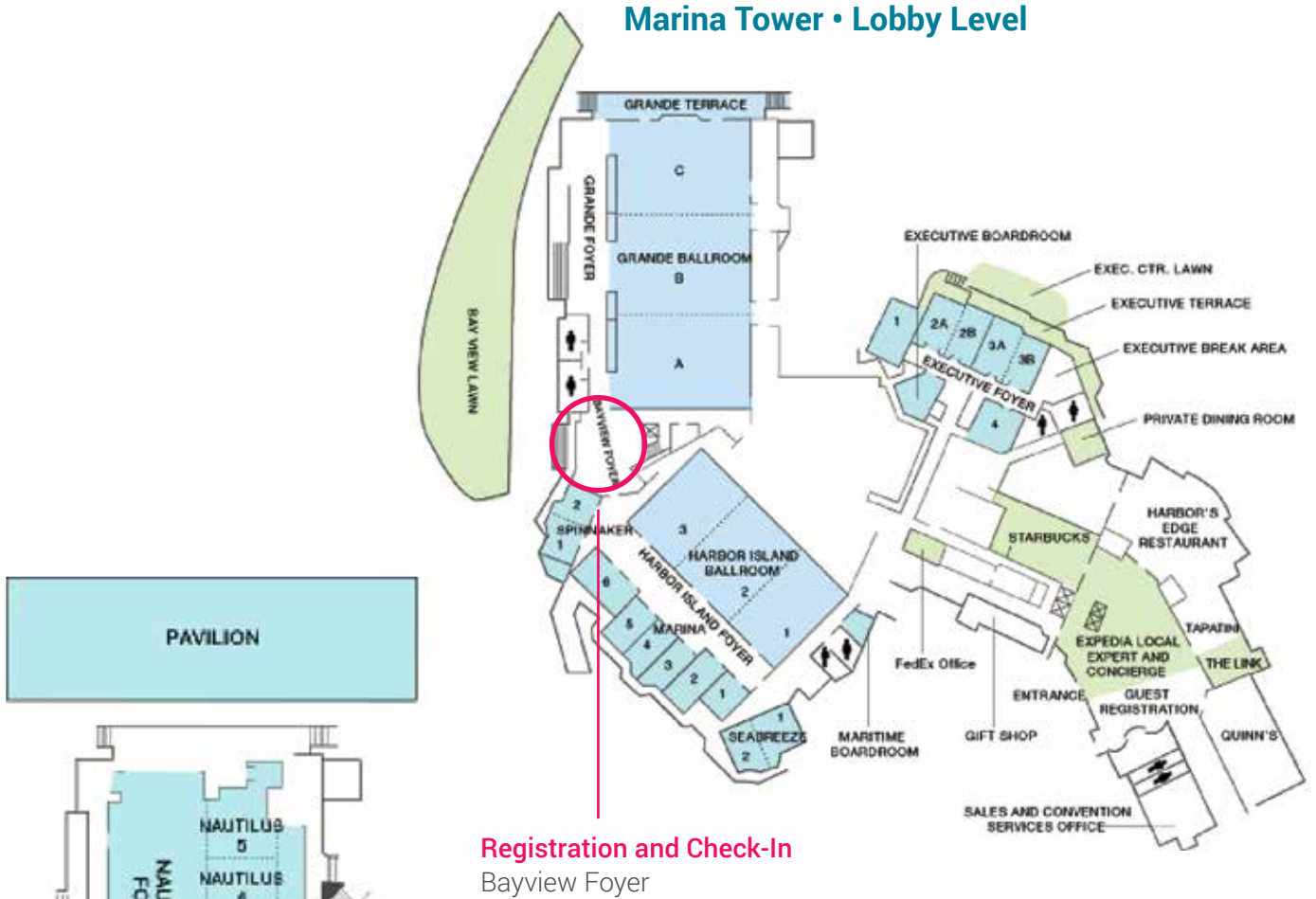
Acorn Naturalists	113	Prescott College	225
Agrium Inc.	213	Project Learning Tree	205
Antioch University New England	220	Project Look Sharp at Ithaca College	201
Council for Environmental Education	221	Project WET Foundation	203
Discovery Expeditions	312	San Diego County Office of Education, CREEC	230
Environment for the Americas	125	Scientists and Environmentalists for Population Stabilization	228
Future City	231	Solar One	222
Greater Madison Convention and Visitors Bureau	101	TerraCycle	324
HHMI BioInteractive	209/211	Transforming Youth Outdoors	123
International Peace Garden	308	U.S. Environmental Protection Agency	210
John Slade Books	320	U.S. Forest Service	212
Merry Lea Environmental Learning Center of Goshen College	229	University of Washington–College of the Environment	129
Middlebury College School of the Environment	131	Waste Management	111
Montreat College	223	Western Washington University/Facing the Future	224
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# Sheraton San Diego Hotel & Marina

## Marina Tower • Lobby Level



**Registration and Check-In**  
Bayview Foyer



## Marina Tower, Lower Level





# Madison welcomes you.



**naaee**

North American Association  
for Environmental Education

One of two U.S. cities built on an isthmus, Madison is nestled between Lake Mendota and Lake Monona, and is renowned for its stunning, four-season scenery.

Come be inspired in the community where Gaylord Nelson's "Earth Day" began. Where Aldo Leopold wrote *A Sand County Almanac*. And where bird-shaped effigy mounds once built by ancestors of the Ho-Chunk and other Nations remain visible on the UW-Madison campus.

**45<sup>TH</sup> ANNUAL  
CONFERENCE**

**13<sup>TH</sup> ANNUAL  
RESEARCH  
SYMPOSIUM**

**October 18-22, 2016**

Monona Terrace Community & Convention Center

# One semester can make a world of difference!



## ***Conserve School***

is seeking high school students who feel a strong attachment to the natural world and who are motivated to protect it. This semester-long immersion in environmental studies and outdoor activities deepens a student's love of nature, builds a commitment to conservation and equips them to take meaningful action as environmental stewards.



Thanks to the generosity of Conserve School's founder James R. Lowenstine, the cost of the 17 week experience including room, board and tuition is only \$200.



## **Hiring Teaching Fellows for August 2016**

Conserve School seeks energetic, dedicated, and mature college graduates with an interest in conservation, outdoor activities, and education to be semester school teaching fellows.

Learn more online at:

**ConserveSchool.org**  
**ConserveSchool.org/employment**  
**Facebook.com/ConserveSchool**

**A semester exchange program in the Wisconsin Northwoods.**

# It's hip to be square.

Download the NAAEE app and access complete conference information!

There are **three ways** to get the app:

- Go to [crowd.cc/naaee2015](http://crowd.cc/naaee2015)
- Scan the **QR code** below
- Download the "CrowdCompass Directory" from your app store.

Once you have the app, search for **NAAEE**.



**naaee**

North American Association  
for Environmental Education



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