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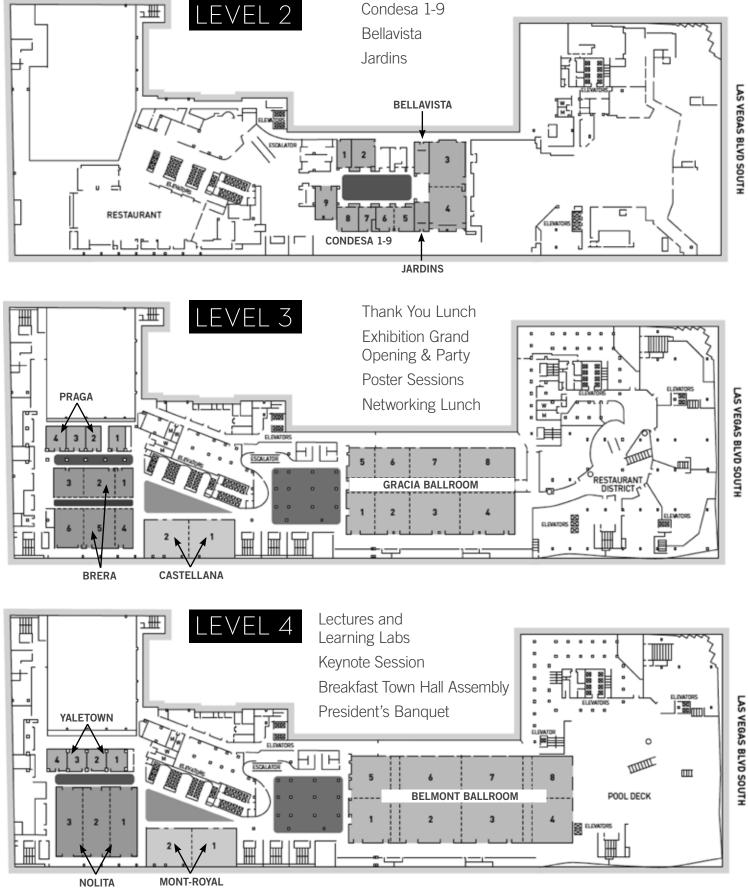
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Disclaimer:

The National Environmental Health Association (NEHA), as part of its AEC, presents a wide variety of speakers who are invited to present the latest training, education, and information on a specific area of expertise within environmental health and protection. The speakers are given general guidelines to facilitate their respective presentation, however, they are solely responsible for the content of those presentations. This is also true for the abstracts and materials provided by the speakers for their presentations. Moreover, any comments or observations made by an individual speaker are the sole responsibility of that speaker and do not necessarily reflect the judgment or views of NEHA. No liability, either expressed or implied, for any such statement or the content of any given presentation at the AEC & Exhibition, will under any circumstances be assumed by NEHA.

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Unforeseen Changes:

The AEC schedule, sessions, speakers, events, etc. are subject to change at anytime without prior notification.

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WELCOME TO THE NEHA 2014 AEC AND IFEH 13TH WORLD CONGRESS!

CONFERENCE REGISTRATION

Belmont Registration Desk at The Cosmopolitan of Las Vegas Monday, July 7: 7:00 am – 5:00 pm Tuesday, July 8: 7:00 am – 8:00 pm Wednesday, July 9: 7:00 am – 5:00 pm Thursday, July 10: 7:30 am – 5:00 pm Friday, July 11: 7:30 am – 5:00 pm

CYBER CAFÉ

In-kind donation by American Public University

Belmont Registration Desk

Computers are available for use; this year cell phone charging stations are not available.

Monday, July 7, 10:00 AM – 4:00 PM Tuesday, July 8, 8:00 AM – 5:30 PM

Wednesday, July 9, 7:00 AM - 5:00 PM

Thursday, July 10, 7:30 AM - 4:00 PM

VIRTUAL AEC: YOUR MEETING COMPANION

Belmont Registration Desk

NEW! Use your smart phone or other mobile device to navigate the conference. The AEC "App Squad" team will help you download and use the AEC app.

Monday, July 7: 8:30 AM - 6:00 PM

Tuesday, July 8: 8:30 AM - 6:00 PM

VIRTUAL AEC: YOUR CONTINUING EDUCATION RESOURCE

See page 71 for details on sessions being recorded for future viewing.



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FIRST TIME ATTENDEE?

Monday, July 7, 4:00 PM - 5:00 PM

Meet in Yaletown 2 for a quick preview and what to expect during your first AEC! **Student?** Visit page 9.

CONTINUING EDUCATION CREDITS

Earn up to 24 hours of CE contact hours—enough to meet your full two year NEHA professional credential education requirement by attending and participating in the NEHA AEC's educational sessions, keynote address, first-time attendee meeting, and other activities.

Help NEHA streamline and green the AEC by tracking CE hours on paper (optional), then complete one entry on the online submission form at www.neha.org/CEweb/CE.asp.

See more ways to help green the AEC on page 64.

NEW AGREEMENT BETWEEN NEHA AND CA!

No more signing in at every session!

California REHS Credential Holders: Provide NEHA with the complete the online submission above and a copy of your speaker evaluations. ADDITIONALLY, complete the Certificate of Attendance Request form at the following link: http://www.neha.org/pdf/CE/ Certificate_of_Attendance_Request_Form.pdf. The California REHS program will require your certificate and completed speaker evaluations.

NEHA is a recognized provider of relevant continuing education and recertification credits by:

- American Council for Accredited Certification (ACAC)
- Board of Certified Safety Professionals (BCSP)

Submit your CE hours directly to that state/association. If that organization requires a Certificate of Attendance, please request one on the CE tracking sheet provided by NEHA.

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SPECIAL EVENTS

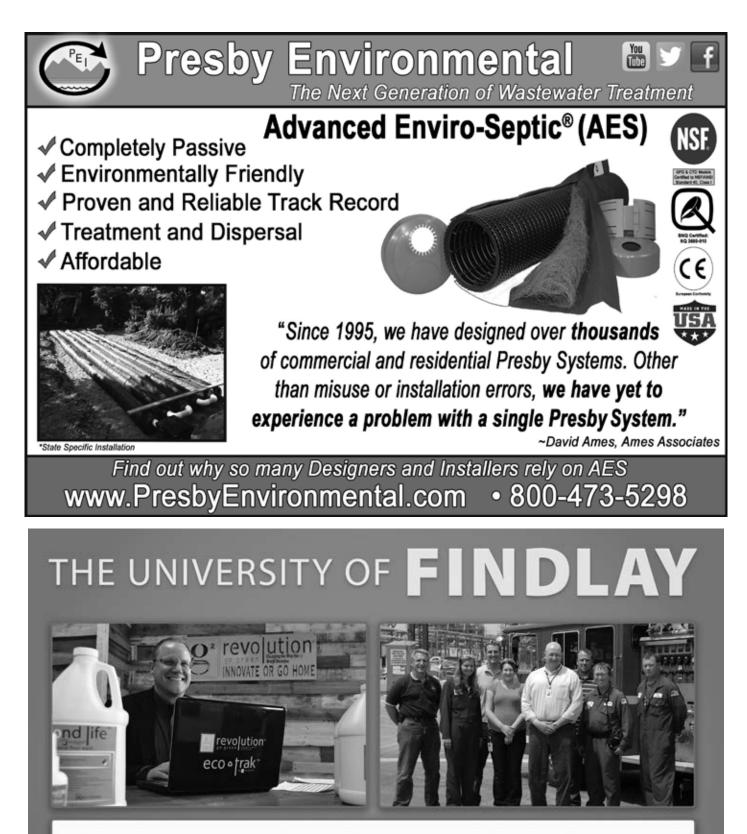
Mon. July 7	1:00 PM-3:00 PM	Community Event	Meet at registration desk at 12:15pm
	1:00 PM-5:00 PM	NEHA/SORA Water Reclamation & Reuse Field Trip	Meet at registration desk
	4:00 PM-5:00 PM	First Time Attendee Workshop	Yaletown 2
	5:15 PM-6:45 PM	Buses to The Mirage	Meet at registration desk
	7:30 PM-9:00 PM	UL Event: Terry Fator Show	The Mirage Hotel
Tues. July 8	12:30 PM-1:30 PM	Thank You Luncheon	Brera Ballroom 1-6
	3:30 PM-6:00 PM	Awards Ceremony & Keynote Session	Nolita 1-3
	6:00 PM-7:00 PM	American Academy of Sanitarians (AAS) Wagner & USPHS Honor Awards Reception	Yaletown 3
	6:00 PM-9:00 PM	Exhibition Grand Opening & Party Silent Auction Poster Session	Gracia Ballroom
Wed. July 9	8:00 AM-1:00 PM	Exhibition & Poster Session	Gracia Ballroom
	8:00 AM-11:00 AM	Silent Auction	
	8:00 AM-12:00 PM	Student Research Presentations	Mont-Royal 1
	1:00 PM-2:30 PM	Networking Luncheon (sponsored in part by American Public University)	Brera Ballroom 1-6
	2:30 PM-5:30 PM	Student and Mentor Network Lounge	Yaletown 4
Thur. July 10	7:30 AM-9:00 AM	Town Hall Assembly (sponsored by National Restaurant Association)	Nolita 1 & 2
	7:00 PM-9:30 PM	President's Banquet	Nolita 1-3

IFEH EVENTS

Sun. July 6	1:00 PM-6:00 PM	International Faculty & EHAC Forum	Condesa 5 & 6
Mon. July 7	8:00 AM-12:00 PM	IFEH Regional Meetings	Yaletown 2-4
Thur. July 10	7:00 PM-9:30 PM	President's Banquet IFEH Transfer of Presidency IFEH Awards IFEH Flag Ceremony	Nolita 1-3

SORA EVENTS

Mon. July 7	1:00 PM-5:00 PM	NEHA/SORA Water Reclamation & Reuse Field Trip	Meet at registration desk
Tues. July 8	6:00 PM-9:00 PM	Exhibition Grand Opening & Party	Gracia Ballroom
Wed. July 9	8:00 AM-9:00 AM	SORA Strategic Planning Committee	Yaletown 3
	12:00 PM-1:00 PM	SORA Conference Planning Committee	Yaletown 3
	6:30 PM-7:30 PM	SORA Meet & Greet Reception	Brera 4 & 5
Thur. July 10	7:00 AM-8:00 AM	COI Committee Meeting	Yaletown 3
	10:30 AM-12:00 PM	SORA Business Meeting	Yaletown 3
	5:30 PM-5:45 PM	SORA Board Meeting	Yaletown 3
	6:30 PM-8:30 PM	Closing Reception	Gracia Ballroom 1



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In addition to all of the training and educational sessions, here are some other opportunities for you to take advantage of while attending the NEHA 2014 AEC.

TUESDAY, JULY 8

12:30 PM – 1:30 PM | Yaletown 4 The Power of Mentorship and Networking

Perfect your elevator speech for use at the conference events, and plan how to select educational sessions and maneuver the Exhibit Hall.

WEDNESDAY, JULY 9

8:00 AM – 12:00 PM | Belmont 5 Student Research Presentations. (See page 47)

2:30 PM - 5:30 PM | Yaletown 4

- The College Transition—from Degrees to Dollars, Erin Cavin, Environmental Health Specialist II, Southern Nevada Health District. Learn how to make the connection from graduation to the work force, and on how to return to school after working.
- Networking for New Professionals and Beyond, Elise Rothschild, Division Chief at Sacramento County. Learn how networking can be used to launch and build your career.

THURSDAY, JULY 10

4:00 PM – 5:00 PM | Yaletown 4 How to Follow Through on Networking with New Contacts

Networking Events

(These events are **not** included with a student conference registration, but tickets to events can be purchased on site at the NEHA registration desk.)

- Exhibition Hall Grand Opening & Party (Tuesday and Wednesday). Visit the AAS booth to sign up for 15-30 minute time slots for host mentors to talk with students.
- Networking Luncheon (Wednesday)
- President's Banquet (Thursday)

STUDENT RESEARCH PRESENTATIONS...Page 47

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Vicia Dirig Collins

Alicia Enriquez Collins, REHS President, National Environmental Health Association

LETTER FROM NEHA'S PRESIDENT

Dear Colleagues,

On behalf of the National Environmental Health Association (NEHA) board of directors and superb staff, welcome to NEHA's 78th Annual Educational Conference & Exhibition in Las Vegas, Nevada! We are privileged this year to partner with the International Federation of Environmental Health (IFEH) 13th World Congress. We welcome each of you and our honored guests from near and far.

NEHA staff and technical advisors have worked countless hours and have coordinated with IFEH council members to present an educational program which includes current environmental health issues impacting our communities in the U.S. and around the globe. This week's agenda provides a tremendous and rare opportunity for all participants! I invite you to take full advantage of the educational program, exhibition, business meetings, and networking opportunities available throughout the week. We will have several esteemed guests from around the world in attendance this year, and I encourage you to expand your environmental health network and develop everlasting friendships.

We thank you for your support of NEHA and are grateful to each of you and to your employers for recognizing the importance of your participation in this conference. We appreciate that many have traveled great distances to attend this special educational conference. We are confident your expectations for a high caliber educational program will be exceeded.

Respectfully, Alicia Enriquez Collins President

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Peter Davey, PhD, IFEH President, 2010-2012

IFEH PRESIDENT WELCOME

The International Federation of Environmental Health (IFEH) presents the 13th Environmental Health Global Congress in partnership with the National Environmental Health Association's (NEHA) 78th Annual Educational Conference (AEC) & Exhibition, July 7–10, 2014, in Nevada, USA. We express our thanks to NEHA for planning and hosting this innovative 78th AEC here in Las Vegas. I would like to especially thank delegates who made the trip and are supporting this important event. Welcome also to families travelling with our members.

IFEH Council membership consists of 43 full country members across the globe; and together with over 50 academic, associate, and individual members and our sponsors, we collectively represent more than 40,000 environmental health practitioners worldwide. We are all part of a great profession with a long history, many traditions, and an exciting future.

On July 5, IFEH will host our annual IFEH Council Meeting and our AGM will be held on July 6, facilitated by the IFEH board of directors. During this time the five IFEH Regional Groups meet and delegates are welcome to join us. The IFEH International Faculty Forum supporting academics and environmental health students will host a day of seminars and learning activities ... it's going to be a productive and rewarding conference for all involved.

Delegates at this year's IFEH and NEHA event will be presented with a series of highlevel, invited speakers aimed at provoking ideas within our scientific and policy driven approaches and expanding our individual and group educational and learning experience. Plenary, break-out lectures, educational sessions, and learning labs are offered at this conference covering the significant and emerging environmental health topics. I must congratulate the conference committees for the program design, which is a balance of rich, scientific practitioner and academic content with robust peer review. We are assured of a quality educational conference in all dimensions of learning. The conference will also have online sessions; I especially welcome the virtual congress participants. Let's take these messages back to the workplace and our communities to facilitate and implement targeted environmental health outcomes.

Special thanks to NEHA President Alicia Collins, the NEHA and IFEH board of directors, NEHA Executive Director and CEO Nelson Fabian and staff, NEHA Education Coordinator Jill Schnipke, IFEH President Elect Henning Hansen, IFEH Secretary Rod House, Treasure Steve Cooper, and of course, Mel Knight, our IFEH Americas Regional Chair for all the efforts in planning and delivering this major professional body event.

Once again, on behalf of IFEH, NEHA, and all of our wonderful sponsors and supporters, thank you to all of you who have joined us at the 2014 IFEH and NEHA AEC & Exhibition in Las Vegas.

Thanks again and enjoy the conference.

Peter Davey, PhD IFEH President, 2010-2012

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NATIONAL ENVIRONMENTAL HEALTH ASSOCIATION (NEHA)

JULY 7 - 12, 2014 Las Vegas, Nevada

Dear Friends,

Welcome to America's most dynamic city – Las Vegas! You could not have chosen a better City to hold your conference in, and once you get a taste of what Las Vegas has to offer, you will definitely be back. As the Mayor of this great City, I am delighted to tell you why Las Vegas is *the* place to live, work and play!

Las Vegas continues to capture the world's imagination as the City where anything is possible. With world-class hotels, award-winning restaurants, luxurious spas, fantastic shopping, the finest golf courses and spectacular entertainment, Las Vegas remains one of the most electrifying destinations in the world.

While attending the conference, it is my hope that you will have a chance to explore Downtown Las Vegas, an area of our City that is undergoing a dramatic renaissance. It is evolving into a vibrant place for living, working, entertainment and the arts. Downtown Las Vegas is comprised of an enticing mix that includes:

- The neon-drenched excitement of the Fremont Street Experience, visited by over 21 million people each year.
- · Multi-million dollar casino and hotel renovations and expansions.
- Fremont East Entertainment District featuring trendy new gathering places for dining, dancing, cocktails and enjoyment.
- · An emerging eclectic mix of live-in artists and galleries known as the 18b Arts District.
- The World Market Center, a state-of-the-art home furnishings trade show complex with over 5 million square feet, has merged with another furniture complex in North Carolina and will now be called the International Market Center. The facilities in Las Vegas and North Carolina encompass 13 buildings, with 10.6 million square feet of furniture showrooms.
- Symphony Park, a phenomenal 61-acre planned development anchored by two key projects, the Cleveland Clinic Lou Ruvo Center for Brain Health, designed by renowned architect Frank Gehry, and The Smith Center for the Performing Arts, Las Vegas' first world-class performing arts facility. Symphony Park will also be the planned future home of The Charlie Palmer, a luxury boutique business hotel; a first-class casino/hotel with significant retail space; abundant street-side retail offerings; a two-acre park; and an estimated 1000 urban style residences.
- A collection of world-class museums including the Neon Museum Boneyard, which houses over 100 donated and rescued Las Vegas signs that date from the late 1930s through the early 1990s; The Mob Museum, which provides a fascinating glimpse into our City's history and Discovery Children's Museum in Symphony Park, among others.

Again, welcome to fabulous Las Vegas! Best wishes for an enjoyable stay in our fine City.

Sincerely,

Casolyn Soodman

Carolyn G. Goodman Mayor, City of Las Vegas



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WELCOME TO THE 78TH NEHA AEC

... and welcome to Las Vegas!



Nelson Fabian, Executive Director, National Environmental Health Association

Dear NEHA AEC Attendee,

Thirty-one years ago, I managed my first AEC in Norfolk, Virginia. Wow—what a difference 31 years can make!

The AEC that you are about to experience has changed in many ways since that Norfolk conference. It is much larger. The educational program covers so many more topics. Opportunities for networking have greatly expanded. We're now into conferences that are multi-generational, interactive, virtual, green, and ROI based. It's been an amazing transformation.

But over these years, the foundational piece of this event has never changed. From day one of the planning for these events, our staff and volunteers have always maintained a central focus on how this single event could help you the most. We understand that your world is also changing. Moreover, it is us who need to keep up with you, and especially with the new demands that get placed on you as environmental health evolves and the needs of our communities change. The result is the much different AEC you see today.

On behalf of the many people involved in building this updated and contemporary conference experience for you, I encourage you to take full advantage of everything it offers—from new international friendships to the rich educational program to knowledge of the latest in the products and services featured in our exhibition and to even the fun and excitement of our unique host city.

I, too, have a special interest in this conference. It will be my last as your executive director and CEO. As such, I look forward to personally visiting with as many attendees as possible to wish you well and to thank you for the privilege it has been to serve you and this profession for these wonderful 31 years.

Your friend, Nelson

Sunday & Monday Agenda

SUNDAY, JULY 6

1:00 PM-5:30 PM	International Faculty Forum & EHAC Joint Meeting	Condesa 5 & 6
11:00 AM-5:00 PM	NEHA Conference Registration Desk	Belmont Registration Desks 1 & 2
MONDAY, JULY 7		
7:00 AM-5:00 PM	NEHA Registration and Information	Belmont Registration Desk 1
8:00 AM-5:00 PM	Industry-Foodborne Illness Investigation Training (I-FIIT-RR) Workshop	Belmont 5
11:00 AM-1:00 PM	SORA Registration	Belmont Registration Desk 2
1:00 PM-3:00 PM	Community Event	Bus to off-site location
1:00 PM -5:00 PM	Springboard to Prevention: The Model Aquatic Health Code, 1st Edition (Free with AEC registration)	Mont-Royal 2
1:00 PM-5:00 PM	NEHA/SORA Water Reclamation & Reuse Field Trip	Bus to off-site location
4:00 PM-5:00 PM	First-Time Attendee Workshop	Yaletown 2
4:30 PM-6:30 PM	SORA Registration	Belmont Registration Desk 2
5:15 PM-6:45 PM	Buses to The Mirage for UL Event	Bus to off-site location
7:30 PM-9:00 PM	UL Event: Terry Fator Show	The Mirage Hotel
Meetings		
8:00 AM-1:00 PM	NEHA Board of Directors Meeting	Mont-Royal 1
8:00 AM-12:00 PM	IFEH Regional Meetings	Yaletown 2-4
3:00 PM-5:00 PM	AEHAP Business Meeting	Belmont 1

MONDAY, July 7

Community Event 1:00 PM-3:00 PM

Meet at registration desk.

Join us at this year's community volunteer activity at Clean the World, an organization which helps reclaim and repurpose waste from the hospitality industry and provides for people in need. Network with colleagues and contribute to a local and global cause while participating in volunteer activities which may include sorting amenities by content and package type, cleaning and boxing amenities, assembling hygiene kits, taking inventory, or writing educational and inspirational notes to recipients.

Buses sponsored by Starbucks Coffee Company.

When you sign up, please be sure to read and be prepared with required attire and waiver. Join your fellow environmental health colleagues at Clean the World's Las Vegas Recycling Operations Center and make a difference locally and internationally!

NEHA/SORA Field Trip 1:00 PM-5:00 PM

Meet at registration desk.

Join us to visit Clark County Water Reclamation District's Desert Breeze Water Resource Center, a state-of-the-art facility that collects wastewater flows from the surrounding neighborhoods to produce high-quality reclaimed water used for large turf irrigation applications such as parks and golf courses. Then, see how Las Vegas Valley Water District's Springs Preserve facilities reclaim wastewater for reuse on its 180-acre campus, which is a living example of sustainable living, design, and architecture, with some of the nation's "greenest" buildings. Please bring a hat and a reusable water bottle to stay hydrated.

Buses sponsored by Advanced Drainage Systems.

Springboard to Prevention: The Model Aquatic Health Code, First Edition 1:00–5:00 PM, Mont-Royal 2

Over the past six years a group of public health, academic, and industry experts have been working with CDC to develop the first comprehensive public health guidance for swimming pools and aquatic venues in the U.S. This workshop will present the first completed version of the Model Aquatic Health Code (MAHC). The MAHC will be a guidance document that can help local and state authorities update or implement swimming pool and spa codes or standards without having to "recreate the wheel." The workshop will cover:

- Common health concerns at aquatic venues,
- Key concepts influencing lifeguarding staffing plans,
- Secondary disinfection, and
- A science-based operational and communication support toolkit for aquatic and pool programs.





First Time Attendee Workshop 4:00–5:00 PM, Yaletown 2

Join us for a quick preview of what to expect during your first NEHA AEC and get the most out of your time.



5:15 PM-6:45 PM	Buses to The Mirage for UL Event	Bus to off-site location
7:30PM-9:00 PM	UL Event: Terry Fator Show	The Mirage Hotel

Meet at hotel front lobby for buses.

As a successful headliner on the Las Vegas Strip, Terry Fator captures the hearts and funny bones of audiences from around the world with *Terry Fator: The Voice of Entertainment*. Backed by a live band, Fator wows audiences nightly with singing, comedy, and unparalled celebrity impressions. The "America's Got Talent" winner brings to life a hilarious range of characters for a one-of-a-kind experience, only at The Mirage.

The UL Event is not included in the registration pricing for the AEC. There is a separate cost to attend this event and registration is required. Transportation to the show will be provided for ticket holders.



Don't have a ticket to the Annual UL Event? Stop by the NEHA registration desk for ticket availability.

Tuesday Agenda

TUESDAY, JULY 8

7:00 AM-8:00 PM	Registration and Information Desk	Belmont Registration Desk 1
8:00 AM-5:00 PM	SORA Registration	Belmont Registration Desk 2
8:30 AM-12:30 PM	Lectures and Learning Labs	Belmont 1-8, Mont-Royal 1-2
12:00 PM-5:00 PM	Exhibitor Move-In	Gracia Ballroom
12:30 PM -1:30 PM	Thank You Lunch	Brera Ballroom 1-6
12:30 PM-1:30 PM	Student and Mentor Network Lounge	Yaletown 4
3:30 PM -6:00 PM	Awards Ceremony & Keynote Session	Nolita 1-3
6:00 PM-7:00 PM	AAS Wagner Award & USPHS Honor Awards Reception	Yaletown 3
6:00 PM-9:00 PM	Exhibition Grand Opening & Party	Gracia Ballroom
6:00 PM-9:00 PM	Silent Auction	Gracia Ballroom
6:00 PM-9:00 PM	Poster Session	Gracia Ballroom
8:25 PM	Door Prize Winner Announced	Gracia Ballroom
Meetings		
8:00 AM-10:00 AM	Past Presidents Meeting	Yaletown 4
11:00 AM-12:00 PM	Affiliate Presidents Meeting	Yaletown 3
3:30 PM-5:00 PM	APSP RWQ Committee Meeting	Condesa 6

	8:30-9:20	9:30-10:20	10:30-11:20	11:30-12:20	12:30-1:30	1:30-2:30	2:30-3:20	3:30-6:00	00:6-00:9
General EH Belmont 1			DROP IN LEARNING LABS						
International EH: IFEH Sestions AM Belmont 4 PM Mont Royal 2	Roy Emerson Award Winner. The Climate Change Challenge	The 2013-14 NEHA Sabbatical Exchange Program : Undergraduate Environmental Health Education in Canada and the U.S.	Case Studies in Successful International Collaboration (Panel)	nal Collaboration (Panel)		Collaboration, Cooperation and Development in Environmental Health	Intelligent Service Delivery through a Web Based Environmental Health K nowledge System		
Indoor Air Quality Belmont 1						School Indoor Air Quality Improvement: Lessons from Multhomah County, Oregon	How Contractors and Homeowners Can Improve Indoor Air Quality Before a House is Built		
Emergency Preparedness & Response AM Mont Royal 2 PM Belmont 3	Environmental Health and Disaster Management - An International Effort for Training and Awareness	r Disaster Management Challenges from Non-communicable Disases: Lessons Learned & Questions Going Forward	Enhancing Planning and Preparedness: Development of an E-Learning Tool for Chemical Incidents	Hurricane Sandy: A Complex Environmental Health Communications Challenge		To Tweet or not to Tweet: Leveraging Social Media for Environmental Health	Social Media for Environmental		E
Land Use Planning: Science to Policy Belmont 5	Keys to Facilitating Perception of Healthy Cites Noise in Kural Partneship in and Urban Indonesia	Air Quality Levels of Heavy Assessments Metals in Using Satellite Traffic-Related Derived High Particulate the Resolution the Matter along	Developing Policy to Address Near Roadway Pollution Health Hazards	Outside-the-Box Advocacy: Organizing Public Health's Engagement in Built Environment Advocacy		Protecting and Improving Environmental Health by Influencing Policy: Advocacy Techniques & Approaches	Translating the Science to Policy for a Healthy Built Environment		XHIBITION GR
Pathogens & Outbreaks Mont Royal 1	Issues and Investigation of Challenges: a Foodborne Investigation of Illness Acodoorne Outbreak in Illness	Who's Missing From The Table? Building Partnerships with the Medical Community in Foodborne Illness Surveillance	Don't Gamble with Norovirus: Prevention, Control and Containment of a Norovirus Outbreak in a Casino	Restroom Infection Control: Chlorhexidine, the Final Frontier				AWARDS CERE	AND OPENING
Environmental Justice Belmont 4					LUNCH	101 Ways to Improve Health Equity: IFEH Policy 10	EH Policy 10	MONY & KEYI	& PARTY & PC
Technology & EH AM Belmont 3 PM Mont Royal 1	Implementation of GIS for research on neural tube defects	Tools and Data for Identifying Areas with a High Potential for Private Well Contamination	Environmental Public Health Tracking: Developing Nationally- Consistent Community Environmental Health Profiles	Using the Lean Program to Improve Efficiency in Environmental Health Services		Help! Everyone Wants My Data: A Look at StreamIltimg Data Collection for Environmental Health Programs	Public Health Mythbusters	NOTE SESSION	OSTER SESSIO
Recreational Waters Belmont 6	How Many Ways Can You Test for Chlorine in Recreational Water? (NEHA/APSP session)	Chlorine Resistant Pathogen Treatment Strategies for Recreational Water (NEHA/APSP session)	Gage-Bidwell Law of Purification: Old Errors Corrected and New Relevance Identified (NEHA/APSP session)	Virginia Graeme Baker Pool and Spa Safety Act		Hot Tub &Spa Inspection Data: The Power to Prevent Illness and Injury	Rethinking Recreational Water Monitoring: Can Predictive Modelling Increase Public Health Outcomes?		N
Children's EH Belmont 8	Lessons Learned About Environmental Health in the World of Child Care	Keeping Children Safe and Healthy Through Comprehensive Child Care Center Regulations	Beating the Odds: Eliminating Lead Exposure for Kids in the Nation's Capital	Results from Association a Community Between Based Relaive Risk Environmental of Birth Defects Intervention and Arsenic					
Leadership/ Management Belmont 8						Transforming Environmental Health Practice for a Changing World	Globalization Implications of and lts the Affordable Impact on the Care Act on Environmental Health the Health		
Food Protection and Defense Belmont 2	8.30 - 9.50 Food Safety Focus Series I: A National Collaborative Effort to Support the FDA National Retail Food Regulatory Program Standards (Panel Discussion)		10:00 - 12:20 Food Safety Focus Series II: Local experien Standards	II: Local experiences with the FDA Retail Program		Beton a Sure Thing: THINK RISK	How to Deliver Effective Food Safety Programs on a Tight Budget		
Onsite Wastewater Belmont 7	Sustainability is the Name of the Game - EPA's Decentralized Wastewater Program Efforts	The Proliferation of Blue-Green Algae: Context, Challenges and Innovative Solutions	Onsite Wastewater Treatment and the Value of Independent Certification	Reatlors and Environmental Health, Partners in a Successful Mandatory Point of Sale Program		Transfer of Property Requirements: Training, Certification, and Politics	aining, Certification, and Politics		

TUESDAY • SESSIONS



Tuesday Sessions

Children's EH

8:30 AM-9:20 AM

Belmont 8

Lecture

Lessons Learned About Environmental Health in the World of Child Care

Though millions of US children spend hours every day in child care, environmental health is rarely on the radar screen of those who care for children in these settings. Build your capacity for, and understanding of, working with the unique world of child care and early learning environments. This session will bring you up to speed on initiatives to gather baseline data on contaminants in child care settings and provide you with free resources that support improving children's environmental health in these settings.

Carol Stroebel, Director of Training and Policy, Children's Environmental Health Network, United States

9:30 AM-10:20 AM

Lecture

Lecture

Mini Lecture

Keeping Children Safe and Healthy Through Comprehensive Child Care Center Regulations

Belmont 8

Are your children protected against secondhand smoke, scalding hot water, and shigellosis outbreaks in the child care center where they spend a great deal of time? Are they assured of receiving healthy meals and regular outdoor exercise in a safe playground? Learn in this session how one county developed environmental health regulations to ensure protections against these and other environmental hazards and how you can do the same in your jurisdiction.

Craig M. Corwin, REHS/RS, Environmental Health Program Supervisor, Jefferson County Department of Health, United States

10:30 AM-11:20 AM

Belmont 8

Beating the Odds: Eliminating Lead Exposure for Kids in the Nation's Capital

The local government in Washington, D.C. has succeeded in dramatically reducing the incidence of blood lead levels of 5 micrograms per deciliter or greater, year after year, for 4 years in a row. Could the policies, partnerships, and program approaches described in this presentation reveal the secret to eliminating childhood lead poisoning altogether? Come prepared to share your own success stories as well as your frustrations, learn from the experience of others, and increase your own odds of local success.

Pierre Erville, MS, JD, Associate Director for Lead-Safe and Healthy Housing, District Department of the Environment, United States

11:30 AM-11:50 AM

Belmont 8

Results from a Community Based Environmental Intervention Asthma Project in Rural North Carolina

Session Sponsor: Mars Air Systems

Environmental "triggers" in the home can have significant adverse impacts on children with asthma. This presentation demonstrates how a local hospital and a university teamed up to provide home-based environmental interventions to families that have children with asthma living in rural, eastern North Carolina. The results demonstrated will provide insight into ways that may help children with asthma in your community.

Gregory Kearney, DrPH, MPH, RS, Assistant Professor, East Carolina University, United States

* Indicates that session will be recorded for the Virtual AEC.

12:00 PM-12:20 PM Belmont 8 Mini Lecture

Association Between Relative Risk of Birth Defects and Arsenic Concentrations in Soils of China

Incidence of birth defects has been proven to be associated with heavy metal pollution in several countries. This study aimed to test that association in China by characterizing chemical components of soil in a region that has a high prevalence of birth defects and comparing it against the incidence of birth defects. Attend this session to see if there is an association between the two.

Xiaoying Zheng, PhD, Director, Institute of Population Reserach, Peking Univ., People's Republic of China

Emergency Preparedness & Response

8:30 AM-9:20 AM	Mont-Royal 2*	Lecture

Environmental Health and Disaster Management—An International Effort for Training and Awareness

Globally, environmental health professionals have a critical role in mitigating public health risks before and after disasters. To build this capacity, the International Federation of Environmental Health, CDC and NEHA have collaborated to develop the course, "Environmental Health and Disaster Management," heavily guided by CDC's successful Environmental Health Training in Emergency Response course. Attend this session to see how this type of course promotes the profession and ensures that professionals are adequately equipped to prepare, respond, recover and mitigate the adverse impacts of disasters internationally.

Tim Hatch, MPA, REHS/RS, Planning and Logistics Director, Alabama Department of Public Health, Center for Emergency Preparedness, United States | Ben Ryan, Director of Disaster Risk Reduction for the Asia-Pacific Region, International Federation of Environmental Health, Australia

9:30 AM-10:20 AM

Mont-Royal 2*

Learning Lab

Disaster Management Challenges from Non-communicable Diseases: Lessons Learned & Questions Going Forward

Due to population aging and an increase in longevity, there has been a disease transition to non-communicable diseases (NCDs), which are the challenge for the 21st Century. This is a new concept for environmental health and disaster management to explore, as the focus has traditionally been on communicable diseases in the disaster setting. Today, damages to public health infrastructure such as food, water, and sanitation, place the vulnerable population with NCDs at great risk. Attend this group exercise to discuss and debate possible approaches to and roles environmental health professionals play in mitigating the risks of disaster.

Benjamin Ryan, MPH, PhD Candidate, James Cook University, Australia

10:30 AM – 11:20 AM Mont-Royal 2*

Lecture

Enhancing Planning and Preparedness: Demonstration of an E-Learning Tool for Public Health Management of Chemical Incidents

Chemical incidents involving major chemical facilities and transport of toxic industrial chemicals are surprisingly common and may result in widespread environmental contamination, public exposure, and subsequent acute and chronic health effects. This session will include an interactive demonstration of the applicability of an e-learning tool to actual events by means of working through a major chemical incident. Discover how employing this resource can help you respond more effectively to chemical incidents, thereby protecting public health.

David Russell, MD, Director of WHO Collaborating Centre, Public Health England at Cardiff Metropolitan University, United Kingdom 11:30 AM-12:20 PM Mont-Royal 2*

Lecture

Hurricane Sandy: A Complex Environmental Health Communications Challenge

During widespread power and internet outages, disaster responders cannot always assume that their sophisticated communications gearradios, pagers, cellphones and computers-will work. Alternate plans need to be ready for deployment to assure continuity and efficiency of the public health response. In this presentation, follow the Somerset County experience during Hurricane Sandy to identify gaps and develop solutions to bridge them in your preparedness plans.

Michele Samarya-Timm, MA, HO, MCHES, REHS/RS, DAAS, Health Educator / REHS, Somerset County Department of Health, United States

1:30 PM-3:20 PM	Belmont 3	Learning Lab
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To Tweet or Not To Tweet: Leveraging Social Media for Environmental Health

Session Sponsor: Sweeps Software, Inc.

Social media is everywhere, but users are increasingly selective about which media they use, who they follow, and what messages they share. In this atmosphere, how does a local environmental health professional decide whether, where, and how to connect? In this learning lab, CDC will lead hands-on exercises in message design that have you practice the evidence-based tips, tricks, and tools that make it easier for resource-lean public health departments to engage their audiences. Come away with tested messages for a variety of platforms and resources for designing a social media outreach plan.

Jana L. Telfer, Associate Director for Communication Science, CDC, NCEH/ATDSR, United States

Environmental Justice

1:30 PM-3:20 PM

Lecture

101 Ways to Improve Health Equity

The International Federation of Environmental Health (IFEH) works to disseminate knowledge concerning environmental health and promote cooperation between countries where environmental health issues are transboundary. In 2012, IFEH adopted Policy 10, based on the 2008 WHO report "Closing the Gap in a Generation" which aims to improve health equity through action on the social determinants of health. The session will showcase how colleagues around the world are making a difference! What problem are they addressing? What actions have been taken? What outcomes are being delivered? And how can YOU make a difference where YOU are?

Belmont 4

Janet Russell, CFCIEH, OBE, Presiden, Chartered Institute of Environmental Health, United Kingdom | Peter Davey, PhD, President, IFEH, Australia | Henning Hansen, President Elect (2014), IFEH/ EnviNa Denmark, Denmark | Jerry Chaka, Past President, IFEH, South Africa | Peter Archer, CFCIEH, President Elect (2016), IFEH, United Kingdom | Robert W. Bradbury, MBA, CPHI(C), Immediate Past President, IFEH, Canada | Sylvanus Thompson, MS, PhD, CPHI(C), Associate Director, Toronto Public Health, Canada | Welford C. Roberts, PhD, DAAS, RS/REHS, Past President NEHA, Subject Matter Expert, Force Health Protection and Human Performance, Medical Research and Innovations, Air Force Medical Support Agency, United States

Food Protection and Defense

8:30 AM-9:50 AM

Belmont 2

Learning Lab

Food Safety Focus Series I: A National Collaborative Effort to Support the FDA National Retail Food Regulatory Program Standards

Session Sponsor: Prometric and Skillsoft

Many stakeholder organizations including NEHA, NACCHO, AFDO, and IFPTI, are teaming up with FDA to provide resource and technical expertise to state/local/tribal jurisdictions enrolled in the FDA National Retail Food Regulatory Program Standards. Learn from panel members representing these associations and FDA about the program support services that are available, and how your agency can take advantage of this collaborative effort to enhance the effectiveness of the nation's retail food protection system. John Marcello, REHS/RS CP-FS, Pacific Region Retail Food Specialist, U.S. Food and

(NACCHO), United States | Stephen Hughes, MS, REHS, Retail Food and Cooperative Programs Coordination Staff, U.S. Food and Drug AdministrationCenter for Food Safety and Applied Nutrition / Retail Food Protection Team, United States | Gerald Wojtala, Executive Director, International Food Protection Training Institute, United States

10:00 AM-12:20 PM Belmont 2 Learning Lab

Food Safety Focus Series II: Local Experiences with the FDA Retail Food **Program Standards**

Session Sponsor: Prometric and Skillsoft

Information sharing and connectivity between regulatory retail food protection programs is an essential element for establishing an integrated food safety system. Learn from the experiences of agencies that have participated in the NACCHO Retail Food Program Standards mentormentee project. Gain an understanding through interactive group exercises on how to use the standards process to promote continuous improvement within your agency and achieve substantive public health outcomes.

Jennifer Li, Director, Environmental Health, Health and Disability, National Association of County and City Health Officials (NACCHO), United States | Stephen Hughes, MS, REHS, Consumer Safety Officer, FDA/CFSAN/Office of Food Safety, United States Pieter Sheehan, Director, Division of Environmental Health, Fairfax County Health Department, United States | Carrie Dickhans, Food and Environmental Program Manager, St. Louis County Department of Health, United States | Cady Hutchinson, Public Health Sanitarian, Lake County General Health District, United States | Kari Wagner, REHS, Environmental Health Specialist III, Sacramento County Environmental Management Department, United States | Paul Stromp, RS/REHS, Environmental Health Specialist, Lake County General Health District, United States | Debbie C. Watts, MPH, REHS/RS, Manager, Food Protection Services, Tulsa Health Department, United States | Anne Lowry, REHS, Environmental Health Director, Chatham County Public Health Department, United States

1:30 PM-2:20 PM	Belmont 2	Lecture
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Bet on a Sure Thing: THINK RISK

Session Sponsor: Glo Germ

The Southern Nevada Health District wants the odds to be in favor of food safety. In 2013, they modified their food establishment inspection process to increase the focus on controlling the five foodborne illness (FBI) risk factors. The food inspection report form and scoring system were aligned with those risk factors and an educational campaign was undertaken. This session will share available data on the program's success to date and provide you with best practices and lessons learned to determine if your agency should adopt a similar approach.

Rose Henderson, RN, REHS, Environmental Health Manager, Southern Nevada Health District. United States

2:30 PM-3:20 PM Belmont 2 Lecture

How to Deliver Effective Food Safety Programs on a Tight Budget Session Sponsor: Glo Germ

Due to the worldwide economic downturn and its effect on government spending, existing UK delivery models for food hygiene inspections are now in need of review. This session will quantifiably describe the economic and programmatic challenges agencies are facing, using Wales as the example. We'll examine the traditional food hygiene inspection program model and then evaluate contemporary adaptive approaches that are more innovative, imaginative and targeted. Would these techniques help your agency provide a quality service while protecting public health?

Andrew Curnin, MPH, Programme Director, Senior Lecturer, Cardiff Metropolitan University, United Kingdom

General EH Drop in Learning Labs

9:30 AM-12:30 PM

Belmont 1 Learning Lab [Drop in]

Blown Away: The Truth About Air Curtains

Come take the quiz! What is the top producer of carbon dioxide emissions in the U.S.? What kinds of pathogens can grow on plastic curtains? What does a fire extinguisher have to with it? This lab will connect the dots and illustrate how air curtains can use ambient air to save energy, reduce pathogens and pests in a facility, and improve sanitation at the same time. Armed with facts, share your opinion on whether or when health districts should require air curtains.

Tiffany Calig, National Sales Manager, Foodservice Division, Mars Air Systems 9:30

g Lab [Drop in] | 2:30 PM-3:20 PM

Belmont 1

Dirty Hands for Cleaner Water: Techniques for Testing Sand to Create a Balanced Environment

An efficient onsite wastewater system maintains a delicate balance between the amount of oxygen entering the system with the amount of oxygen needed to decompose the organic matter and meet the demand for other reactions. In this lab, get your hands dirty! Identify materials and techniques that could maintain oxygen levels that could allow soil to accept wastewater at rates of two to three orders of magnitude higher than the current design loading. *Lee Rashkin, Director of Sales & Marketing, Presby Environmental, Inc.*

9:30 AM-12:30 PM Belmont 1 Learning Lab [Drop in]

Inside Out: The Wall Between Food Safety and Onsite Treatment

Restaurant waste streams are laden with food debris, FOG (fats, oils, and grease), and sanitizers. When onsite treatment system problems arise, we end up following our nose outside to the odor, an indicator of poor system performance or issues. See how dual range QAC test strip and practices inside, and special treatment media and system design modifications outside, can tear down the figurative wall between the food safety and onsite sewage programs. *Colin Bishop, REHS, RS, Director Environmental North America, Anua*

9:30 AM-12:30 PM Belmont 1 Learning Lab [Drop in]

Milking It: Food Fraud Detection Lab

Food fraud is the substitution, addition, or misrepresentation of food, food ingredients, or food packaging for economic gain. There are few products more often reported for fraud than milk products. While FSMA mandates that food manufacturers ensure the safety of their food ingredients, you and your organization may be required to respond to incidents of fraud. The DairyGuard milk powder analyzer is just one technology fighting food fraud, protecting consumers and brands alike. Put it to the test in a live demonstration. *Brian Smith, PhD, Senior Infrared Product Specialist, PerkinElmer Inc.* | *Michele Romero, Senior Sales Specialist, PerkinElmer Inc.*

9:30 AM-12:30 PM Belmont 1 Learning Lab [Drop in]

Restaurant Inspections: Do You SEE What You See?

It's easy to remember the discovery of a pest infestation. But do we sometimes miss what's right in front of us? Think like a pest to identify possible entry points, harborage conditions, and breeding sites that lead to insect or rodent problems. This lab will test your ability to detect evidence of pests in a food facility from the back door delivery, through preparation, service, and cleanup, all the way to the dumpster. See how you can prevent foodborne illness by approaching your restaurant inspection from the perspective of a fly on the wall.

Zane Hall, RS, Quality Systems Manager, Orkin

<u>9:30 AM-12:30 PM</u>

Belmont 1 Learning Lab [Drop in]

Visualize Gaps and Build Capacity

How do you maintain flexibility, stay on course, and gauge your effectiveness? Get your hands on tools that measure and monitor regulatory programs, costs, fees, staffing, training, and trends. In this lab, you're invited to dive into data visualization widgets that can monitor and optimize critical EH program activities such as: effective inspector routing (a green initiative), risk monitoring, public disclosure, elements of the FDA Voluntary Program Standards, budget monitoring, staffing levels, public/private data sharing, and more. *Darryl Booth, MBA, President, Decade Software Company, LLC., United States*

Indoor Air Quality

<u>1:30 PM-2:20 PM</u>

Belmont 1

Lecture

School Indoor Air Quality Improvement: Lessons from Multhomah County, Oregon

Through an EPA grant, Multnomah County Environmental Health worked with 20 schools in three districts to develop a sustainable Indoor Air Quality campaign (IAQ). The objectives were to create local advocates for effective IAQ management, strengthen health care professionals' use of environmental asthma management practices, and improve the health of school staff and students through IAQ management plans. This session will demonstrate recommended practices for IAQ inspections and share lessons learned. *Jeff Strang, REHS/RS, HHS, Environmental Health Specialist, Multnomah County, Oregon, United States*

How Contractors and Homeowners Can Improve Indoor Air Quality Before a House is Built Radon is a cancer-causing radioactive gas that you can't according to the second sec

Radon is a cancer-causing radioactive gas that you can't see, smell, or taste. There are mitigation strategies such as sealing cracks and openings to prevent the entry of radon gas into existing structures. Though radon can actually be "built out" of new construction for a fraction of the cost of mitigation, preventive measures are often not considered. This session explains the theory behind building radon out and shares special considerations for those working with builders, designers and architects on new construction. *Art Nash, Jr., Energy Specialist, Cooperative Extension Service, University of Alaska Fairbanks, United States*

International EH: IFEH Special Sessions

8:30 AM-8:50 AM	Belmont 4	Mini Lecture

The Climate Change Challenge... Engaging the Environmental Health Practitioner This session will be precented by the winner of the Day Emergen Award

This session will be presented by the winner of the Roy Emerson Award essay competition. It will review the literature and present an argument for environmental health practitioners (EHP) and their organizations to fully engage at the global and local community level in the "The Climate Change Challenge." The analysis will identify and discuss relevant global policies and highlight the appropriate local environmental health policy, solutions, actions, partners and community engagement necessary to reduce the impacts of climate change. *Roy Emerson Award Winner*

9:00 AM-9:20 AM	Belmont 4	Mini Lecture

Environmental Health from Academia to Professional Life

In Portugal, the creation of the degree in Environmental Health emerged from the need for more qualified professionals to face the challenges of 1) identification, characterization and reduction of risk factors for health originating in the environment 2) participation in environmental health and health education sessions in specific community groups, and 3) development of measures for monitoring and health surveillance of systems, structures and activities with interaction with the environment. See how the experience in Portugal could be applied elsewhere.

Susana Paixao, MS, REHS/RS, CEHT, Professor, ESTeSC-Coimbra Health School, Portugal | Nelson Leite e Sa, Professor, ESTeSC-Coimbra Health School, Portugal

9:30 AM – 10:20 AM _____ Belmont 4 _____ Lecture

The 2013-14 NEHA Sabbatical Exchange Program : Undergraduate Environmental Health Education in Canada and the U.S.

Have you ever thought about applying for the NEHA Sabbatical Exchange Award? Ever wondered about what you might gain from an international experience? Come explore the answers to these questions from this twotime winner of the award, as he explores the undergraduate educational system for public health inspectors in Canada and searches for best practices to apply to a new environmental health sciences program at Kent State University in Kent, OH.

Charles Hart, PhD, CIH, CSP, RS, DAAS, Associate Professor, Kent State University, United States

10:30 AM-12:20 PM Belmont 4 Lecture

Case Studies in Successful International Collaboration

Environmental health without borders! Environmental health leaders from around the globe will be sharing their experiences in creating successful multi-national environmental health programs. Topics to include award winning food safety initiatives, emergency preparedness training, and occupational health instruction. Come away from this session with best practices that get you thinking globally and acting locally!

Mel Knight, REHS/RS, Chair, Americas Regional Group, International Federation of Environmental Health, United States | Alicia Enriquez-Collins, REHS, President, NEHA, United States | Peter Davey, PhD, President, IFEH, Australia | Gary Brown, DrPH, CIH, RS, DAAS, Eastern Kentucky University, United States | Sylvanus Thompson, MS, PhD, CPHI(C), Regional Secretary, IFEH, Canada | Carolyn Harvey, PhD, CIH, RS, DAAS, CHMM, Professor, Director of MPH Program, Department of Environmental Health, Eastern Kentucky University, United States | Henroy Scarlett, Lecturer, University of the West Indies, Jamaica | Tim Hatch, MPA, REHS/RS, Planning and Logistics Director, Alabama Department of Public Health, Center for Emergency Preparedness, United States | Ben Ryan, Director of Disaster Risk Reduction for the Asia-Pacific Region, IFEH, Australia | Martin A. Kalis, Public Health Advisor, CDC/NCEH/DEEHS/EHSB, United States

1:30 PM-2:20 PM

Mont-Royal 2*

Lecture

Collaboration, Cooperation, and Development in Environmental Health

This session will examine the efficacy of cooperation and collaboration in environmental and public health projects. Specific examples involving cross border collaboration and cooperation between professionals from widely differing backgrounds and cultures will be explored. These lessons learned, successes, and failures will help you plan new projects and deliver existing projects more effectively.

Stewart Petrie, Head of Environmental Health, States of Jersey, Jersey | Dennis, Mazali, Senior Lecturer and Environmental Health Consultant, Muhimbili University of Health and Allied Sciences, Tanzania

2:30) PM-	3:20 P	Μ		Mont-Royal 2*	Lecture
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Session Sponsor: Decade Software

Intelligent Service Delivery through a Web Based Environmental Health Knowledge System

How can funding cuts improve environmental health service delivery? Through innovations like the online Regulatory Information and Management System (RIAMS) being used in the UK and Australia, which has delivered big productivity gains and improved service outcomes across international borders. This success has led to more creative approaches for delivering environmental health through public health data, using apps for channel shifting service demand, and encouraging selfservice to enable providers to do more with less and enable professionals to focus on the priorities of the day. See how these approaches could work in your program.

Robert Halford, CEHP, Managing Director, RH Environmental Limited, United Kingdom | Sean La Fontaine, Business Development Manager, Kernow Environmental Services Pty Ltd, Australia

Land Use Planning: Science to Policy

8:30 AM-8:50 AM

Mini Lecture

Keys to Facilitating Healthy Cities Partnership in Indonesia: A Case Study

Research completed in Makassar City, South Sulawesi, identified key success factors in implementing the Healthy City Plan which utilized the WHO Healthy Cities Model (HCM), with special focus on improving local partnerships and increasing inter-sectoral action across all agencies. The findings come from of a comprehensive review of government documents, 24 in-depth interviews with key informants, and community focus group discussions. The lessons learned may be valuable in forming the partnership arrangements for the new Indonesian National Government's Master Regional Strategic Plan.

Belmont 5

Sukri Palutturi, MPH, PhD, Lecturer, School of Public Health Hasanuddin University, Indonesia | Peter Davey, PhD, Senior Lecturer, Griffith University, Australia

9:00 AM-9:20 AM

Belmont 5

Mini Lecture Annoyance and Perception of Noise in Rural and Urban Areas of France

Traffic, urban, and occupational noises are now described as major environmental problems, which can greatly interfere with health. This session will discuss the results of a survey conducted to identify the perception of noise pollution in occupational and domestic environments. Attend this presentation to identify possible interventions and recommendations that may alleviate health risks from noise pollution. Marie-Pierre Sauvant-Rochat, PhD, DrPH, Professor, University of Auvergne - Faculty of Pharmacy, France

9:30 AM-9:50 AM

Mini Lecture

Air Quality Assessments Using Satellite Derived High Resolution Aerosol **Optical Depth (AOD) Retrievals**

Belmont 5

Analysis of human exposure to atmospheric pollution requires knowledge of spatial distribution of particulate matter (PM) in urban areas at scales of 1-100 meters. To date, spatial-temporal patterns of PM within urban areas have been examined using localized models or coarse satellite images, resulting in inability to predict exposure. This study applied existing

technologies in a novel way to create a model with higher resolution and less spatial variability. It more accurately captured the pollution levels along highways and urban locations in the Boston area, and can thereby improve the ability to examine human exposures in areas with high traffic. Alexandra Chudnovsky, PhD, Assistant Professor/Senior, Lecturer, Tel-Aviv University, Israel

10:00 AM-10:20 AM Belmont 5 Mini Lecture

Levels of Heavy Metals in Traffic-Related Particulate Matter Along a Major Motorway in Nigeria

Traffic-related particulate matter contributes extensively to ambient air pollution especially in urban centers. Hence, populations found along major urban motorways are at higher risk of various health effects. This study aimed to describe the heavy metal profile of ambient urban particulate matter in the study area. Having this insight to the relationship between the particulate matter load and the heavy metal speciation in the air could provide a means to reducing the pollution and associated health problems.

Godson Ana, PhD, MPH, Lecturer, University of Ibadan, Nigeria

10

Developing Policy to Address Near Roadway Pollution Health Hazards

Research has shown that air pollutants are elevated next to major traffic sources and that proximity to major roadways and highways is associated with risk of negative health outcomes. While federal regulations exist for fine particulate matter, policy to address near roadway air pollution is very limited. Using data and ideas emerging from a Boston area project funded by the Kresge Foundation, this session will highlight opportunities for environmental health professionals to play a role in developing more widely implemented and effective policy in the future.

Doug Brugge, MS, PhD, Professor, Tufts University School of Medicine, United States

11:30 AM-12:20 PM	Belmont 5	Lecture

Outside-the-Box Advocacy: Organizing Public Health's Engagement in Built Environment Advocacy

The buzz phrase "Health in All Policies" has almost become ubiquitous, especially in public health's efforts to come to the land use planning and infrastructure design discussion. Tulsa Health Department will share their project's success using community engagement and collaborative relationships. They'll provide you with some innovative techniques to use when resources are limited to educate and advocate for health with decision makers, the public, and your own agency.

Joani Dotson, MPH, Policy and Health Analytics Coordinator, Health Data & Evaluation Division, Tulsa Health Department, United States

1:30 PM-2:20 PM	Belmont 5	Lecture

Protecting and Improving Environmental Health by Influencing Policy: Advocacy Techniques & Approaches

Environmental health practice is affected by a wide range of policies at local, national and international levels, and the process of policy-making is fast-paced and complex. This session will use a case study approach to influencing policy using analysis of the chief drivers and key actors in the policy process. Attendees will come away with effective interventions that influence policies for the promotion of environmental health.

Alastair Tomlinson, MPH, Senior Lecturer in Environmental & Public Health, Cardiff Metropolitan University, United Kingdom | Gayle Davis, MPH, Lecturer in Environmental Health, Cardiff Metropolitan University, United Kingdom

2:30 PM-3:20 PM Belmont 5

Lecture

Translating the Science to Policy for a Healthy Built Environment

Environmental conditions and events outside of structures affect the health of people living inside of those structures. Utilizing the best, current epidemiology and exposure data, EH professionals have been developing policies and interventions targeting reductions in these exposures. Building upon the morning sessions, this panel will demonstrate how

researchers, EH practitioners, and policy leaders are improving the health of the public. There will be an open forum for discussing and solving the challenges and obstacles you face, giving you new strategies to apply in your coverage area.

Felix I. Zemel, MCP, MPH, RS, DAAS, Health Agent/Administrator, Cohasset Board of Health, United States | Doug Brugge, MS, PhD, Professor, Tufts University School of Medicine | Joani Dotson, MPH, Policy and Health Analytics Coordinator, Health Data & Evaluation Division, Tulsa Health Department | Alastitics Tomlinson, MPH, Senior Lecturer in Environmental & Public Health, Cardiff Metropolitan University, United Kingdom | Michelle Miller, Programs Division Director, Office of Lead Hazard Control and Healthy Homes, U.S. Department of Housing and Urban Development

Leadership/Management

1:30 PM-2:20 PM	Belmont 8	Lecture
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Transforming Environmental Health Practice for a Changing World

Environmental health interventions have produced revolutionary breakthroughs in longevity and quality of life in the last 200 years, but the public health threats and societal stressors faced by the human race have changed. This session will cover NEHA's newly adopted definitions of "environmental health" and "environmental health professional" and will make a case for recalibrating traditional EH programs to address challenges like obesity, climate change, sustainability, healthy built environments, and risks associated with low-dose/chronic contamination of water, land and air. Come away with a road map of the skills and mindset necessary for the future of the profession.

Justin Malan, MA, Executive Director, California Conference of Directors of EH, United States | Angelo J. Bellomo, REHS, QEP, Director of Environmental Health, County of Los Angeles Department of Public Health, United States | John Steward , MPH, REHS/RS, Program Manager/Academic Professional, Georgia State University School of Public Health

2:30 PM-2:50 PM

Belmont 8 Mini Lecture

Globalization and its Impact on the Environmental Health Profession

The future is not plastics, it's globalization. Practitioners coming into the EH field can expect to perform some work for a foreign national or in a foreign land. This session will give attendees a knowledge of the agreements that permit globalization, the developing world's hunger for first world sanitation, and the need to develop environmental health standards that will protect the people of every nation on the planet. *Doug Farquhar, JD, Program Director Environmental Health, National Conference of State Legislatures, United States*

3:00 PM-3:20 PM

Belmont 8

Implications of the Affordable Care Act on Environmental Health

The Affordable Care Act (ACA) has triggered a massive change in the provision of health care and the public health landscape. Through the introduction of newly recognized classes of workers and mechanisms to be reimbursed for preventive services, the practice and perception of environmental health is likely to see profound change as well. Attend this session to determine why and how EH professionals and organizations can become protectors of community health and leverage new funding to survive and thrive.

David Dyjack, DrPH, CIH, Associate Executive Director, National Association of County and City Health Officials, United States

Onsite Wastewater

8:30 AM-9:20 AM

Lecture

Mini Lecture

1:3

Session Sponsor: Anua

Sustainability is the Name of the Game—EPA's Decentralized Wastewater Program Efforts

There are small and rural underserved communities across the U.S. in need of first-time and adequate access to water and wastewater infrastructure. Through joint efforts with many government agencies, EPA has developed programs and tools such as workshops in a box to assist these communities in creating sustainable solutions that will meet their

Belmont 7

current and future needs. Attend this session to gain knowledge and resources to implement programs in your community even on a shrinking budget.

Maureen Tooke, Environmental Protection Specialist, US EPA, United States

9:30 AM-10:20 AM	Belmont 7	Lecture

The Proliferation of Blue-Green Algae: Context, Challenges, and Innovative Solutions

Treated effluent from wastewater treatment systems with high levels of phosphorus contributes directly to the eutrophication of waterways and blue-green algal blooms, which can be toxic to animal and human life. This session will share data from a year-long study of an approach to phosphorus reduction using the electrocoagulation principle in combination with a secondary treatment system. Come see how to reduce phosphorous levels in domestic wastewater without chemicals and while maintaining treatment standards.

Marie-Christine Belanger, MS, Product Director, Premier Tech Aqua, Canada

10:30 AM-11:20 AM	Belmont 7	Lecture

Onsite Wastewater Treatment and the Value of Independent Certification

Meeting the discharge limit requirements is very important, but it may not be the only or best rationale for acceptance of a wastewater treatment device. This session will discuss device certification by an accredited independent organization to a recognized American National Standard, including potential benefits, the process, and scope. Come away with an understanding of how third party certification can provide the data needed to site a wastewater system before it becomes a fixed liability. *Ron Grimes, MPH, REHS/RS, DAAS, Manager Environmental Health Programs, Part Idems Affrika Method*

Regulatory Affairs, NSF International, United States

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Session Sponsor: Presby Environmental

Realtors and Environmental Health: Partners in a Successful Mandatory Point of Sale Program

The Ottawa County Department of Public Health has a mandatory time of sale program in place, requiring inspection of all homes served by onsite water and/or sewage systems at the time of sale. This presentation will highlight the creation of a successful time of sale program, including stakeholder involvement, collaboration with realtors and other regulated parties, and implementation. Attend this session to see if a program like this would create healthy outcomes in your area.

Adeline Hambley, REHS/RS, Environmental Health Manager, Ottawa County, United States | Dale Zahn, Chief Executive Officer, West Michigan Lakeshore Association of Realtors, United States

0 PM-3:20 PM	Belmont 7	Learning Lab

Transfer of Property Requirements: Training, Certification, and Politics

Ensuring new homeowners know what they are getting with a decentralized system makes sense - right? If new homeowners know the type of wastewater system they are inheriting, plus how to take care of it, there is less of a chance of the system not being kept up. Then why is it so hard to get property transfer requirements in place? This roundtable will investigate the sometimes perilous journey of designing and implementing property transfer regulations, ensuring a trained, competent workforce of inspectors and navigating the politics around real estate requirements. We will start with two real-world examples and then open it up for discussion. Anyone who is interested is encouraged to speak up and participate!

Joelle Wirth, REHS/RS, Program Manager III, Environmental Quality Program, Coconino County Public Health Service District/Community Development, United States | Daniel A. Olson, REHS/RS, Onsite Wastewater Program Manager, Iowa Dept. of Natural Resources, United States

Pathogens and Outbreaks

8:30 AM-8:50 AM

Mini Lecture

Issues and Challenges: Investigation of Foodborne Illness Outbreak in Jamaica

Mont-Royal 1*

This session will review an outbreak investigation conducted in a mega hotel in Jamaica. Along the way, we'll discover gaps in the investigation process, describe challenges in disease surveillance, and determine the barriers to effective outbreak prevention and control. See how the existing regulations stack up against changing trends in the tourism sector and possible remedies for the shortcomings. Use this case study to identify the emerging challenges and possible solutions in your outbreak investigation process before they happen.

Taraleen Malcolm, PhD, MPH, CP-FS, Technical Advisor, Pan American Health Organization, Jamaica

9:00 AM-9:20 AM Mont-Royal 1* Mini Lecture

Investigation of Foodborne Illness Outbreak in Toronto, Canada

In August 2013, the organizers of a large public event received a number of complaints of gastrointestinal symptoms that were related to the consumption of a new popular food product served by one of their vendors. Challenges and lessons learned related to logistics, the development of the case definition, the environmental inspection, the multi-jurisdictional nature of the outbreak, and communications will be described. Take away tips for your next outbreak response.

Sylvanus Thompson, MS, PhD, CPHI(C), Associate Director, Toronto Public Health, Canada

9:30 AM-10:20 AM	Mont-Royal 1*	Lecture
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Session Sponsor: Neogen Corporation

Who's Missing From The Table? Building Partnerships with the Medical Community in Foodborne Illness Surveillance

Detecting increases in self-reported foodborne illnesses and low report rates by medical providers, Kern County Environmental Health implemented an innovative approach to enhance collaboration between Environmental Health, public health, and the medical community. The execution of the Foodborne Illness Surveillance Guidance Training for Medical Professionals became a successful method in communicating with the medical community and improving foodborne illness surveillance. This presentation will provide an overview of the workshop design, challenges, results, and next steps that you may apply within your community.

Diana Wilson, REHS/RS, Food Program Supervisor, Kern County Environmental Health, United States | Kimberly Hernandez, MPH, Public Health Epidemiologist, Kern County Public Health Services Department, United States

10:30 AM – 11:20 AM Mont-Royal 1* Lecture

Don't Gamble with Norovirus: Prevention, Control and Containment of a Norovirus Outbreak in a Casino

Norovirus is the most common cause of acute gastroenteritis and the most common cause of food-borne illness in the United States affecting 19-21 million people and costing over \$2 billion in healthcare costs every year. Using an outbreak that occurred at a Midwestern casino, this presentation will discuss the epidemiology of norovirus, prevention and control measures, laboratory testing considerations, and sampling techniques. The ability to apply this information could help prevent the spread of Norovirus in your jurisdiction, or, worldwide if an outbreak occurred in a tourist destination like Las Vegas.

Eric Bradley, MPH, REHS/RS, CP-FS, DAAS, Environmental Health Specialist, Scott County Health Department, United States | Kristen Obbink, DVM, MPH, RRT Coordinator/Foodborne Illness Epidemiologist, Iowa Department of Public Health, United States

11:30 AM-12:20 PM Mont-Royal*

Restroom Infection Control: Chlorhexidine, the Final Frontier

Pioneering, award-winning work at the Queen Elizabeth Hospital, UK has demonstrated the remarkable residual antimicrobial activity

of chlorhexidine on surfaces, thereby maintaining their continuous cleanliness over time. In this school-setting trial, we demonstrate significant improvements in continuous cleanliness of restroom door handles. Come discuss the possible benefits of applying this simple, inexpensive technique beyond clinical and office environments.

Peter Young, MD, Director, Critical Care, Queen Elizabeth Hospital, United Kingdom | Holly Young, Research Study Lead, Queen Elizabeth Hospital, United Kingdom

Recreational Waters

8:30 AM – 9:20 AM Belmont 6 Lecture

How Many Ways Can You Test for Chlorine in Recreational Water? (NEHA/APSP session)

Discover the many currently available testing methods for the determination of chlorine concentration in recreational waters. This session will demonstrate and explain not only the methods but will also address the common chlorine testing interferences you might encounter in the field. Evaluate the attributes, advantages, and disadvantages of each method and come away with the ability to choose the best testing method for your application.

Jody O'Grady, Vice President of Sales Operations and Support, Taylor Technologies, Inc., United States

9:30 AM-10:20 AM	Belmont 6	Lecture
Session Sponsor: Industrial Test Systems, Inc.		

Chlorine Resistant Pathogen Treatment Strategies for Recreational Water (NEHA/APSP session)

Because chlorine resistant pathogens, such as *Cryptosporidium*, can survive for extended periods of time in even well-maintained swimming pools, multi-pronged approaches are useful in prevention of disease transmission from these pathogens. This session will cover the efficacy and practical application of various approaches including UV, ozone, filtration, enhanced filtration, and traditional sanitizers such as chlorine. *Ellen Meyer, PhD, Technology Manager, Lonza, United States*

10:30 AM-11:20 AM Belmont 6

Lecture

Gage-Bidwell Law of Purification: Old Errors Corrected and New Relevance Identified (NEHA/APSP session)

Sanitarians and pool operators increasingly look to enhanced filtration and secondary disinfectants (UV or ozone) to limit the spread of cryptosporidiosis. The effective use of these tools may be at odds with the use of multi-speed circulation pumps to conserve energy. This session will explain and demonstrate the principles underlying the Gage-Bidwell law of purification by consecutive dilution to help you answer the question: how much turnover of pool water through the filtration/supplemental sanitizer system is enough?

Stanley Pickens, PhD, Senior Research Associate, Axiall Corporation, United States

11:30 AM-12:20 PM Belmont 6 Lecture Virginia Graeme Baker Pool and Spa Safety Act Implementation and

Virginia Graeme Baker Pool and Spa Safety Act Implementation and Findings in King County

The Pool and Spa Safety Act (P&SSA) was enacted to prevent suction entrapment by requiring additional safety measures for suction drains. It sounds simple enough but how well is it being implemented? In Seattle and King County, a review of approximately 1000 pre-operational pool inspections revealed that revised plans and return inspections were required at over a third of them to ensure safety and compliance. Using lessons learned from this agency's compliance program, you will be able to identify common pool equipment installation errors, assess their significance, and implement solutions that achieve compliance and improve pool patron safety.

Ann Jackson, REHS/RS, Environmental Health Investigator, Public Health Seattle and King County, United States

Lecture

1:30 PM-2:20 PM

Belmont 6

Lecture

Hot Tub & Spa Inspection Data: The Power to Prevent Illness and Injury

Did you know that one in less than seven routine hot tub/spa inspections resulted in immediate closure due to serious violations? One in five inspections identified residual disinfectant violations? Did you know hot tub/spa inspection data can revolutionize prevention of recreational waterassociated illness, pool chemical-associated health events, and drowning? Come find out how state and local inspection data, being collected in a surveillance pilot project, can help inform development of national resources to help state and local environmental health officials optimize their efforts to promote healthy swimming.

Michele Hlavsa, MPH, Epidemiologist/Chief, Healthy Swimming, CDC, United States

2:30 PM-3:20 PM	Belmont 6	Lecture

Rethinking Recreational Water Monitoring: Can Predictive Modelling **Increase Public Health Outcomes?**

Canadian recreational water safety practices are put into an international context by comparing them with the US EPA and WHO guidelines. A review of the use of a geometric mean will identify the limitations of using bacteriology in general, and the geometric mean of E. coli in particular, as the basis of recreational water safety decision-making, and determine the most appropriate, evidence-based values of the geometric mean for recreational water to be considered safe. Use these results to create a comprehensive risk assessment strategy, forecasting models, and risk management approaches to posting recreational water safety.

Andrew Papadopoulos, PhD, MBA, CPHI(C), Associate Professor and Coordinator, Master of Public Health, University of Guelph, Canada

Technology and EH

Session Sponsor: Mitchell Humphrey

8:30 AM-8:50 AM

Belmont 3

Mini Lecture

Implementation of GIS for Research on Neural Tube Defects in China

In China, the incidence rate of birth defects, especially that of neural tube defects (NTDs) is at a very high level. Studies have shown that birth defects are sometimes associated with environmental pollution, but the traditional statistical approach has not identified the pathogenesis of NTDs. This study applied GIS methods to explore the spatial data, to characterize the clustering of NTDs, and to identify relevant environmental factors. Data will be shared with the hope that this approach will aid in the research, intervention and prevention of birth defects.

Haochen Wang, PhD Student, Institute of Population Research, Peking Univ., People's Republic of China

Belmont 3

9:00 AM-9:20 AM

Mini Lecture

Session Sponsor: Mitchell Humphrey

Can Technology Improve Hand Washing Behaviors?

How often should food employees wash their hands? How often ARE they? For regulators and operators alike, knowledge is power. This session will describe technologies that capture hand washing data over time and make it available on site in real time. See how that data can be acted upon by operators and regulators to create behavior change, manage personnel issues, prevent foodborne illness, and kindle a culture of cleanliness. Jim Mann, Executive Director, Handwashing For Life Institute

9:30 AM-10:20 AM

Session Sponsor: Mitchell Humphrey

Tools and Data for Identifying Areas with a High Potential for Private Well Contamination

Belmont 3

In many areas there are concerns about private well water quality, but little data on levels of contaminants such as nitrate, arsenic and uranium. The presenters have compiled extensive groundwater quality data from national, state, and local sources and generated maps spanning the US showing where there is the greatest chance of elevated levels of these contaminants. In this session you will be shown how to access and interpret these maps

and data for application in your jurisdiction.

Jim VanDerslice, MS, PhD, Associate Professor, Div of Public Health, Univ of Utah, United States

10:30 AM-11:20 AM	Belmont 3	Lecture
Session Sponsor: Mitchell Humphrey		

Environmental Public Health Tracking: Developing Nationally-Consistent **Community Environmental Health Profiles**

Communities, local health departments, coalitions, and other stakeholders need community-specific information to evaluate and monitor environmental health issues over time, and to drive policy, intervention, and other public health actions. Discover how the Environmental Public Health Tracking Network infrastructure can be used to combine environmental and health measures into community snapshot reports, and get recommendations for developing profile reports for your city or state including sub-county reports using zip codes and census tract boundaries.

Melissa Murray Jordan MS, Senior Environmental Epidemiologist, Florida Department of Health, United States | John T. Braggio, PhD, MPH, Chief, Environmental & Occupational Epidemiology, Maryland Department of Health and Mental Hygiene, United States | Sarah Walters, MPH, Environmental Epidemiologist, New York City Environmental Public Health Tracking Program, New York City Department of Health and Mental Hygiene, United States

11:30 AM-12:20 PM	Belmont 3	Lecture
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Session Sponsor: Mitchell Humphrey

Using the Lean Program to Improve Efficiency in Environmental Health Services

The Kanawha-Charleston Health Department (KCHD) applied the innovative Lean Program to reduce billing errors and improve efficiency in environmental health program administration. Using a step-by-step approach to document processes, and team approach to identify root causes of problems, KCHD was able to create an itemized action plan with measurable outcomes and deliverables. See how this approach could build capacity within your agency.

Nasandra Wright, MPH, REHS, RS, Environmental Health Director, Kanawha-Charleston Health Department, United States

1:30 PM-2:20 PM	Mont-Royal 1*	Lecture
Session Sponsor: Mitchell Humphrey		

Help! Everyone Wants My Data: A Look at Streamlining Data Collection for Environmental Health Programs

Do you feel overwhelmed by the sheer amount of data collection that must be done for your programs to fulfill state or federal reporting mandates? Attend this session to see how Sacramento County's Environmental Management Department (EMD) streamlined their data collection mandates for the Cross Connect and Hazardous Materials Chemical Inventory Reporting (EPCRA) programs. When faced with processing test reports from over 14,5000 cross connect devices and a recent law mandating that Hazardous Materials Chemical Inventory reporting (EPCRA) be reported electronically, EMD not only managed to overcome these overwhelming obstacles but saved in staff time and cut costs. Elise Rothschild, REHS/RS, Division Chief, Sacramento County Environmental Management Dept, United States | Darryl Booth, President, Decade Software LLC, United States

2:30 PM-3:20 PM Mont-Royal 1* Lecture

Session Sponsor: Mitchell Humphrey

Public Health Mythbusters

"I read it on the internet so it must be true!" From former professional wrestlers to reality TV stars to healthy living fanatics, it seems like everyone has a website promoting myths and rumors about health that are not based in fact. How do environmental health professionals win this war of words? See how one agency is using creative and fun multimedia presentations to educate their constituents.

Dan Hendershott, REHS/RS, Environmental Health Manager, Summit County Public Health Dept, United States

Lecture



Tuesday Poster Session

6:00 PM – 9:00 PM, Gracia Ballroom (3rd Level)

EH Tracking & Informatics

1 The Unpredictable Floods: Health Impact in Kentucky Magan Meade, MPA, MPH, Principal Investigator, Student, Eastern Kentucky University, United States

Food Protection and Defense

2 A Regional Approach to Food Handler Training Requirements: Facilitating the Conversation in Your Region

Chris Saxton, REHS, Environmental Supervisor, Cass County Health Department, United States | Rebecca Steiner, MPH, REHS, Environmental Public Health Program Manager, City of Kansas City, United States

3 At the Intersection of Environmental Epidemiology, Toxicology, and Food Safety: A Case Study of Aflatoxins Amer El-Ahraf, PhD, REHS, Professor and Vice President Emeritus, California State University, United States

General EH

4 Environmental Health Exposure Awareness Among Healthcare Professions: A Pilot Study Dhitinut Ratnapradipa, MPA, MS, PhD, Associate Professor, Southern Illinois University, United States

5 Gaming Chip Sanitation

Edward Mc Keown, MS, PhD, Purdue University, United States

6 Correlates of Environmental Insecurity Among Suburban Residents

Aaron Akinloye, Lecturer, University of Lagos, Nigeri | Adetoun Akinwusi, Lecturer, University of Ibadan, Nigeria

7 Environmental Health Epidemiology Capacity in State Public Health Agencies

Erin Simms, MPH, Associate Research Analyst, Council of State and Territorial Epidemiologists, United States

Hazardous Materials & Toxic Substances

8 Coming Home: Military Working Dogs as Sentinels of Human Disease in Veterans

Terra Irons, PhD, Toxicologist, Department of Veterans Affairs, United States

9 The Effects of Organic Pollutants in Soil on Human Health

Lynn Burgess, MS, PhD, Professor, Dickinson State University, United States

Healthy Homes and Communities

10 Comparison of Continuous and Point-in-Time Measurement of Temperature and Relative Humidity in the Residential Environment

James Johnston, PhD, Associate Professor, Brigham Young University, United States

12 Environmental Strategies to Improve Asthma Conditions in Minorities in Fulton County, Georgia

Denise Smith, MPH, Project Coordinator, Learn To Grow, Inc, United States | Neka Gilliam, Community Outreach Coordinator, Learn To Grow, Inc., United States

Injury Prevention/Occupational Health

13 Estates Excellence - Facilitating Business Led Health and Safety Improvement Susan Wadsworth, MPH, Environmental Health Officer, North Lanarkshire Council, United Kingdom | Archie Strang, Environmental Health Officer, North Lanarkshire Council, United Kingdom

Leadership/Management

14 A Conceptual Model for Learning and Integrating Environmental Health Knowledge, Skills, and Practice Dhitinut Ratnapradipa, MPA, MS, PhD, Associate Professor, Southern Illinois University, United States

Pathogens and Outbreaks

15 Challenges and Successes in the Investigation of the Hepatitis A Outbreak of 2013 *Carla Tuite, MS, Team Leader, FDA/CORE, United States*

Schools/Institutions

16 Scholar Ergonomics — Primary Schools in Tartu (Estonia) Case Study Marta Vasconcelos Pinto, PhD, Teacher, Escola Superior de Tecnologia da Saude de Coimbra, Portugal

cancelled

17 Protecting Vulnerable Populations from Acquiring Heat-Related Illnesses During Extreme Heat Events James J. Balsamo, Jr., MS, MPH, MHA, RS, CP-FS, CSP, CHMM, DLAAS,

Director of Environmental Health and Safety, Tulane University, United States

Solid Waste

18 Food Waste in Canteen Trays of Elementary Schools from Center Region of Portugal Nelson Leite e Sa, MS, REHS/RS, CEHT, Professor of Environmental Health, ESTeSC - Coimbra Health School, Portugal | Susana Paixao, Professor, ESTeSC -Coimbra Health School, Portugal

Student Research Presentations

- 19 Yucca Mountain: The Effects of a Nuclear Waste Repository on the Environment and Human Health Carrea M. Dye, AEHAP Student Leadership Award Winner, Graduate Student, Eastern Kentucky University
- 20 Ethylene Oxide-The Sweet Killer: An In-Depth Analysis Chinonye H. Akunne, AEHAP Student Leadership Award Winner, Graduate Student, Eastern Kentucky University
- 21 Are South African Street Food Vendors Posing a Public Health Risk? A Systematic Review and Meta-Analysis Folasuyi Richardson, AEHAP Student Leadership Award Winner, Graduate Student, Eastern Kentucky University
- 22 Effects of Blood Meal Source on Aedes albopictus Life Table Characteristics and Vector Competence for **Dengue Virus**

Caitlin van Dodewaard, AEHAP Student Research Competition Winner, Graduate Student, East Carolina University

23 Removal of Arsenic From Water Under Static-State Conditions

Jordan Kyle Finneseth, AEHAP Student Research Competition Winner, Undergraduate Student, California State University, San Bernardino

- 24 Single and Binary Adsorption of Heavy Metals in Aqueous Solution using Shrimp Shells Derivatives Noelle A. Mware, AEHAP Student Research Competition Winner, Undergraduate Student, Benedict College
- 25 Competitive Adsorption of Pb²⁺, Cu²⁺, and Cr²⁺ via a Packed Bed Column Using Pinecone Derived Adsorbents

Faith A. Kibuye, AEHAP Student Research Competition Winner, Undergraduate Student, Benedict College

- 26 The Lurking Element: A Study About the Dangers of Lead and Other Harmful Elements in Northern Kentucky Toy Vending Machines Brittany Wells, AEHAP Student Research Competition Winner, Undergraduate Student, Eastern Kentucky University
- 27 PM₂₅ Airborne Particulates near Frac Sand Operations Kristen A. Walters, AEHAP Student Research Competition Winner, Undergraduate Student, University Wisconsin-Eau Claire

28 NSF Scholar Presentation: National Survey on the Model Aquatic Health Code Keidré Long

Technology and EH

29 Human Elements: Marketing the Significance of **Environmental Health**

Lana Cao, Health Education Specialist, County of San Bernardino Department of Public Health Division of Environmental Health Services, United States | Adela Evans, REHS, County of San Bernardino Department of Public Health Division of Environmental Health Services

30 Emerging Products and Human Health: Characterizing the Potential Risks Posed by Nanoparticles Ephraim Massawe, PhD, Assistant Professor, Environmental Health and

Industrial Hygiene, Southeastern Louisiana University, United States

Water Quality

31 The Advantages and Disadvantages of Water Fluoridation

Dewan Raja, MPH, MD, Professor of Anatomy and Toxicology, Palmer College of Chiropractic Florida, United States

32 Investigation of a Wastewater Treatment Plant for **Environmental Releases**

Kristy A. Siegel, PhD, MPH, CPH, Research Associate, University of South Florida, United States



Tuesday, July 8, 3:30 PM – 6:00 PM Nolita 1-3

AWARDS CEREMONY

The Awards Ceremony will precede the Keynote Session, and honors the best of the best in environmental health. Be inspired as those environmental health professionals and students doing outstanding work in our field of practice are recognized and honored for their efforts.



Check out the sessions in the Sustainability/Climate Change track for more on this topic. Wrap it all up again with Dr. Keim in the 3:00 PM panel on Thursday!

KEYNOTE SESSION

Dr. Keim will be speaking on emerging and contemporary issues, including the far-reaching health effects of global climate change.

In addition to his current role, Dr. Keim has spent many years working for the CDC in many capacities including Acting Associate Director in the Office of Terrorism Preparedness and Emergency Response, Medical Officer and Team Leader at the International Emergency and Refugee Health Branch, and Acting Associate Director for Science in the Division of Emergency and Environmental Health Services. He is also an adjunct faculty member at the Rollins School of Public Health at Emory University.

Dr. Keim has provided consultation for the management of dozens of disasters involving the health of literally millions of people throughout the world. Dr. Keim is the author of several hundred scientific presentations, 40 journal publications, and 13 book chapters.

Dr. Keim received numerous awards for his work in CDC's emergency operations during the World Trade Center, anthrax letter, and Hurricane Katrina emergencies, as well as for leading the U.S. health sector response after the Indian Ocean tsunami.

He has been a member of the White House Subcommittee for Disaster Reduction since 2006. He served as a review editor for the United Nations Intergovernmental Panel on Climate Change from 2009 to 2011.



Exhibition

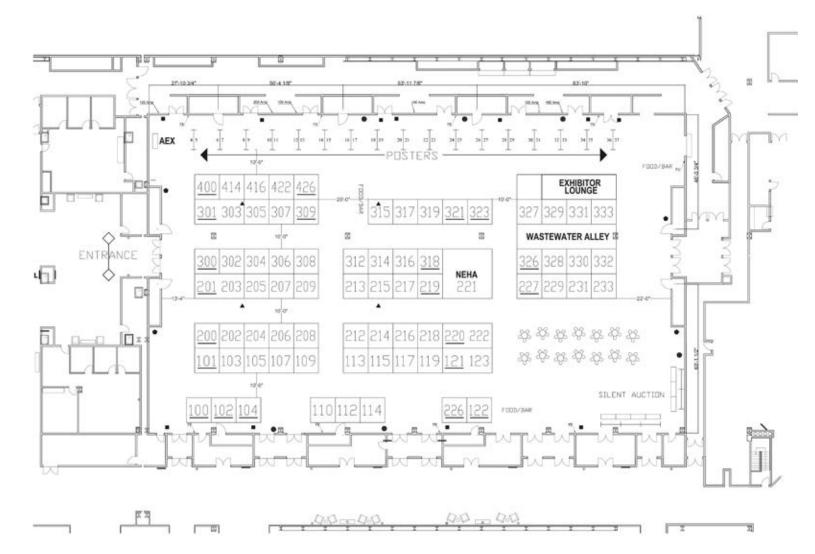
Gracia Ballroom

TUESDAY

12:00 PM - 5:00 PM	Exhibitor Set Up
6:00 PM – 9:00 PM	Exhibition Grand Opening & Party
6:00 PM – 9:00 PM	Poster Session
8:25 PM	Door Prize Winner Announced*

WEDNESDAY

8:00 AM – 1:00 PM	Exhibition Open
8:00 AM - 1:00 PM	Poster Session
10:30 AM	Door Prize Winner Announced*
11:00 AM	Silent Auction Finale
1:00 PM – 2:20 PM	Networking Lunch
1:00 PM – 5:00 PM	Exhibitor and Poster Move Out
	*Must be present to win.



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TECHNOLOGY AND ELECTRONIC DEVICES

Gizmo Expert

GAIN VALUABLE INDUSTRY CONNECTIONS

At the exhibition, connect with exhibitors that offer products, services, and knowledge to help you be more productive in your job!

ABC Trading Solutions

Vladi Bergman 3305 Spring Mountain Rd. Suite 402 Las Vegas, NV 702-673-7963 vladi@abctradingsolutions.com www.abctradingsolutions.com **Booth: 104**

Advanced Drainage Systems

Lisa Schwotzer 4640 Trueman Rd Hilliard, OH 43026 800-733-7473 lisa.schwotzer@ads-pipe.com www.ads-pipe.com **Booth: 233**

American Academy of Sanitarians (AAS)

Gary Noonan 1568 LeGrand Cir Lawrenceville, GA 30043 678-407-1051 gnoonan@charter.net www.sanitarians.org **Booth: 307**

American Chemistry Council

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American Public University

Chris Garvey 10110 Battleview Parkway Ste 114 Manassas, VA 20109 703-396-6420 cgarvey@apus.edu www.studyatapu.com **Booth: 219**

Anua

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Aqua Test, Inc.

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Association of Environmental

Health Academic Programs Yalonda Sinde 4500 9th Ave NE Ste 300 Seattle, WA 98105 206-522-5272 www.aehap.org Booth: 426

Association of Food and Drug Officials

Krystal Reed 2550 Kingston Rd Ste 311 York, PA 17402 717-757-2888 kreed@afdo.org www.afdo.org Booth: 122

Association of Professional Piercers

Caitlin McDiarmid PO Box 1287 Lawrence, KS 66044 888-888-1277 info@safepiercing.org www.safepiercing.org Booth: 414

Association of Schools and Programs of Public Health

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Bio-Microbics Inc.

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California Conference of Directors of Environmental Health

Sheryl Baldwin P.O. Box 2017 Cameron Park, CA 95682 530-676-0715 sheryl@ccdeh.com www.ccdeh.com Booth: 114

Cambro

Patricia Guerrero 5801 Skylab Rd Huntington Beach, CA 92647 714-848-1555 pguerrero@cambro.com www.cambro.com Booth: 115

CDC National Center for Environmental Health/ATSDR

Carol Merkin 4770 Buford Highway, MSF61 Atlanta, GA 30327 770-488-0589 www.cdc.gov Booth: 117

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CDC National Environmental Public Health Tracking Network

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Columbia Southern University

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Decade Software Company, LLC

Jill Cha 1195 West Shaw Ave Fresno, CA 93711 800-233-9847 ext 703 jillcha@decadesoftware.com www.decadesoftware.com **Booths: 220, 222**

Digital Health Department, Inc

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Eljen Corporation

Joe Glasser 10 N Main St, Ste 216 W Hartford, CT 06107 860-233-6334 jglasser@eljen.com **Booth: 326**

EPA, Indoor Environments

Lou Witt 1200 Pennsylvania Ave NW MC: 6609J Washington, DC 20460 www.epa.gov/iaq **Booth: 209**

EPA, Office of Wastewater Management

Maureen Tooke 1200 Pennsylvania Ave NW Washington, DC 20460 202-564-1162 **Booth: 331**

FDA/Center for Food Safety and Applied Nutrition

Jennifer Hemphill 5100 Paint Branch Pkwy College Park, MD 20740 240-402-1907 jennifer.hemphill@fda.hss.gov www.fda.hhs.gov **Booth: 306**

Forensic Analytical Labs

Jim Flores 6765 S. Eastern Ave. Suite 3 Las Vegas, NV 89119 800-827-3274 jflores@falaboratories.com www.falaboratories.com **Booth: 204**

Gizmo Expert

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GLO GERM

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HealthSpace USA Inc

Joseph Willmott 4860 Cox Rd Ste 200 Glen Allen, VA 23060 866-860-4224 jwillmott@healthspace.com www.healthspace.com Booths: 121, 123

Hedgerow Software Ltd.

Neil Grinwis 202, 200 County Hills Landing NW Calgary AB T2L 0A3 Canada 403-226-9699 neilgrinwis@hedgerowsoftware.com www.hedgerowsoftware.com **Booth: 316**

Hoot Systems, LLC

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Industrial Test Systems, Inc

James Jaunakais 1875 Langston St Rock Hill, SC 29730 803-329-9712 tradeshows@sensafe.com www.sensafe.com **Booth: 312**

Inspect2Go

Paul Smith 1001 Avenida Pico #C110 San Clemente, CA 92673 949-480-5500 markering@inspect2go.com www.inspect2go.com Booth: 300

InspekPro, LLC

Ann Lewis 3603 Seneca Ave Los Angeles, CA 90039 323-939-7373 213-383-4111 mail@inspekpro.com www.inspekpro.com **Booth: 212**

International Federation of Environmental Health

Peter Davey Chadwick Court 15 Hatfields London SE1 8DJ UK www.ifeh.org Booth: 318

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Jet Inc.

Trent Lydic 750 Alpha Dr Cleveland, OH 44143 440-461-2000 tlydic@jetincorp.com www.jetincorp.com **Booth: 330**

LaMotte Company

Ernie Rector 802 Washington Ave Chestertown, MD 21620 410-778-3100 erector@lamotte.com www.lamotte.com **Booth: 226**

Mars Air Systems

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Michigan State University Online Master of Science in Food Safety

Peggy Trommater 1129 Farm Lane B-51 Food Safety &Toxicology Building East Lansing, MI 48824 517-884-2080 trommat2@msu.edu www.foodsafety.msu.edu **Booth: 206**

Mitchell Humphrey

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National Library of Medicine

Two Democracy PIz, 518 6707 Democracy Blvd MS: 48660 Bethesda, MD 20892 888-346-3656 www.nlm.nih.gov Booth: 215

National Restaurant Association

Jaclyn Sanford 175 W Jackson Blvd Ste 1500 Chicago, IL 60604-2814 312-261-5311 jsanford@restaurant.org www.restaurant.org **Booth: 400**

National Swimming Pool Foundation

Margaret Smith 4775 Granby Cir Colorado Springs, CO 80919 719-540-9119 margaret.smith@nspf.org www.nspf.org **Booth: 208**

NEHA Training & Education

720 S Colorado Blvd Ste 1000-N Denver, C0 80246 303-756-9090 support@nehatraining.org www.nehatraining.org **Booth: 317**

Neogen Corporation

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NSF International

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Sarah Watts 2 Mullnack Dr Salem, MO 65560 573-729-2057 salessupport@ozarkriver.com www.ozarkriver.com **Booth: 218**

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Wednesday Agenda

WEDNESDAY, JULY 9

7:00 AM-5:00 PM	Registration and Information Desk	Belmont Registration Desk 1
8:00 AM-12:00 PM	Student Research Presentations	Belmont 5
8:00 AM-1:00 PM	Poster Session	Gracia Ballroom
8:00 AM-5:00 PM	SORA Registration	Belmont Registration Desk 2
8:00 AM-5:00 PM	Food Safety Focus Symposium: CCFS Course Day 1	Condesa 4
1:00 PM-2:30 PM	Networking Buffet Luncheon Sponsored by APU	Brera Ballroom 1-6
2:30 PM-5:30 PM	Lectures and Learning Labs	Belmont 1-8, Mont-Royal 1-2
2:30 PM-5:30 PM	Student and Mentor Network Lounge	Yaletown 4
6:30 PM-7:30 PM	SORA Meet & Greet Reception	Brera Rooms 4 & 5
Exhibition		
8:00 AM-1:00 PM	Exhibit Hall Open	Gracia Ballroom
8:00 AM-11:00 AM	Silent Auction	Gracia Ballroom
11:00 AM	Silent Auction Finale in Exhibit Hall	Gracia Ballroom
12:40 PM	Door Prize Drawing in Exhibit Hall	Gracia Ballroom
1:00 PM-6:00 PM	Exhibitor (& Posters) Move-Out	Gracia Ballroom
Focus Groups		
9:00 AM-10:00 AM	Sustainability & EH Focus Group	Condesa 5
10:00 AM-11:00 AM	Food Safe Schools Focus Group	Condesa 5
11:30 AM-1:00 PM	UL Focus Group Lunch	Condesa 9
Meetings		
8:00 AM-9:00 AM	SORA Strategic Planning Committee Meeting	Yaletown 3
8:00 AM-4:00 PM	APSP RWQ Committee Meeting	Condesa 6
9:00 AM-10:00 AM	Nevada Environmental Health Association (NvEHA) Meeting	Belmont 4
10:15 AM-11:00 AM	NEHA Endowment Fund Meeting	Yaletown 3
11:00 AM-1:30 PM	AAS Business Meeting	Condesa 2
12:00 PM-1:00 PM	SORA Conference Planning Committee Meeting	Yaletown 3
5:30 PM -6:30 PM	SORA Board Meeting	Yaletown 3

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4:30 PM - 5:20 PM		Assessing Arrborne and Managing Microorgansms Workers: Pascolated with Exposures to Packaging Glass Bloærosols:	Stopping the Outbreak! A Sanitarian's Guide to Marathon, Triathlon and Endurance Race Events	Environmental Building an Health Effective Epidemiology Environmental Capacity in State Public Health Program	Organizational Culture Change: Moving the Needle from Fair to Great	Building Resilience Against Climate Effects A Framework for State and Local Health Departments	Correcting Corrections: Surviving Jail Inspections and High Risk Inmate Activities	Smoke and Ash Burning to Know: Deconstructed - Mercury to Not Just Particles Exposure from	
3:30 PM - 4:20 PM	DROP IN LEARNING LABS	Germicidal Action of Some Metals/ Metal Ions in Combating E. coll Bacteria	Exempted Smoking Areas: The Irish Experience	DC's National ic Health Tracking	pacity	pacts and Options: Northwest Arctic	Iled Me Populations- tectated Illnesses at Events	Lead Poisoning Outbreak Resulting from Construction and Renovation	
3:30 PM	DROP IN LEA	From Kentucky to Kenya: Quantification of Health Benefits Associated	d Considerations	Learning Tools for CDC's National Environmental Public Health Tracking Network	Building Agency Capacity	Climate Change Impacts and Options: Case Studies in the Northwest Arctic Borough, Alaska	Cancelled Pretesting Vunnershe Populations from Acquiring Heat Related Illnesses During Extreme Heat Events	oxicology Toolbox for	
2:30 PM - 3:20 PM		Public Health in Hair and Beauty Salons - Making it Gel	E-Cigarettes: Evidence, Perspectives, and Considerations for Creating Policy	Equipment Certification and Standards. More Important Than You Might Thinkl	Building an Environmental Health Program of Excellence in a Time of Austenty	Triggers for Change in the Safest Place on Earth	Food-Safe Schools: Food Safety Beyond the Cafeteria	P-M-S (Pesticides - Metals - Solvents) Toxicology Toolbox for the EH Generalist	
	General EH Beimont 1	International EH: IFEH Special Sessions Belmont 4	Emerging EH Issues Belmont 3	General EH Belmont 6	Leadership/Management Mont Royal 2	Sustainability/ Climate Change Mont Royal 1	Schools/ Institutions Belmont 7	Hazardous Materiais & Toxic Substances Beimont 8	
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1:00 PM – 2:30 PM	σă	Be Se	Ε	B G		6 S	B	B S B B B	
12:00 PM - 1:00 PM 1:00 PM - 2:30 PM	Ğ	11 12 13 10 10 10 10 10 10 10 10 10 10 10 10 10	12	8 8			<i>'8</i> 8	H 98 88	
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12:00 PM – 1:00 PM	G EXHIBIT HALL		POSTER SESSION				38 	H B B	
11:00 AM - 12:00 AM 12:00 PM -1:00 PM								H B B B B	
10:00 AM- 11:00 AM 11:00 AM - 12:00 AM 12:00 PM - 1:00 PM				STUDENT RESEARCH PRESENTATIONS				R 1	

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Practical Water Reuse

Grey water and Water Reuse in the Southwest

The Meat and Potatoes of Water Reuse in Idaho

Onsite Wastewater Belmont 7

Foods Without Frontiers

Catch Me if You Can—Misbranding, Adulterating and Counterfeiting Foods: A National / International Food Incident Workshop

Food Protection and Defense Belmont 2



Wednesday Sessions

* Indicates that session will be recorded for the Virtual AEC.

Emerging EH Issues

2:30 PM-3:50 PM Belmont 3 Lecture/Panel

Session Sponsor: Mars Air Systems

E-Cigarettes: Evidence, Perspectives, and Considerations for **Creating Policy**

This panel will introduce attendees to e-cigarette products and their intersection with public health and environmental health. A leading researcher from University of California, San Francisco, will review the literature on direct and indirect harm from exposure to e-cigarettes. We'll get a look at the FDA's past and current attempts at regulation of these products and get CDC's view of the health implications of this new marketplace for nicotine products. A representative from Chicago Department of Public Health will share the lessons learned as they successfully incorporated electronic smoking device ban into existing Clean Indoor Air regulations. NACCHO will share their work with Chicago and other health agencies to address local and state policy-making. Come away with an understanding of this new industry and the role that you and your agency play in protecting public health.

Doug Farquhar, JD, Program Director Environmental Health, National Conference of State Legislatures, NEHA Legal Issues Technical Advisor, United States | Lucy Popova, PhD, Center for Tobacco Control Research & Education, University of California, San Francisco, United States | Kendall Stagg, JD, Director of Policy, Planning, and Legislative Affairs, Chicago Department of Public Health, United States | Andrew Roszak, MPA, JD, Senior Director, Environmental Health, Pandemic Preparedness and Catastrophic Response, National Association of County and City Health Officials, Centers for Disease Control & Prevention, United States | CDC Presenter (Invited)

4:00 PM-4:20 PM Belmont 3 Mini Lecture

Exempted Smoking Areas: The Irish Experience

When is a smoking area not a smoking area? Hear how bar owners in Ireland have pushed the smoke free laws to the limit and beyond to accommodate patrons who smoke. See how the environmental health officers and the courts responded to these challenges and learn from Ireland's decade of experience to avoid similar problems.

Maeve Costello, Environmental Health Officer, Health Service Executive Ireland, Ireland

4:30 PM-5:30 PM

Belmont 3

Lecture

Stopping the Outbreak! A Sanitarian's Guide to Marathon, Triathlon, and **Endurance Race Events**

What if 44,000 people arrived overnight in your town for a marathon, triathlon, or adventure/obstacle race event? Could you advise race organizers on how to meet their participants' environmental health needs? Could you handle an outbreak? Take a journey through 2011 Las Vegas Marathon outbreak to learn about the environmental health components commonly associated with these events and how their breakdown can lead to outbreaks. Apply the lessons learned from this incident to adventure and endurance events in your community.

Robert Maglievaz. MPH. REHS/RS. Environmental Specialist III. Florida Department of Health-Volusia County, United States | Brian Labus, Senior Epidemiologist, Southern Nevada Health District, United States

Food Protection and Defense

2:30 PM-4:20 PM	Belmont 2	Learning Lab
Session Sponsor, Perkin Elmer		

Catch Me if You Can - Misbranding, Adulterating, and Counterfeiting Foods: A National / International Food Incident Workshop

Recent food fraud incidents involving melamine, horse meat, and rat meat necessitate that local, national and international government and industry stakeholders have knowledge of response when an incident occurs in their jurisdictions. The newest FDA FREE-B exercise explores such a food fraud scenario. When faced with this situation, what are the risks? Who gets involved? What are the handoffs to different national or international government agencies? This workshop includes live participation of international stakeholders via a web platform. In addition, related multilingual educational materials will provide attendees with immediately applicable resources for the stakeholders in their own jurisdictions. Michele Samarya-Timm, MA, HO, MCHES, REHS/RS, DAAS, Health Educator / REHS, Somerset County Department of Health, United States | Brad Deacon, JD, Emergency Management & Administrative Law Coordinator, Michigan Department of Agriculture & Rural Development, United States

4:30 PM-5:20 PM	Belmont 2	Lecture
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Session Sponsor: San Jamar

Foods Without Frontiers

Farm to Fork is a great slogan, but how do we really ensure food safety when the farm is is one country, processing in another and consumers in a third, fourth or more countries? Using the recent international food safety recall of Karicare Whey Protein Concentrate for a contaminated ingredient, you'll see that simply knowing about an adverse event in your country is no longer enough. This session will identify gaps in international incident notification systems such that attendees will be equipped to act to fill those gaps and respond promptly and efficiently to the next incident that arrives at the shipping dock.

Stephen Bell, Specialist Adviser, Import & Export Systems & President, New Zealand Institute of Environmental Health, New Zealand Ministry for Primary Industries, New **Zealand**

General EH Drop in Learning Labs

2:30 PM-5:30 PM Belmont 1

Learning Lab [Drop in]

Inspector Gadget: Go, Go Google Glass

In this age of information and technology, life is richly textured and layered and interconnected. This lab adds another dimension to inspection in the form of Google Glass. Put them on and peer into what the future of inspections and audits might look like. Envision seamless processes, more compliant operations, and the photos, videos, and endless data points that support enforcement action. Generate ideas and provide feedback about where the future of inspections might go.

Rahul Saxena, President, Digital Health Department, Inc.

Report Writing for Beginners

Most inspection software products use report writing tools that generate usable reports from an SQL data storage format. But how does an environmental health professional create new or ad hoc reports that

are not part of the system's canned reports? This learning lab will be an interactive opportunity to get more information out of any electronic data system. Report writing experts will demonstrate or allow you to produce ad hoc reports and more sophisticated reports quickly without having to go to the vendor.

Michael Kinder, MS, REHS/RS, EMT-B, Vice President of Regulatory Affairs, HealthSpace, United States

2:30 PM-5:30 PM Learning Lab [Drop in] Belmont 1

Sanitizing 101

There are several effective sanitizers that yield a 99.999% reduction of representative pathogenic microorganisms of public health importance, when used properly, in accordance with the label. But what REALLY happens if the instructions aren't followed? If the sanitizer concentration used is too high? Or if the test strip is swished around in the solution? Or if the solution is above the suggested temperature? Participate in live demonstrations to see for yourself the proper techniques to test, use, and apply sanitizer solutions.

Shelly Wallingford, MS, REHS/RS, Retail Quality Assurance Manager, Starbucks Coffee Company, United States | Joe, Dent, District Manager, Kay Chemical Company

2:30 PM-5:30 PM Belmont 1 Learning Lab [Drop in]

The Reporters Are Here: Now What?

The media can be a partner in communicating with the public, providing guidance, securing the reputation of your organization, and distributing an informative message, without spin. Get a quick lesson in compiling facts and information into a simple media template or conduct a post-mortem assessment of your last interaction with the media (if applicable). Either way, this lab demonstrates how perception can turn the mass media into a friend rather than a foe.

Anthony Mangeri, MPA, CPM, CEM, Director, Emergency Services Outreach, American Public University System, United States

2:30 PM-5:30 PM Belmont 1 Learning Lab [Drop in]

What's Your Water Quality?

Bring water samples from fountains, pools, water coolers, or bottles to this live demonstration. Discover how to rapidly assess bacterial content and bypass the time-consuming plate count method. See how robust and reliable onsite microbiologic enzyme technology can provide the hard data needed to initiate corrective actions in 15 minutes. Come away with an understanding of aquatic microbiology and the ability to monitor water quality for several environmental health programs. Lisa Rogers, President, Mycometer, Inc., United States

2:30 PM-5:30 PM Learning Lab [Drop in] Belmont 1

You're in Luck: CIFOR Tools for Foodborne Outbreak Response

The CIFOR Industry Guidelines for Foodborne Outbreak Response are voluntary guidance for owners, operators, and managers of retail food establishments to help outline, clarify, and explain industry's recommended role in a foodborne illness outbreak investigation. The facilitators will provide mini-lessons that answer questions such as: Should both regulators and industry collect samples of suspect food? When should an employee be restricted from handling food? What tools are available to help industry respond? Put your outbreak response plans to the test and obtain resources to strengthen them.

Scott Holmes, MS, REHS/RS, Manager, Environmental Public Health, Lincoln-Lancaster County Health Department, United States | Lisa, Hainstock, RS, Food Safety Specialist, Michigan Department of Agriculture, United States

General EH

2:30 PM-3:20 PM

Belmont 6

Lecture

Equipment Certification and Standards: More Important Than You Might Think! Regulatory authorities require approved products in many program areas such as food service equipment, drinking water additives and system

components, and swimming pool equipment. This presentation will outline the basic principles of product approval, including the certification process and its relationship to standards. Come away with knowledge of the certification process and how it can help relieve some of the burden associated with equipment and product acceptance.

Jim Dingman, MS, REHS/RS, DLAAS, Lead Regulatory Engineer, UL, United States

PM-4:20 PM	Belmont 6	Lecture
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Session Sponsor: Sweeps Software, Inc.

3:30

Learning Tools for CDC's National Environmental Public Health Tracking Network

CDC's National Environmental Public Health Tracking Network (Tracking Network) is a dynamic system that provides information and data about environmental hazards and the health problems that may be related to them so that you can combat environmental health concerns in your community. It might sound complicated, but CDC has developed a variety of simple and easy to understand online training materials. This session will describe the tools and provide examples of the accomplishments that are possible when public health officials use the Tracking Network to look for answers to important questions about public health.

Jennifer Moore, MPH, Health Communications Specialist, Centers for Disease Control and Prevention, United States

4:30 PM-4:50 PM	Belmont 6	Mini Lecture
4:30 FIVI-4:30 FIVI	Delinonito	winn Lecture

Environmental Health Epidemiology Capacity in State Public Health Agencies

The Council of State and Territorial Epidemiologists (CSTE) assesses epidemiology capacity in state health departments to measure epidemiology capacity of the health department workforce. This session shares the 2013 results, including the findings of a new environmental health capacity assessment. The outcomes will inform program managers of opportunities to increase capacity for environmental health. Additionally, this session will educate listeners on current environmental epidemiology activities; access to data; data analysis, interpretation, and dissemination functions; organizational placement and funding; and outreach, partnership, and collaboration.

Erin Simms, MPH, Associate Research Analyst, Council of State and Territorial Epidemiologists, United States

5:00 PM-5:20 PM Belmont 6 Mini Lecture

Building an Effective Environmental Enforcement Program

The Salt Lake County Health Department has a robust and comprehensive enforcement program to augment its educational outreach for regulated entities. The program's elements, designed to further the agency's mission of protecting public and environmental health, will be presented. The experience in Salt Lake County has been that a wide range of significant enforcement activities have been successfully conducted, many with the collaboration of outside agencies at the local, state and federal levels of government.

Royal DeLegge, MPA, PhD, REHS/RS, Environmental Health Director, Salt Lake County Health Department, United States | Eric Peterson, MA, LEHS, Assistant Environmental Health Director, Salt Lake County Health Department, United States

Hazardous Materials & Toxic Substances

2:30 PM-3:50 PM Belmont 8

Learning Lab

P-M-S (Pesticides - Metals - Solvents) Toxicology Toolbox for the EH Generalist

With shrinking budgets and staff at many agencies, environmental health professionals must often be generalists who can respond to any phone call from the public. In this exercise, you'll assess your knowledge of the uses, benefits, hazards, and what you need to know about pesticides, metals, and solvents. Then, become familiar with existing resources and build customized checklists. Run through practice scenarios to be sure you can apply the knowledge, use the resources, and implement the checklists when you get that call about a real life exposure case.

Sharron LaFollette, PhD, Associate Professor, University of Illinois Springfield, United States | Lenore I. Killam, MA, Clinical Instructor, Dept. of Public Health, University of Illinois Springfield , United States

4:00 PM-4:20 PM	Belmont 8	Mini Lecture
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Lead Poisoning Outbreak Resulting from Construction and Renovation at an Indoor Firing Range

The presentation will describe one of the largest outbreaks of lead poisoning in Washington State, resulting from demolition and construction at an indoor firing range. Numerous gun range employees and construction workers were exposed to lead, as well as family members of construction workers. Many agencies responded to the incident, but public health agencies faced significant limitations to controlling the public's exposure to lead. How can public health agencies help prevent episodes like this in the future?

Stephen Whittaker, PhD, Public Health Researcher, Public Health Seattle & King County, United States

4:30 PM-4:50 PM Belmont 8 Mini Lecture

Smoke and Ash Deconstructed - Not Just Particles

Smoke and ash are not homogenous products; they contain a complex mixture of chemical products as a result of incomplete combustion. This session will explore the composition of smoke and discuss the short term and long term health effects of exposure, including possible heavy metal exposure during the release of smoke from bushfires and prescribed burns. We'll discuss possible risk mitigation strategies for the community and for the occupational safety and health of people responding to the smoke and ash related incidents.

John Edwards, Senior Environmental Officer, Department Environment Regulation, Australia

5:00 PM-5:20 PM Belmont 8 Mini Lecture

Burning to Know: Neighborhood Mercury Exposure from Crematoriums

There is a growing public concern over the possible environmental hazard of mercury emissions from dental amalgams during cremation. This has made the placement of crematoriums in communities a hot topic. To date, most data on the risk of mercury exposure from crematoriums has come from measuring either the number of amalgams in the corpses or direct emissions testing of the stack. This study was conducted at the breathing zone to characterize the actual exposure to a residential community. Does the new data put the issue to rest?

James Doten, MS, Supervisor Environmental Services, Minneapolis Health Department, United States

International EH: IFEH Special Sessions

2:30 PM-3:20 PM

Belmont 4

Lecture

Public Health in Hair and Beauty Salons - Making it Gel

Not many industries can boast a stake in every town around the world in quite the same way the hair and beauty industry can. But there is a risk to the public arising from hairdressing, beauty therapy and skin penetrating activities. Governments manage this risk through public health licensing, inspection and enforcement, but does it make a difference? This session will share and utilize data from recent studies in Tasmania to promote a common-sense approach to effectively increase public health outcomes in a sustainable, relevant way.

Jayne Jose, Environmental Health Officer, Meander Valley Council, Australia

3:30 PM-3:50 PM

Mini Lecture

From Kentucky to Kenya: Quantification of Health Benefits Associated with Water Disinfection Strategies

Belmont 4

Many international students come to the U.S. to obtain an education that will enable them to address a significant challenge in their native lands: waterborne disease. There are many rapidly expanding household water disinfection strategies being implemented the world over, yet their epidemiologic effectiveness is largely untested. Our study used a 28-day retrospective design to ascertain disease prevalence and water disinfection practices in Kenya's Great Rift Valley. In sharing the findings, we will also illustrate the difference being made by students in their home country. *Jason Marion, MS, PhD, Assistant Professor, Eastern Kentucky University, United States*

4:00 PM-4:20 PM

Belmont 4

Mini Lecture

Germicidal Action of Some Metals/Metal lons in Combating *E. coli* Bacteria in Relation to their Electro-Chemical Properties

It seems obvious that ions of metal have germicidal properties, but the nonionized metal's forms also possess germicidal properties. In fact, the less ionizable the metal is, the greater its germicidal properties. This study explores mechanisms other than ionization of metals that may further explain their germicidal properties. Discuss the possibilities for widening the scope of application of germicidal properties of metals in the future. *Ababu T. Tiruneh, PhD, Lecturer, Water Resources Engineering and the Environment, University of Swaziland, Swaziland*

4:30 PM-4:50 PM	Belmont 4	Mini Lecture

Assessing and Managing Workers' Exposures to Bioaerosols During the Treatment of Organic Waste

Large-scale waste treatment facilities are becoming more commonplace in the UK as municipal waste is being diverted from landfills. In the organic waste sector, workers' exposures to bioaerosols and the potential health implications arising from these exposures are poorly characterized. This session presents research findings that describe employee exposure levels to dust and endotoxin, discusses the potential implications on workers' respiratory health, and explores risk mitigation measures that reduce employee exposure levels in accordance with the legal framework. *Peter Sykes, PhD, Associate Dean (enterprise), Cardiff School of Health Sciences,*

Peter Sykes, PhD, Associate Dean (enterprise), Cardiff School of Health Sciences, Cardiff Metropolitan University, United Kingdom

5:00 PM-5:20 PM	Belmont 4	Mini Lecture

Airborne Microorganisms Associated with Packaging Glass Sorting Facilities

Do you know what happens to waste deposited in the recycling bin? This study takes us to a sorting facility, where there is an increased risk of handling material in decomposition and exposure to biological agents. We'll examine the findings of the total concentration of airborne bacteria and fungi and then further characterize the environmental micro flora as means of assessing the occupational risks associated with the waste sorting industry.

Marta Vasconcelos Pinto, PhD, Teacher, Escola Superior de Tecnologia da Saude de Coimbra, Portugal | Joana Santos Guerreiro, PhD, Teacher, Escola Superior de Tecnologia e Gestao de Viana do Castelo, Portugal

Leadership/Management

2:30 PM-3:20 PM

Mont-Royal 2*

Lecture

Building an Environmental Health Program of Excellence in a Time of Austerity

In times of fiscal austerity we are sometimes confronted with making hard choices about our environmental health programs. This presentation will explore how to trim outdated or "sacred cow" programs and strengthen key programs with high public health benefit. The presentation will include case studies on how general fund tax dollars can be replaced with funds from other sources and on how interns, volunteers, and community partnerships can be used to strengthen priority programs.

Bob Custard, REHS/RS, CP-FS, Environmental Health Manager, Alexandria (VA) Health Department, United States | Lydia Zweimiller, REHS, Environmental Health Specialist Senior, Alexandria (VA) Health Department, United States | Michele Howard, District Standardization Officer, Alexandria (VA) Health Department, United States | Erin May, MPH, CPO, Environmental Health Specialist Senior, Alexandria (VA) Health Department, United States

3:30 PM-4:20 PM

Mont-Royal 2*

Lecture

Lecture

Session Sponsor: Decade Software

Building Agency Capacity

These days, every health department is being tasked to increase capacity - capacity to provide customer services, to innovate, and, most importantly, to ensure a healthy population. This session will showcase four real-life case studies where the local health department (some small, some large) committed to leadership, responsible data management, program management, and even operations, eliminated non valueadded activities. We'll recount the best (and sometimes the worst) practices found in everyday health agencies so you can concentrate on accountability and overall effectiveness to increase your capacity and make your agency lean and nimble too.

Darryl Booth, MBA, President, Decade Software Company, LLC, United States

4:30 PM-5:20 PM Mont-Royal 2* Lecture

Session Sponsor: Decade Software

Organizational Culture Change: Moving the Needle from Fair to Great

Do you want to improve your organization's efficiency or change its culture? Do you want to become more innovative and creative? This session will show you how to transform a department that is lagging behind in the use of technology, operating with outdated or insufficient policies and procedures, trails in productivity, and has a staff that is resistant to change. Come away inspired and prepared to take on the issue your organization is facing.

Corwin Porter, MPH, REHS/RS, Director of Environmental Health, San Bernardino County, Department of Public Health Division of Environmental Health, United States

Onsite Wastewater

2:30 PM-3:20 PM Belmont 7

The Meat and Potatoes of Water Reuse in Idaho

Surprising to many, Idaho has been in the water reuse business for almost 30 years. The Water Reuse Program has evolved from basic approvals for land application of municipal and industrial wastewater into a comprehensive statewide beneficial reuse permitting program. Learn how a successful program is administered and how it handles challenges like shrinking irrigation water supplies and increasing stringency of federal NPDES permits. Come away with an understanding of and resources for the implementation and administration of water reuse programs. Chas Ariss, PE, Wastewater Engineering Program Manager, Idaho Department of Environmental Quality, United States

3:30 PM-4:20 PM Belmont 7 Lecture

Greywater and Water Reuse in the Southwest U.S.

This session will explore the types of greywater systems and water reuse practices widely available and specifically address those utilized in the Southwest U.S. It will review the progress and acceptance of greywater and water reuse systems in the region and cover the rules, lingering regulatory issues and impediments to broader use of these systems. Come away with an understanding of the issues involved and approaches to water reuse in the Southwest U.S.

Joelle Wirth, REHS/RS, Program Manager III, Environmental Quality Program, Coconino County Public Health Service District/Community Development, United States

4:30 PM-5:20 PM	Belmont 7	Lecture
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Session Sponsor: Presby Environmental

Practical Water Reuse

Session Sponsor: Anua

State health, environmental and planning agencies are examining planned water reuse as a powerful tool for water resource management. This session will explore standards and requirements for onsite residential and commercial water reuse treatment systems, water quality requirements for non-potable water use, competency of personnel managing reuse systems, and using evidence based information to communicate with the public. Come away with a no-nonsense, how-to approach to water reuse. Bob Rubin, PhD, Professor Emeritus, North Carolina State University

Schools/Institutions

2:30 PM-3:20 PM Session Sponsor: Neogen Corporation Belmont 5

Learning Lab

Lecture

Food-Safe Schools: Food Safety Beyond the Cafeteria

There are unique food safety requirements associated with federally funded school nutrition programs, such as the National School Lunch Program (NSLP). This session will address the NSLP's operational complexities that influence food safety--such as serving food in classrooms, at kiosks, on field trips, and other locations outside of the cafeteria. You will explore collaborative opportunities with your school community and become familiar with targeted resources to effectively and practically address food safety challenges beyond the school cafeteria.

Jeannie Sneed, PhD, RD, CP-FS, Professor, Center of Excellence for Food Safety Research in Child Nutrition Programs, Kansas State University, United States Vanessa DeArman, Project Coordinator, Food Safe Schools/Food Safety Program, Research and Development. NEHA

cancelled 3:30 PM-4:20 PM Belmont 5

Protecting Vulnerable Populations from Acquiring Heat Related Illnesses During Extreme Heat Events

Heat affects what we do and how well we do it, but what other environmental factors affect our health, especially in a sedentary environment? Can retroactive climatic data about a very specific locationin a town, county, or state be used to protect vulnerable populations fromheat related illnesses? This session will demonstrate the need for and useof heat index and other data as a tool to generate actionable protective measures for the incarcerated population.

James J. Balsamo, Jr., MS, MPH, MHA, RS, CP-FS, CSP, CHMM, DLAAS, Director of Environmental Health and Safety, Tulane University, United States

4:30 PM-5:20 PM	Belmont 5	Lecture

Correcting Corrections: Surviving Jail Inspections and High Risk Inmate Activities

Despite legal authority and civil rights case law, correctional institutions often remain an Environmental Public Health challenge due to outdated rules, lack of understanding, and malaise regarding incarcerated persons. Indicators of unusual, interesting, and unique high-risk public health activities performed by inmates will be presented and demonstrated. Outbreak preparedness will also be discussed using an example of a multi-virus outbreak at the US's largest single site correctional facility. This presentation will provide guidance and tips to better prepare you for an inspection in a detention facility.

Phillip Gnacinski, MS, LEHP, Environmental Health Specialist, Cook County Sheriff's Office, United States | Bruce Schroer, MPH, REHS/RS, Chief of Environmental Health, Cook County Sheriff's Office, United States

Sustainability/Climate Change

2:30 PM-3:20 PM

Mont-Royal 1* Lecture

Triggers for Change in the Safest Place on Earth

Kingborough Council in southern Tasmania recognized that climate change is a global issue that requires a local response. It continues to undertake a wide range of technical climate change impact evaluations and communication projects. However, the identification of a meaningful implementation pathway proved elusive. See how the Triggers for Change project created a framework that has ensured the council and its staff mainstreamed climate change adaptation into its activities. Could your organization implement a similar strategy?

Jon Doole, CEHT, Manager Environmental Services, Kingborough Council, Australia Donovan Burton, Climate Change Planner, Climate Planning, Australia

3:30 PM-4:20 PM

Mont-Royal 1*

Climate Change Impacts and Options: Case Studies in the Northwest Arctic Borough, Alaska

In the Northwest Arctic Borough, the impact of climate on environmental conditions is a fact of life, and with this comes a substantial challenge to the Native Inupiat lifestyle, culture, and traditional subsistence "way of life." Like areas which are being innudated by sea level rise, these changes are affecting drinking water, sanitation and other infrastructure at the "coalface" where these impacts are most evident in the U.S. See how environmental health practitioners are providing innovative solutions that promote resilience and adaptation rather than foregoing a cultural and community identity.

R. Steven Konkel, PhD, Associate Professor Environmental Health Science, University of Alaska Anchorage College of Health, United States | Mike Black, Director of Rural Utilities Management Services, Alaska Native Tribal Health Consortium

4:30 PM-5:20 PM

Mont-Royal 1*

Lecture

Lecture

Building Resilience Against Climate Effects: A Framework for State and Local Health Departments

CDC saw the need for and developed a comprehensive approach for public health agencies to anticipate, prepare for and respond to the numerous challenges presented by the effects of climate change on human health. This presentation will highlight initiatives underway and tools in development for establishing "climate ready" public health agencies. The speaker will describe successes and challenges implementing CDC's process for building climate resilience capabilities in Arizona, and share lessons learned and best practices in implementing the framework at your agency.

Matthew Roach, MPH, Climate & Health Program Manager, Arizona Department of Health Services, United States



Wednesday Poster Session

8:00 AM - 1:00 PM, Gracia Ballroom (3rd Level)

Children's EH

1 SunWise - Promoting Sun Safety in Minority Populations Using Environmental Education

Brittany Howard, Environmental Health FellowASPPH (hosted by EPA Office of Air & Radiation), United States

2 Evaluation of the Eco-Healthy Child Care Program[®] Robyn Gilden, RN, MS, PhD, Assistant Professor, University of MD School of Nursing, United States

Emergency Preparedness & Response

- 3 The Health Impacts of Flood Events Stephen Cooper, CEHP, Trustee, Chartered Institute of Environmental Health, United Kingdom
- 4 Zigzagging: A Comparative Analyses of Preparedness/ Response to Hurricanes Katrina, Irene, and Sandy Adenike Bitto, DrPH, MPH, MD, Consultant Epidemiologist & Master Certified Health Education Specialist, Consultant Services, United States

Food Protection and Defense

5 Root Cause Analysis of Food Establishments with Chronic Non-Compliance Challenges

Christopher Skilton, MS, Health & Environmental Investigator II, Public Health, Seattle & King County, United States | Eyob Mazengia, Environmental Health Supervisor, Public Health, Seattle & King County, United States

6 Improving Food Safety through the Health Education Liaison Program (HELP)

Raymond Britain, REHS/RS, Public Health Program Manager, County of San Bernardino Department of Public Health Division of Environmental Health Services, United States, Roseann Catan, REHS, County of San Bernardino Department of Public Health Division of Environmental Health Services

7 Food and Water Safety Risk Factors Associated with Mobile Food Vehicles

Brenda Vanschaik Faw, Sr. REHS/RS, CP-FS, Senior Environmental Scientist, California EHS-Net, United States, Joyce L. Tuttle, Sr. REHS, PHM, Senior Environmental Scientist, California EHS-Net, United States

Hazardous Materials & Toxic Substances

8 Emergency Planning/Preparedness for Marine Transport of Noxious Chemicals: A Rational Approach David Russell, MD, Director, WHO-Collaborating Centre for Chemical Incidents, Cardiff Metropolitan University, United Kingdom

9 SFS Analysis as a Method for Detecting Styrene Released from Polystyrene Plastic

Bruno Cvetkovic, Head of Division, Institute of Public Health "Dr. Andrija Stampar", Croatia

10 Project CLEAN: Clean Living Environment in Appalachian Neighborhoods

Nasandra Wright, MPH, REHS, RS, Environmental Health Director, Kanawha-Charleston Health Department, United States

11 Emerging Contaminant in Source Water from Medical Treatment: Iodine 131

John Consolvo, MS, Laboratory Manager, Philadelphia Water Department, United States

12 The Green & Healthy Homes Initiative - Implementing a Collaborative Model to Address Home-Based Environmental Health Hazards

Brendan Wade Brown, MHS, Risk Science and Public Policy Certificate, Program Evaluation & Data Management Senior Associate, Green & Healthy Homes Initiative, United States

13 Environmental Health Professionals Helping Seniors Age in Place

Jo Rhodes, MS, HHS, Clinical Services Supervisor, Health and Hospital Corporation, United States

Injury Prevention/Occupational Health

14 Review of Occupational Exposure to Biological Agents Joana Santos Guerreiro, PhD, Teacher, Escola Superior de Tecnologia e Gestao de Viana do Castelo, Portugal | Marta Vasconcelos Pinto, PhD, Teacher, Escola Superior de Tecnologia da Saude de Coimbra, Portugal

15 Occupational Noise Exposure in Gyms of County of Coimbra

Marta Vasconcelos Pinto, PhD, Teacher, Escola Superior de Tecnologia da Saude de Coimbra, Portugal

16 Risk Assessment of a Ferrous and Nonferrous Metals Waste Industry

Joana Santos Guerreiro, PhD, Teacher, Escola Superior de Tecnologia e Gestao de Viana do Castelo, Portugal | Marta Vasconcelos Pinto, PhD, Teacher, Escola Superior de Tecnologia da Saude de Coimbra, Portugal

17 Assessment of Biological Risk on Air, Operators, and Surfaces in Packaging Glass Sorting Facilities Marta Vasconcelos Pinto, PhD, Teacher, Escola Superior de Tecnologia da Saude de Coimbra, Portugal | Joana Santos Guerreiro, PhD, Teacher, Escola Superior de Tecnologia e Gestao de Viana do Castelo, Portugal

18 Ergonomic Risk Assessment: Case Study of an Industry of Low Voltage Electrical Installations

Marta Vasconcelos Pinto, PhD, Teacher, Escola Superior de Tecnologia da Saude de Coimbra, Portugal

19 Food Service Inspectors Promoting Restaurant Worker Protection—A Pilot Assessment and Intervention Study Marilyn C. Underwood, PhD, REHS/RS, Director of Environmental Health, Contra Costa County, Environmental Health Division, United States

Leadership/Management

20 Professional Training Agreement Development and Use for Undergraduate Environmental Health Science Internships

Anne Marie Zimeri, PhD, Assistant Professor / B.S.E.H. Program Coordinator, University of Georgia, United States

21 Building an Effective Environmental Enforcement Program

Royal DeLegge, MPA, PhD, REHS/RS, Environmental Health Director, Salt Lake County Health Department United States | Eric Peterson, MA, LEHS, Assistant Environmental Health Director, Salt Lake County Health Department, United States

Nuisances, Zoonoses, & Vector Control

22 Comparative Pyrethroid Exposure Assessment Among the Residents Living in Bed Bug Infested Buildings in North Carolina

Yolanda Anderson, PhD, Professor, Dept. of Environmental, Earth and Geospatial Sciences, North Carolina Central University, United States | Jessica Barnwelll, Graduate Student, Dept. of Environmental, Earth and Geospatial Sciences, North Carolina Central University, United States

23 The Epidemiology of Coccidioidomycosis–15 California Counties, 2007-2011

Keith Winkler, REHS/RS, Director of Public Health, Kings County Department of Public Health, United States

24 Valley Fever (*Coccidioides immitis*): Implications for Public Health at Fort Irwin and the National Training Center

First Lieutenant (1LT) Genise Carpenter, Chief, Environmental Health, MEDDAC, Weed Army Community Hospital, United States

25 Plague, Tick-Borne Relapsing Fever, and Rocky Mountain Fever Surveillance and Prevention in Coconino County and Grand Canyon

Hugh Murray, RS, EH Plans Examiner, Coconino County Public Health Services District, United States | Doug Murphy, RS, REHS, Environmental Specialist II, Coconino County Public Health Services District, United States

Pathogens and Outbreaks

26 To Bleach or Not to Bleach: A Comparison of Environmental Disinfecting Techniques Effective Against Sporulating Pathogens

Robert Hulette, REHS/RS, Adjunct Instructor, Meharry Medical College, United States

WEDNESDAY • STUDENT RESEARCH PRESENTATIONS

Technology and EH

27 We Track. You Act! A Case Study in Online Advertising from CDC

Jennifer Moore, MPH, Health Communication Specialist, Centers for Disease Control and Prevention, United States

Water Quality

28 Assessment of Pharmaceutical Residues in Watersheds of Auvergne, France

Marie-Pierre Sauvant-Rochat, PharmD, PhD, Professor of Public Health, University of Auvergne – Faculty of Pharmacy, France

29 Education to Water: An Educational Mobilization in the French Primary School

Marie-Pierre Sauvant-Rochat, PharmD, PhDProfessor of Public Health, University of Auvergne – Faculty of Pharmacy, France

30 Colorado's Private Well Initiative: Collaboration and Data Use

Hope Dalton, MPA, Water Specialist, Tri-County Health Department, United States | Eric Brown, Environmental Data Coordinator, Colorado Department of Public Health and Environment, United States

Student Research Presentations

POSTER PRESENTATIONS:

Tuesday, July 8, 6:00 PM-9:00 PM in Gracia Ballroom

ORAL PRESENTATIONS:

Wednesday, July 9 in Belmont 5



8:00 AM- 8:30 AM

Effects of Blood Meal Source on *Aedes albopictus* Life Table Characteristics and Vector Competence for Dengue Virus

Caitlin van Dodewaard, Graduate Student, East Carolina University, Greenville, NC

Faculty Mentor: Dr. Stephanie Richards

8:30 AM - 9:00 AM

Removal of Arsenic from Water Under Static-State Conditions

Jordan Kyle Finneseth, Undergraduate Student, California State University, San Bernardino, San Bernardino, CA *Faculty Mentor: Dr. Robert Phalen*

9:00 AM - 9:30 AM

Single and Binary Adsorption of Heavy Metals in Aqueous Solution Using Shrimp Shells Derivatives

Noelle A. Mware, Undergraduate Student, Benedict College, Columbia, SC *Faculty Mentor: Dr. Milton Morris*

9:30 AM - 10:00 AM

Competitive Adsorption of Pb²⁺, Cu²⁺, and Cr²⁺ via a Packed Bed Column Using Pinecone Derived Adsorbents

Faith A. Kibuye, Undergraduate Student, Benedict College, Columbia, SC *Faculty Mentor. Dr. Milton Morris*

10:00 AM- 10:30 AM

The Lurking Element: A Study About the Dangers of Lead and Other Harmful Elements in Northern Kentucky Toy Vending Machines

Brittany Wells, Undergraduate Student, Eastern Kentucky University, Richmond, KY *Faculty Mentor: Dr. Sheila Pressley*

10:30 AM - 11:00 AM

PM₂₅ Airborne Particulates near Frac Sand Operations

Kristen A. Walters, Undergraduate Student, University Wisconsin-Eau Claire, Eau Claire, WI

Faculty Mentor: Dr. Crispin Pierce

11:00 AM - 12:00 PM

2014 NSF Scholar Presentation: National Survey on the Model Aquatic Health Code

Keidre' Long, Undergraduate Student, Eastern Kentucky University, Richmond, KY

Faculty Mentor: Dr. Sheila Pressley

Thursday Agenda

THURSDAY, JULY 10

7:30 AM -9:00 AM	Town Hall Assembly	Nolita 1 & 2
7:30 AM-5:00 PM	Registration and Information Desk	Belmont Registration Desk 1
8:00 AM-5:00 PM	Food Safety Focus Symposium: CCFS Course Day 2	Condesa 4
12:00 PM-1:00 PM	Technical Advisors Lunch	Yaletown 3
1:00 PM-5:00 PM	Lectures and Learning Labs	Belmont 1-8, Mont-Royal 1-2, Gracia Ballroom 3-4
4:00 PM-5:00 PM	Student and Mentor Network Lounge	Yaletown 4
6:30 PM-7:00 PM	NEHA Cocktail Hour	Nolita Ballroom Foyer
6:30 PM-8:30 PM	SORA Closing Reception	Gracia Ballroom 1
7:00 PM-9:30 PM	President's Banquet	Nolita Ballroom 1-3
Meetings		
7:00 AM-8:00 AM	SORA COI Committee Meeting	Yaletown 3
9:00 AM-10:00 AM	NEHA Regional Caucus Meetings	
	Regions 1 & 3	Gracia Ballroom 1
	Region 2	Gracia Ballroom 2
	Region 4	Gracia Ballroom 7
	Regions 5, 6, & 7	Gracia Ballroom 5
	Regions 8 & 9	Gracia Ballroom 6
3:00 PM-3:50 PM	USEHA Business Meeting	Belmont 8
5:30 PM-5:45 PM	SORA Board Meeting	Yaletown 3

REGIONAL CAUCUS

The following is a list of NEHA regions and the	Region 5: AR, KS, LA, MO, NM, OK, TX		
states within those regions:	Region 6: IL, IN, KY, MI, OH		
Region 1: AK, ID, OR, WA	Region 7: AL, FL, GA, MS, NC, SC, TN		
Region 2: AZ, CA, HI, NV	Region 8: DE, MD, PA, VA, WV, Washington, DC, and members of		
Region 3: CO, MT, UT, WY, and members residing outside of the US	the US armed forces residing outside the US		
Region 4: IA, MN, ND, NE, SD, WI	Region 9: CT, MA, ME, NH, NJ, NY, RI, VT		

TOWN HALL ASSEMBLY					7:30 - 8:50					
Sustainability/ Climate Change AM Belmont 4 PM Belmont 2	Nuisances, Zoonoses, & Vector Control Belmont 6	Healthy Homes and Communities AM Mont Royal 1 PM Belmont 1	Leadership/ Management Be/mont 5	Food Protection & Defense AM Belmont 2 PM Mont-Royal 2	Water Quality Mont Royal 1	Emergency Proparedness & Response <i>Belmont</i> 3	International EH: IFEH Special Sessions AM Mont Royal 2 PM Belmont 4	Uniformed Services Belmont 8	General EH Belmont 1	
2014 Sustainability Award Winner		Pesticide Usage and Pesticide Dust Concentrations in Residences of Astimatic Children Living in Subsidized Housing in Philadelphia		Focusing Disney Magic on Food Safety		Destructive Wildfires and Devastating Floods: EH's Response and Role in Recovery	Emerging A Review of Products and Characterizing Practices, the Potential Resultations Resultations and Challengs Nanoparticles	Telling Your Public Health Story		9:00-9:50am
How Our Use of Water, Energy and Resources Affects Public Health	Get Results! Tools for Managing a Public Health Nulsance Program	Fungal Bioburden in Foreclosed Upon Homes Using ERMI ^{em} as an Indicator	Getting through the Health	Ŧ		Educational Outreach to Facilitate a Safe Return Home After a Flood Event	Using Underreporting Estimates to Mobilize the Development of Targeted, Proactive Food Safety Policy	Current Army Research and Advanced Development Efforts in Environmental Health	DROP IN LEARNING LABS	10:00-10:50am
ater, Energy and R	for Managing a ance Program	VOCs: Sneaky Sources and Sustainable Solutions	₂Swamp – Commu	•		e After a Flood	e Food Safety ₩	arch and ment Efforts in arth	RNING LABS	:50am
	Using Heat to Treat for Bed Bugs in a Homeless Shelter	The Green & Healthy Homes Initiative - Implementing a Collaborative Model to Address Home Based Environmental Health Hazards	Getting through the Swamp – Communicating the Value of Environmental Health	Nanotechnology implications for Food and Food Safety		Protecting the Living Environment of Survivors in Congregate Shelters During Disasters: Is Public Health Ready?	An Integrated Approach to Environmental Regulation and Inspection of Industrial Sites in the European Union	Safe Patient Handling in the Indian Health Service: Assessing Prevalence of Injury Symptoms and Perception of Risk	-	11:00-11:50am
Vegas Goes Green	t for Bed Bugs in gr	thy Homes nrting a el to Address ronmental Health	f Environmental	Food Safety Apps can Improve Food Safety Standards		ng Environment ngregate Shelters Is Public Health	roach to gulation and strial Sites in the	ling in the ice: Assessing ry Symptoms and		1:50am
Inte Pei Ch	GIS of F Pro Suu	He.	He He	глисн Ө С С Т	QA	NH Pre	the the	Dis Eth		
International Perspectives on Climate Change: TBD	GIS Mapping to Get Rid of Rodents - Integrated Pest Program Program Success	Implementing a Community-Based Childcare Program Utilizing the Healthy Homes Rating System	A Competency Based Model for Navigeting the Environmental Health Terrain	Applying a Behavior Change Model Proven to be Effective in Child Care Settings to Licensed Food Establishments	An Innovative Response to Outbreaks	NHSPI: A New Way to Measure and Advance Our Nation's Preparedness	Key Factors in Successful Outbreak Management: Lessons Learned in the United Kingdom	Ethics in Public Health -Pas and Present-A Closer Look Discussion		1:00-1:50
International Perspectives on Climate Change: EH & Urban Health	New Urban Rat Control Program Development in the Post Recessionary Environment	nmunity-Based Jtilizing the ng System	onmental	Change Model ve in Child ensed Food		to Measure ation's	essful Outbreak nns Learned in	Ith -Past er Look and		50
The National Clir What it Means fo Health Practice	Hantavirus in Northern Arizona: Investigation and Response	Clever Software Health in Homes	Lead, Follow or C – Leadership in C	FDA's Oral Culture Learner Project: Helping Food Employees Understand the Importance of Food Safety	Preventing Legionellosis	Public Health Preparedness: Examination of Legal Language Authorizing Responses to Radiological Incidents	Rio Verde, Ecuador: Populations Under Attack By Environmental Conditions	The Uniformed Services Environmental Health Association Strategic Plan		2:00
The National Climate Assessment: What it Means for Environmental Health Practice	Integrated Approach Prevention in Uganda: Experiences from a Pilot Project	Clever Software Tools that Advance Health in Homes	Lead, Follow or Get Out of the Way – Leadership in Contemporary EH	e Learner Food Employees mportance of	Broadening the National Dialogue on Public Health and Water Quality	paredness: egal Language onses to dents	for: Populations Environmental	ervices ealth Association		2:00-2:50
Climate Change a of Governance, Er Opportunities	What Public Health Professionals Need to Know About Ticks and Lyme Disease	No Vacancy: Best Practices for a Multi-Agency Approach to Motel Closure	Leadership Strategies for Developing Millennials	Flip the Fear: Food Allergen Lawsuits, Training Requirements, and Tools	Colorado's Private Well Initiative: Collaboration and Data Use	Incorporating Emergency Preparedness into Retail Food Facility Inspections				3:00-3:50
Climate Change and Sustainability: Navigation of Governance, Energy and Built Environment Opportunities	h Professionals out Ticks and		gies for nials	d Allergen Requirements,	An Online Class for Private Well Owners to Protect Public Health	argency 9 Retail Food 18				-3:50
Navigation /ironment		The Public Health Challenge of Hoarding		The Great Food Truck Race for Food Safety	Arsenic in Groundwater—The Unknown Threat	Assessments After Chemical Incidents: The Elk River Chemical Spill				4:00-4:50
PRESIDENT'S BANQUET										

THURSDAY • AT-A-GLANCE



Thursday Sessions * Indicates that session will be recorded for the Virtual AEC.

Emergency Preparedness & Response

9:00 AM-9:50 AM	Belmont 3	Lecture

Destructive Wildfires and Devastating Floods: Environmental Health's **Response and Role in Recovery**

El Paso County, Colorado recently experienced two destructive wildfires and four devastating floods. These disasters left 900 homes destroyed, many businesses damaged, and an ongoing rebuilding effort. Environmental health professionals reduced human suffering and protected human health by managing the reentry of nearly 60,000 evacuees, assisting damaged/flooded food establishments, surveying damaged wells and onsite wastewater systems, and building a water distribution station. Which issues could you get ahead of the curve during your next disaster response using their insights?

Tom Gonzales, MPH, REHS/RS, Director, Environmental Health Division, El Paso County Public Health, United States

10:00 AM-10:50 AM	Belmont 3	Lecture

Educational Outreach to Facilitate a Safe Return Home After a Flood Event

In Spring 2013, a 30 mile ice jam let loose the mighty Yukon River flooding the village of Galena, Alaska. The regional tribal environmental health professionals and the land grant Cooperative Extension took a collaborative approach to providing healthy homes and flood remediation workshops to evacuees. This novel partnership resulted in residents being empowered to safely enter, assess, and choose to remediate or relocate their dwellings. Evaluate the approach taken in this remote village and determine if a similar strategy could empower your community after a disaster.

Art Nash, Jr., Energy Specialist, Cooperative Extension Service, University of Alaska Fairbanks | Kyle Wright, REHS, Deputy Director of Environmental Health, Tanana Chiefs Conference (Indian Health Service)

11:00 AM-11:50 AM

Belmont 3

Lecture

Protecting the Living Environment of Survivors in Congregate Shelters **During Disasters: Is Public Health Ready?**

Shelters play an important role in providing safety and basic human needs for survival during disaster situations and therefore are an important priority for public health agencies responding to any disaster. This session will describe the current knowledge and use of assessments as well as the importance and benefits of using them as a data collection tool for decision making and occupant protection. Attend this session to see how to implement assessment procedures and tools in your jurisdiction's disaster response

Miguel Cruz, MPH, Student, Florida International University, United States | Karen Levin, National Center for Disaster Preparedness, Columbia University School of Public Health. United States

1:00 PM-1:50 PM Belmont 3 Lecture

NHSPI: A New Way to Measure and Advance Our Nation's Preparedness

The National Health Security Preparedness Index (NHSPI), first released in December 2013, aims to portray our nation's health security using relevant, actionable information to help guide efforts to achieve a higher level of health security preparedness. This session will provide an overview of the NHSPI, share examples of its potential uses, and give attendees a guide to index-related resources for their own application. A discussion of candidate

indicators for integration in the new Environmental and Occupational Health Domain will allow attendees to contribute to the 2014 version of the Index.

Robert L. Burhans, Special Project Advisor/Health Emergency Preparedness Consultant, New York State Department of Health, Retired | Tim Hatch, MPA, REHS/RS, Planning and Logistics Director, Alabama Department of Public Health, Center for Emergency Preparedness

Public Health Preparedness: Examination of Legal Language Authorizing **Responses to Radiological Incidents**

Jurisdictions throughout the country have been developing plans and procedures to respond and recover from radiological threats. In spite of this, the patchwork of statutes and regulations necessary to support a public health response has been largely unexamined. The Centers for Disease Control and Prevention (CDC) and the National Association of County and City Health Officials (NACCHO) developed the radiation legal preparedness project to examine state and local legal authorities related to a radiological incident and, ultimately, to help develop language that would provide for broad, legal authority to respond to, mitigate, and recover from radiation incidents.

Andrew Roszak, MPA, JD, Senior Director, Environmental Health, Pandemic Preparedness and Catastrophic Response, National Association of County and City Health Officials, United States

3:00 PM-3:50 PM	Belmont 3	Lecture

Session Sponsor: Neogen Corporation

Incorporating Emergency Preparedness into Retail Food Facility Inspections

What can you do to make food facilities strong and capable of moving forward after a disaster? This session will describe how to efficiently address emergency preparedness with operators during routine food facility inspections and will provide resources for your reference. This approach provides an opportunity for the regulator and operator to partner not only to increase chances of the facility's success after a disaster, but to reduce time spent on post-disaster assessment, and protect the public's health at the same time

Michele R. DiMaggio, REHS/RS, CP-FS, Supervising Environmental Health Specialist, Contra Costa County, Environmental Health Division, United States

4:00 PM-4:50 PM Belmont 3 Lecture

Assessments After Chemical Incidents: The Elk River Chemical Spill

Rapid epidemiologic investigations after large chemical releases provide information about exposed persons, health effects experienced, and needs resulting from the release. In addition, the emergency response and impact on hospitals may be assessed. This presentation will describe benefits of performing such an assessment, what is involved, and where to find resources and assistance. The investigation after the 2014 Elk River chemical spill in West Virginia will be used to illustrate the process. Mary Anne Duncan, DVM, MPH, DACVPM, Epidemiologist, Agency for Toxic Substances and Disease Registry, United States

Food Protection and Defense

9:00 AM-10:50 AM

Learning Lab

Focusing Disney Magic on Food Safety

This learning lab will demonstrate how the latest Disney technologies and smart temperature probes are being used in foodservice food safety and impacting inspections. When you put your hands on these technologies in this session, you'll have a FASTPASS for food safety. Bypass the complexity. Go straight to the critical control points. Take your process for a ride. And when it's all over, you get a digital "picture" for your records. This session will give you the skills and confidence you need to conduct inspections or audits in facilities using these types of technologies.

Belmont 2

Brian Nummer, PhD, Extension Food Safety Specialist and Senior Food Safety Advisor, Utah State University, United States | Jeff Lindholm, ICertainty, Inc | Ron Dearing Jr, Manager, Walt Disney Parks and Resorts, United States

11:00 AM-11:20 AM	Belmont 2	Mini Lecture
11.00///// 11.20/////		

Nanotechnology Implications for Food and Food Safety

Environmental health practice will be increasingly influenced by the new 21st century technologies. Nanomaterials in food ingredients and packaging are emerging as the likely first contact by environmental health practitioners of the use of these substances and their unique properties. The session will explore the implications of use and the knowledge and skills practitioners will need to respond.

Maurice Brennan, Honorary Senior Lecturer in Environmental Health, University of Birmingham, UK, United Kingdom

11:30 AM – 11:50 AM Belmont 2 Mini Lecture

Food Safety Apps Can Improve Food Safety Standards

Safe Food Healthy Business is an innovative free food safety app that is designed to educate and create awareness for food handlers, managers and proprietors of food businesses. Created by two Irish Environmental Health Practitioners and released in February 2013, the app has had in excess of 25,000 downloads in 31 countries worldwide. See how food safety applications can be used to improve food safety in your community. *Emer Murphy, MS, Food Safety Consultant, EHAI, Ireland*

1:00 PM-1:50 PM	Mont-Royal 2*	Lecture

Applying a Behavior Change Model Proven to be Effective in Child Care Settings to Licensed Food Establishments

This presentation will introduce the model behavior change strategy used to reduce the number of illnesses and days missed by both staff and children in child care centers. Hear how an FDA Retail Food Safety grant was used to increase Active Managerial Controls implementation for the BIG 5 risk factors for foodborne illness. Lessons learned and results of the first full year of Lincoln-Lancaster County Health Department's Retail Food Safety Consultant program will be shared.

Scott Holmes, MS, REHS/RS, Manager, Environmental Public Health, Lincoln-Lancaster County Health Department, United States

2:00 PM-2:50 PM	Mont-Royal 2*	Lecture

Session Sponsor: San Jamar

FDA's Oral Culture Learner Project: Helping Food Employees Understand the Importance of Food Safety

What we have here is a failure to communicate! Use this session to obtain insights as to why the retail food regulatory inspection process may not be as effective as it could be. Learn how to tailor your communication techniques to make a connection with food worker that will result in positive behaviorial change.

John Marcello, REHS/RS, CP-FS, Pacific Region Retail Food Specialist, U.S. Food and Drug Administration, United States | Chuck Catlin, MPA, RS, Global Food Quality & Risk Manager, Google

3:00 PM-3:50 PM

Mont-Royal 2*

Session Sponsor: National Restaurant Association

Flip the Fear: Food Allergen Lawsuits, Training Requirements, and Tools

The number of individuals with food allergies in the U.S. continues to rise each year. With recent rulings by the FDA and a host of lawsuits over how food allergic diners are treated in the foodservice industry, it can be a scary subject to approach in a food establishment. This session will cover current regulations and training requirements, provide tools for you to flip the fear, and create a safe atmosphere for those with special dietary needs. *Kevin McMaster, MBA, Director of Culinary Operations, SeaWorld Parks and Entertainment, United States* | *Victoria Griffith, CP-FS, Board Member, MenuTrinfo, LLC, President, Griffith Safety Group, United States* | *David Crownover, Product Manager, National Restaurant Association, United States*

4:00 PM-4:50 PM Mont-Royal 2* Learning Lab

The Great Food Truck Race...for Food Safety

The food truck phenomenon has gained national media attention with an estimated 20,000 plus trucks nationwide bringing in over \$1.2 billion annually. Amid the frenzy is a host of unique challenges for food safety professionals. This session will address many approaches to addressing the operational obstacles associated with food trucks such as operating in a small space, reliance upon generators to keep food at correct temperatures, limited water supply, and their mobile nature. Come prepared to trade and take away tips and tricks to use in your work to prevent foodborne illness with food truck operators.

Robert Kramer, REHS/RS, Director Food Services & Safety, ECDI, Food Fort, United States

General EH Drop in Learning Labs

9:00 AM-12:00 pm

Belmont 1 Learning Lab [Drop in]

A Mile in Their Shoes: A Citizen's Experience of EH Program Administration

This lab will put you in the shoes of your customer. Access restaurant inspection results and scores, submit a complaint or compliment, or participate in the permitting process through FastTrackGov's Citizen Interaction Module. Witness how agency processes are streamlined behind the scenes and evaluate the level of service constituents receive through the automated technological interface. How do YOUR processes compare? *Bobbi Wernle, Product Manager, Mitchell Humphrey & Co., United States* | *Nancy Brady, Account Executive, Mitchell Humphrey & Co., United States* |

9:00 AM-12:00 pm Belmont 1 Learning Lab [Drop in]

Plan Checkers: High Rollers of Restaurant Review

Completing plan reviews with speed, accuracy, and confidence can be quite a challenge given the complexity of meeting all regulatory requirements and optimizing operational flow alongside other considerations. Work with experts to solve problems related to approving and identifying appropriate hoods, checking plumbing requirements like water and waste lines and sizing hot water heaters, or approving layouts that are efficient for the intended operations. Take a trip into the future to explore the frontier of electronic plan review.

Colleen Maitoza, REHS/RS, Supervising Health Environmental Specialist IV, Sacramento County Environmental Management Department, United States | Kari Wagner, REHS, Environmental Health Specialist III, Sacramento County Environmental Management Department, United States | Jason Smalley, Supervising Health Environmental Specialist IV, Sacramento County Environmental Management Department, United States

9:00 AM-12:00 pm Belmont 1 Learning Lab [Drop in]

Make Your Data Work Hard, So You Don't Have To

See how easy it is to perform inspections electronically in the field through a hands-on demonstration. Then discover how inspection scheduling and comprehensive data reporting tools can be leveraged to more effectively manage your resources, staff, and programs.

Kevin Thrasher, President / CEO, Sweeps Software, Inc.

52 The premier event for environmental health training, education, networking, advancement, and more!

9:00 AM-12:00 pm Belmont 1 Learning Lab [Drop in]

Water Wizardrv

Instead of a wand, use reagent test strips and a beam of light in a tiny cauldron to get instant and exact water analysis results. In this lab, you'll test your water bottle or the hotel swimming pool water with a hand-held photometer for chlorine, pH, fluoride, alkalinity, or 26 other water quality metrics and sync the result to your tablet or smart phone. Come away with an understanding of water chemistry and a way to apply new mobile technology to your environmental health programs.

James Jaunakais, Industrial Test Systems, Inc., Maris Jaunakais, Industrial Test Systems, Inc., United States

Healthy Homes and Communities

9:00 AM-9:50 AM

Mont-Royal 1*

Lecture

Pesticide Usage and Pesticide Dust Concentrations in Residences of Asthmatic Children Living in Subsidized Housing

The omnipresence of legal and illegal pesticides still impact the lives of children living in low-income subsidized housing and may significantly impact asthma-related pediatric health. This study aimed to characterize the presence of pesticides, this potential health link, and policy implications for pest control and healthy communities in multifamily dwellings. Miranda Engberg, MPH, Environmental Health Specialist, City of Racine Health Department, United States

10:00 AM-10:20 AM	Mont-Royal 1*	Lecture
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Fungal Bioburden in Foreclosed Upon Homes Using ERMIsm as an Indicator

Foreclosed homes sometimes remain empty or unmaintained for long periods of time, allowing the factors that contribute to fungal growth to go unchecked. Because fungi can cause adverse health effects like allergic and asthmatic reactions, this study examined the fungal bioburden in foreclosed homes. Dust samples were collected and analyzed for fungi using U.S. EPA's Environmental Relative Moldiness Index (ERMIsm). Attend this session to learn how the ERMIsm was created, know when to use it, how to interpret the results, and what further research is needed for ERMIsm to become more broadly applicable to EH practice.

Nick Hopkins, Microbiology Laboratory Supervisor, Forensic Analytical Laboratories Inc. United States

10:30 AM-10:50 AM

Mont-Royal 1* Mini Lecture

VOCs: Sneaky Sources and Sustainable Solutions

This session will use case studies to examine the impact of building materials and particular chemicals on indoor air quality (IAQ) throughout their lifecycle. After attending this talk, environmental health professionals will be able to identify materials that might be the origin of volatile organic compounds (VOCs), identify low-emitting alternative materials, and describe the benefits and value of using sustainable building materials. Come away with a proven method for controlling volatile organic compounds in the indoor environments in your community.

Josh Jacobs, Technical Information & Public Affairs, UL Environment, United States

11:00 AM-11:50 AM

Mont-Royal 1* Lecture

The Green & Healthy Homes Initiative - Implementing a Collaborative Model to Address Home Based Environmental Health Hazards

Do more with less! The Green and Healthy Homes Initiative is an innovative model that uses collaboration to assess and address environmental health hazards in the home efficiently and effectively. Using experience and data from interventions in 4,500 homes, this session will demonstrate how to braid multiple resource streams and leverage non-traditional funding sources. You'll create a map of assets and opportunities for the development of a local model in your own community.

Ruth Ann Norton, Executive Director, Green & Healthy Homes Initiative, United States

1:00 PM-1:50 PM

Belmont 1

Lecture

Implementing a Community-Based Childcare Program Utilizing the **Healthy Homes Rating System**

This session will review a case study of the expansion of the local healthy homes program to home-based and small childcare providers. A community organization created a new healthy childcare assessment program based on the Healthy Homes Rating System. The program rates 29 environmental, health and safety hazards for their potential to harm residents and enables those risks to be mitigated. The local fire department even accepts the assessment as equivalent to a fire inspection. Come see if a program like this would benefit your community.

Ann Marie Wolf, MS, President, Sonora Environmental Research Institute, Inc., United States

2:00 PM-2:50 PM	Belmont 1	Lecture

Clever Software Tools that Advance Health in Homes

Get an introduction to the Housing Health and Safety Rating System (HHSRS) and English housing enforcement work. Then try two useful software tools to help with using HHSRS. Hunt for hazards in a virtual home, a tool which can be taken away for free. Then try an online tool to justify budgets by calculating the cost savings from using the HHSRS. Bring your laptops and tablets!

Henry Dawson, MS, Environmental Health Professional/University Lecturer, Bristol City Council/Cardiff Metropolitan University, United Kingdom

	3:00 PM-3:50 PM	Belmont 1	Lecture
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No Vacancy: Best Practices for a Multi-Agency Approach to Motel Closure

When substandard living conditions warrant the closure of a hotel or motel to protect the health of its occupants, the closure of the facility can be complicated by the needs of those being displaced. Kern County's Environmental Health Division has developed a multi-agency approach that ensures government agencies, non-profit organizations, and elected officials can continue to provide services and support the effective relocation of the occupants. Could a similar approach enhance partner collaboration and communication and efficiently utilize resources in your iurisdiction?

Amy Rutledge, REHS/RS, Environmental Health Specialist IV, Supervisor, Kern County Public Health Department/Environmental Health Division, United States

4:00 PM-4:50 PM Belmont 1 The Public Health Challenge of Hoarding

Problematic hoarding is a significant challenge for Public Health officials in every community. It demands an integrated response that recognizes that the complexity presented cannot be addressed by any single agency. This session will discuss how to have timely response interventions through multi-agency approaches with supportive service delivery and long-term

support, resulting in reduced recurrence.

Ron de Burger, Retired Director, Healthy Environments, Toronto Public Health, Canada

International EH: IFEH Special Sessions

9:00 AM-9:20 AM

Mont-Royal 2* Mini Lecture

Lecture

Emerging Products and Human Health: Characterizing the Potential Risks Posed by Nanoparticles

What type of consumer products do you interact with on a daily basis and do they contain nano-particles? What properties might those engineered iron, titanium and carbon nano-particles exhibit that differ from the norm? What type of information do environmental health professionals need to prevent exposures that might cause negative biological effects? This session will give you the facts so you can adapt to the rapidly changing intersection of health and environment.

Ephraim Massawe. PhD. Assistant Professor, Environmental Health and Industrial Hygiene, Southeastern Louisiana University

A Review of Food Safety Practices, Regulations, and Challenges in Lima, Peru

This presentation will share results of research conducted in various restaurants and markets of Lima, Peru. It will describe the food safety regulation and inspection system in use and identify some of the major the major variables and food safety risk factors at play. A brief comparison to the U.S. FDA *Food Code* will be made, providing attendees an opportunity to discuss possible approaches to remediation.

Eliezer Bermudez, MS, PhD, CP-FS, Associate Professor, Indiana State University, United States

10:00 AM-10:50 AM Mont-Royal 2*	Lecture
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Using Underreporting Estimates to Mobilize the Development of Targeted, Proactive Food Safety Policy

Public health policy targeting populations at greatest risk can be used to significantly reduce the burden of foodborne disease. This study calculated incidence rates, disability adjusted life years, and quality adjusted life years estimates for salmonellosis and campylobacteriosis, adjusted for underreporting. Investigators then looked at how these measures of disease burden can contribute to the policy debate on the public health significance of foodborne disease. Targeting food safety activities through proactive public health policy and by using underreporting estimates of reported cases of foodborne illness may raise the issue of foodborne disease in the policy agenda.

Andrew Papadopoulos, PhD, MBA, CPHI(C), Associate Professor and Coordinator, Master of Public Health, University of Guelph, Canada

11:00 AM-11:50 AM Mont-Royal 2* Lecture

An Integrated Approach to Environmental Regulation and Inspection of Industrial Sites in the European Union

This session will provide an overview of the EU Industrial Emission Directive currently being implemented to avoid or minimize polluting emissions in the atmosphere, water, and soil, as well as waste from industrial and agricultural installations, with the aim of achieving a high level of environmental and health protection. Permit structures, industry requirements and inspection processes will be covered. Presenters will discuss the use of Best Available Techniques (BAT) and their application as a reference tool far beyond the EU.

Henning Hansen, President Elect, International Federation of Environmental Health / EnviNa Denmark, Denmark

1:00 PM-1:50 PM

Belmont 4

Lecture

Lecture

Key Factors in Successful Outbreak Management: Lessons Learned in the United Kingdom

Nobody looks forward to a major food poisoning outbreak. But being fully prepared is an essential component of effective outbreak investigation. This session will present lessons learned from two major outbreaks of *E. coli O157* in the UK, with a particular focus on the effective management of the outbreak investigation. Attendees will be able to evaluate their own outbreak management process and skills to ensure they are fully prepared for major outbreaks in their locality.

Alastair Tomlinson, MPH, CEHP, Senior Lecturer in Environmental & Public Health, Cardiff Metropolitan University, United Kingdom

2:00 PM-2:50 PM

Belmont 4

Rio Verde, Ecuador: Populations Under Attack By Environmental Conditions

This session will share the results of a comprehensive assessment of environmental health conditions affecting the morbidity and mortality rates of a population living near the Rio Verde River. We'll chronicle the sanitary conditions observed and the development of an infrastructure of health promoters and voluntary citizens groups championing positive change and sustainability. See how the local political structure can collaborate and participate in strategic solutions that improve conditions and lower the morbidity and mortality in the region. Daniel Harper, DrPH, Consultant, Harper Global Public Health Consulting, United States | Dennis Kalson, International Environmental Health Consultant, Private Consultant, United States

Leadership/Management

10:00 AM-11:50 AM	Belmont 5	Learning Lab

Getting through the Swamp - Communicating the Value of Environmental Health

Do you wonder why your community or worse, decision-makers, don't seem to understand the value of what you do every day? Are you frustrated when your attempts to explain your work fall flat? Then join us for an eyeopening session supported by robust research about what the public thinks about environmental health and how this information can be used to effectively reframe your communications and underscore the value of environmental health.

Tracy Kolian, Interim Director, Center for Public Health Policy, American Public Health Association, United States

1:00 PM-1:50 PM Belmont 5 Lecture

A Competency Based Model for Navigating the Environmental Health Terrain

Issues of health and safety can arouse strong emotions among the public, and given the complexity of environmental health practice today's professionals must consider the need to master certain skills while further developing their talent and capabilities. This session will focus on the 'human' side of environmental health practice and will present to you the skills, competencies, and perspectives needed for successful environmental health practice.

Marc Benchimol, MS, REHS/RS, CP-FS, CCFS, Environmental Health Officer/Auditor, Queensland, Australia

2:00 PM-2:50 PM	Belmont 5	Lecture

Lead, Follow, or Get Out of the Way—Leadership in Contemporary Environmental Health

This "talk show interview" with the 2013 Walter F. Snyder Award winner will examine the practice of leadership within the complexities of our ever changing environmental health profession. A moderator will begin the conversation and then allow the audience to interview our distinguished guest. The audience will help shape the discussion on successes, failures, and transformational moments in environmental health leadership. Attendees will leave with specific direction to enhance their own leadership skills for action on pressing career challenges. This session is presented by the American Academy of Sanitarians.

Michele Samarya-Timm, MA, HO, MCHES, REHS/RS, DAAS, Health Educator / REHS, Somerset County Department of Health, United States | Vince Radke, MPH, RS, CP-FS, DAAS, CPH, Sanitarian, Centers for Disease Control and Prevention, United States

3:00 PM-3:50 PM	Belmont 5	Lecture

Leadership Strategies for Developing Millennials

The face of EH is changing. Baby Boomers are retiring and Millennials will soon make up the majority of the workforce. This session will use generational theory to describe the relational dynamics at play in today's workplace, including attitudes and preferred learning and leadership styles. Examine the factors and qualities that make mentoring a best practice for leadership development and come away with proven strategies and novel approaches to maximize the potential of the next generation of EH leaders. *Frances Gelder, MA, CIPHI(C), Health Protection Services Program Manager, Simcoe Muskoka District Health Unit, Canada*

Nont-Roya

Nuisances, Zoonoses, & Vector Control

10:00 AM-10:50 AM	Belmont 6	Lecture
Session Sponsor: Orkin		
Get Results! Tools for Managi The housing crisis and diminis in more complaints and public County Public Health. See how to categorize and prioritize com in the community. In this sessi and test these tools as a way for nuisances with limited funds a Nichole Lemin, REHS/RS, Assistan Health, Franklin County Public Heal Public Health Nuisance Program S United States	hed mental health service health nuisance inspect we used simple triage a nplaints to get results an on, you'll be able to eval or your department to m nd staff. t Health Commissioner/Dire alth, United States Melissa	ces have resulted tions at Franklin and scoring tools d gain recognition uate this approach anage public health ctor of Environmental McArthur, REHS/RS,
11:00 AM-11:50 AM	Belmont 6	Lecture
Session Sponsor: Orkin		
Using Heat to Treat for Bed B	ugs in a Homeless Shel	lter
the special considerations asso infestation in an institutional fa the homeless population affect learned and come away with a preparedness plans for institut <i>Roy Kroeger, REHS/RS, Env. Health Department, United States</i>	cility, and the evacuation ted. Attendees will bene case for implementing e ional housing facilities.	n and relocation of fit from the lessons evacuations and
1:00 PM-1:20 PM	Belmont 6	Mini Lecture
Session Sponsor: Orkin		
GIS Mapping to Get Rid of Ro Program Success	dents—Integrated Pest	Managment
Eek!!! Rodents!!! Attending this understanding of how to use G difference in an environmental on integrated pest managemen to assist in better deployment of learn new ways to make your s Joshua Witt, Environmental Health Health and Safety, United States Intern, UCLA Office of Environment	IS mapping software to health field. While this p ht it can easily cross into of limited resources. As pecific program more ef <i>Program Manager, UCLA O Alan Chen, MPH, Environm</i>	strategically make a presentation focuses o other areas of study a participant you will ffective! <i>ffice of Environment,</i> <i>ental Health Program</i>
1:30 PM-1:50 PM	Belmont 6	Lecture
Session Sponsor: Orkin		
New Urban Rat Control Progra Post Recessionary Environme	•	

The 2014 proposed budget has been submitted to the Mayor's Office as scheduled. Suddenly, there is a rash of rat infestation complaints from a certain area of the city that is not underserved. Pressure builds to do something. There's no money and you currently have seven vacancies on your staff. What do you do? See how one agency created a new program from scratch.

Keith Krinn, MA, REHS/RS, DAAS, Public Health Administrator, Environmental Health Division—Columbus Public Health, United States

2:00 PM-2:20 PM Belmont 6 Mini Lecture

Session Sponsor: Orkin

Integrated Approach to Malaria Prevention in Uganda: Experiences from a Pilot Project

This pilot project promoted an integrated approach to the prevention of malaria at the household level in two rural communities where malaria is the leading cause of morbidity and mortality. This project conducted a baseline survey on malaria prevention knowledge and practices; trained

community health workers; increased awareness of the population through an integrated approach to malaria prevention; and established study demonstration sites. The integrated approach to malaria prevention was well received by the study communities and work continues to assess health benefits and community perceptions of this approach. Available data will be shared.

David Musoke, MS, Assistant Lecturer, Makerere University School of Public Health, Uganda | George Karani, Professor of Environmental Health, Cardiff Metropolitan University, United Kingdom

2:30 PM-2:50 PM	Belmont 6	Mini Lecture
Session Sponsor: Orkin		

Hantavirus in Northern Arizona: Investigation and Response

Two cases of hantavirus occurred within four weeks of each other in the summer of 2013; one was fatal. This session will discuss investigation techniques, recommendations made to the families affected, and the use of public service announcements. See how this incident led to the local health agency's collaboration with a university to conduct routine surveillance and to retool education for the public and the medical community.

Marlene Gaither, MPA, REHS/RS, Environmental Health Program Manager, Coconino County Public Health Services District, United States

3:00 PM-3:50 PM	Belmont 6	Lecture
Session Sponsor: Orkin		

What Public Health Professionals Need to Know About Ticks and Lyme Disease

Lyme disease continues to have a serious impact on public health in the United States. The Centers for Disease Control (CDC) reported more than 22,000 confirmed infections of *Borrelia burgdorferi*, the causal agent of Lyme disease in 2012. This session will cover the tick vectors and pathology of Lyme disease and the necessity and benefits of an integrated approach to its prevention. Come away with tips to educate the at-risk public and with the ability to implement the best mitigation practices for the management of vectors.

Patrick Copps, MS, BCE, Technical Services Manager, Orkin, United States

Onsite Wastewater

See SORA agenda on page 57

Sustainability/Climate Change

9:00 AM – 9:50 AM Belmont 4

Lecture

The 2014 NEHA Excellence in Sustainability Award Winning Project

NEHA's Excellence in Sustainability Award, sponsored by UL, recognizes any organization, business, association, individual, or NEHA member who is solving environmental challenges by using innovative and environmentally sustainable practices. The 7th Annual NEHA Excellence in Sustainability Award Winner will be announced at the NEHA 2014 AEC!

Adam Palmer, AICP, Environmental Policy Planner, Eagle County, CO

10:00 AM – 11:20 AM Belmont 4 Learning La	g Lab
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How Our Use of Water, Energy, and Resources Affects Public Health

Environmental Health practice promotes human health by limiting human exposure to harmful toxins, substances, and microbes in the environment. Sometimes, this means protecting the health of the natural environment that surrounds us--dramatic mountains, big skies and pristine lakes and rivers. This learning lab will engage you in an activity that explores the role of public health in sustainable water supply management, energy conservation in homes, business, and schools, and evaluating the toxicity of products we use. Could this approach protect the health of our communities and our environment for future generations? *Sharon Grant, HHS, Owner, Eco Edge, United States*

11:30 AM – 11:50 AM Belmont 4 Mini Lecture

Vegas Goes Green

Las Vegas, Spanish for "the meadows," was founded at a cluster of refreshing springs in the midst of desert, an ideal stop along the route west. While Las Vegas is perceived to be a place of excess and waste that has high demands for water and energy, the city is actually a national leader and model of sustainability. Come away with an understanding of the sustainability initiatives making a difference in the human health, the economy, and the environment of Las Vegas.

Marco N. Velotta, MS, AICP, LEED Green Assoc., Management Analyst, City of Las Vegas, Office of Sustainability

Belmont 2 Mini Lecture

International Perspectives on Climate Change: Education of EH Practitioners

Sustainable Communities and Climate Change are emerging within the scope of environmental public health practice. In the global economy, IFEH is looking at competencies and Certification, so EH practitioners can be recognised and practice around the world. As the first step to ensure competence in this emerging area, we need to foster knowledge, skills and abilities in our academic programs. This session explores how we might accomplish that and the possible consequences of not doing so.

R. Steven Konkel, PhD, Associate Professor Environmental Health Science, University of Alaska Anchorage College of Health | Sian Buckley, Senior Lecturer in Environmental Health, University of the West of England, United Kingdom | Tony Lewis, Head of Policy and Education, Chartered Institute of Environmental Health, United Kingdom

1:30 PM – 1:50 PM Belmont 2 Mini Lecture

International Perspectives on Climate Change: EH & Urban Health

Urban areas now accommodate over 50% of the world population, and that percentage continues to climb. Against a backdrop of climate change, and environmental, economic and social change currently occurring in society, major challenges exist in the protection and promotion of urban health. This session will make a case for the widespread adoption of mitigation and adaptation strategies and will present a review of the best policies for healthy cities and sustainable urban development.

Nelson Leite e Sa, MS, REHS/RS, CEHT, Professor of Environmental Health, ESTeSC— Coimbra Health School, Portugal | Susana Paixao, Professor of Environmental Health, ESTeSC—Coimbra Health School, Portugal

2:00 PM-2:50 PM

Belmont 2

Lecture

The National Climate Assessment: What it Means for Environmental Health Practice

The National Climate Assessment (NCA) is a United States government interagency ongoing effort on climate change science. This session will address the health effects of climate change published in the NCA and their intersection with environmental health practice. An overview of the report findings will not only identify possible policy drivers, but will also inform the role of environmental health in response, adaptation, and mitigation of the negative health effects of climate change at the national and regional level.

C. Andrew Miller, PhD, Associate Director for Climate, Air, Climate, and Energy Research Program, US EPA Office of Research and Development

3:00 PM-4:20 PM	Belmont 2	Lecture
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Climate Change and Sustainability: Navigation of Governance, Energy, and Built Environment Opportunities

The United Nations' Intergovernmental Panel on Climate Change (IPCC) 5th Assessment Report (AR5), released this spring provides a clear and view of the current scientific knowledge relevant to climate change, the risks it poses, its possible impacts, and the need for sound adaptation and mitigation efforts. This session will discuss how the science of reports like the AR5 and the National Climate Assessment (NCA) may get translated to local policy, plans, and investments in developing healthy, sustainable

communities. Keynoter Dr. Keim, Dr. Konkel, and Paul Schramm will share examples of local initiatives already under way. Moderated by NEHA Technical Advisor Tom Gonzales.

Tom Gonzales, MPH, REHS/RS, Director, Environmental Health Division, El Paso County Public Health | Mark Keim, MD, Associate Director for Science in the Office for Environmental Health Emergencies, Centers for Disease Control and Prevention, United States | R. Steven Konkel, PhD, Associate Professor Environmental Health Science, University of Alaska Anchorage College of Health, United States | C. Andrew Miller, PhD, Associate Director for Climate, Air, Climate, and Energy Research Program, US EPA Office of Research and Development

Uniformed Services

9:00 AM-9:50 AM	Belmont 8	Lecture
Telling Your Public Health Story		

Many people outside the profession of environmental health science are not aware of the good work done on their behalf and for their protection. Most will have some preconceived notions of what an environmental health professional might do for a living. But, many will not likely realize the vast and varied areas of public health in which an environmental health officers may be involved. It is up to us to record and share our experiences. *Bruce M. Etchison, MPH, RS, DAAS, Captain (Retired), U.S. Public Health Service, United States*

10:00	AM-	10:50	AM	Belmo	ont 8		Lecture

Current Army Research and Advanced Development Efforts in Environmental Health

This presentation will provide a current look at ongoing Army research and advanced developments efforts in the area of environmental health. The U.S. Army Medical Research and Materiel Command has several lines of research and products being fielded in the area of environmental health and this presentation will highlight some efforts in the military infectious disease and military operational medicine investment areas.

John V. Teyhen, REHS, Director, Medical Systems Office & Director, Medical Portfolio, US Army Medical Research & Materiel Command, Assistant Secretary of the Army for Acquisition, Logistics, & Technology, Deputy Assistant Secretary of the Army for Research & Technology, United States

11:00 AM-11:50 AM	Belmont 8	Lecture

Safe Patient Handling in the Indian Health Service: Assessing Prevalence of Injury Symptoms and Perception of Risk

In the current state of our healthcare system, how do we demonstrate the importance of the prevention of occupational injury as a priority for intervention? This research attempted to illustrate the burden of one of the most significant causes of occupational injury among healthcare workers: work-related musculoskeletal injuries resulting from patient handling. Presenters will share the results of research conducted in two of the largest healthcare facilities within the Indian Health Service and discuss how the results can be used to improve worker safety.

LCDR Katherine N. Hubbard, MPH, REHS/RS, Environmental Health Officer, US Public Health Service, Alaska Native Tribal Health Consortium

Ethics in Public Health: Past and Present

More and more organizations are making critical decisions which affect the lives of others based on past ethical study and practices. Environmental health professionals are relying on the ethical problems encountered and solved from history, best practices, and proven processes to help them develop efficient solutions to public health cases. This session will provide a brief overview of ethics within public health and environmental health, and an opportunity for a roundtable discussion of real-world examples of ethical questions posed within in the military and civilian work environments.

A. Deloris Alexander, MS, PhD, Certified as a Bioethics Trainer, Assistant Professor, Director of Integrative Biosciences Ph.D. Program, Tuskegee University, United States

2:00 PM-2:50 PM

Belmont 8

Lecture

The Uniformed Services Environmental Health Association Strategic Plan

This presentation will serve as a primer for the USEHA Business Meeting where the implementation of the USEHA Strategy will be discussed. The primary focus will be a discussion about the process that was followed to develop the USEHA Strategy and the specific considerations that were identified to address the career needs of affiliate members.

Welford C. Roberts, PhD, DAAS, RS/REHS, Subject Matter Expert, Force Health Protection and Human Performance, Medical Research and Innovations, Air Force Medical Support Agency, United States

Water Quality

1:00 PM-2:20 PM	Mont-Royal 1*	Lecture
1:00 FIVI-2:20 FIVI	WULL-RUYAL I	Lecture

Session Sponsor: Mycometer

Innovative Methods to Control, Investigate, and Monitor for *Legionella*: A Panel Discussion

How does a tourism-dependent community respond to an environmental pathogen found in its water? This session will introduce the basic ecology and pathogenicity of *Legionella*. A local engineer will share how a large hotel developed and implemented a waterborne pathogen control plan and the local health district will cover their approach to investigating single cases of legionellosis. Detection and monitoring methods will also be addressed, including a rapid bacteria screening method which provides a means for risk assessment and outbreak mitigation without waiting for a bacterial culture. See if this integrated approach could be applied to address *Legionella* concerns in your community.

Mark Bergtholdt, MPH, REHS/RS, Environmental Health Supervisor, Southern Nevada Health District, United States | Brooke Winter, Regional Manager & Principal, Phigenics | Lisa Rogers, President, Mycometer, Inc.

2:30 PM-2:50 PM

Mont-Royal 1*

Session Sponsor: Industrial Test Systems, Inc.

Broadening the National Dialogue on Public Health and Water Quality

This presentation will highlight the benefits of leveraging cross-disciplinary knowledge, resources, and communication channels on water quality and public health. Several examples of media coverage of water quality issues and the response from public health officials and water quality practitioners will be presented to give attendees an understanding of the perspectives of water quality and public health groups, common understandings, and technical challenges. Come away with techniques and recommendations to more effectively and consistently communicate with the public about water quality issues.

Rula A. Deeb, PhD, BCEEM, Principal, Geosyntec, United States

3:00 PM-3:20 PM

Mont-Royal 1* Mini Lecture

Mini Lecture

Colorado's Private Well Initiative: Collaboration and Data Use

From conception, project design, results, and lessons learned along the way, hear a case study about collaboration between federal, state and local agencies to obtain and use water quality data related to private wells while marketing the use of the data. This case study involves multiple agencies sharing data, data display using geographic information systems (GIS), and unanticipated obstacles. We learned the hard way so you don't have to. *Hope Dalton, MPA, Water Specialist, Tri-County Health Department, United States*

3:30 PM-3:50 PM

Mont-Royal 1*

Mini Lecture

An Online Class for Private Well Owners to Protect Public Health

The Private Well Class is designed to provide homeowners an understanding of the basic science of water wells, well maintenance and groundwater protection. The innovative, ten-lesson class is delivered by e-mail, supplemented by webinars, and is self-directed. This session will cover the success of this program, which has had over 2,700 participants in the first year. Hear how sanitarians are using this class in their work with well owners and how you could utilize this free resource!

Steven Wilson, MS, Groundwater Hydrologist, University of Illinois—State Water Survey, United States

4:00 PM-4:50 PM	Mont-Royal 1*	Lecture

Arsenic in Groundwater—The Unknown Threat

Public wells in the United States are regularly tested for arsenic, but private wells typically are not. However, when arsenic was found in 47% of wells tested in Iowa in 2008, a case study was designed to determine the source. This pilot study in Cerro Gordo County tests 29 parameters of wells and maps them against their depth and source aquifers. See which factors are associated with arsenic contamination in groundwater, recommendations for avoiding contamination, and how researchers, public health officials, and private wells drillers built a successful team to serve the homeowners for this serious threat.

Douglas Schnoebelen, PhD, Director, Lucile A. Carver Mississippi Riverside Environmental Research Station, United States | Sophia Walsh, Environmental Health Specialist, Cerro Gordo County Public Health, United States



NEHA AEC attendees are welcome to attend the SORA educational sessions at no charge. Please be aware that some events require tickets or are open only to SORA/COI registrants.

MONDAY, JULY 7

Pre-Conference

1:00 PM - 5:00 PM

SORA/NEHA Onsite Wastewater Reclamation & Reuse Field Trip

Join us for an in-depth look at the landscape of water resource management in Southern Nevada as we visit two of the area's water reclamation facilities. Clark County Water Reclamation District's Desert Breeze Water Resource Center, is a state-of-the-art facility that collects wastewater flows from the surrounding neighborhoods to produce highquality reclaimed water used for large turf irrigation applications such as parks and golf courses. Then, see how Las Vegas Valley Water District's Springs Preserve facilities reclaim wastewater for reuse on its 180-acre campus, which is a living example of sustainable living, design, and architecture, with some of the nation's "greenest" buildings. *Buses Sponsored by Advanced Drainage Systems, Inc.*

WEDNESDAY, JULY 9

8:00 AM – 9:00 AM	Yaletown 3		
Strategic Planning Committee Meeting			
10.00 PM 1.00 PM			
<u>12:00 PM – 1:00 PM</u>	Yaletown 3		
Conference Planning Committee Meeting			
5:30 PM – 6:30 PM	Yaletown 3		
SORA Board Meeting (Closed for Board Members Only)			
-	-		
<u>6:30 PM – 7:30 PM</u>	Brera 4 & 5		
6:30 PM – 7:30 PM SORA Meet & Greet Reception	Brera 4 & 5		
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	Brera 4 & 5		
	Brera 4 & 5		

THURSDAY, JULY 10

7:00 AM – 8:00 AM COI Committee Meeting	Yaletown 3		
8:00 AM - 8:45 AM	Gracia Ballroom 3 & 4		
Breakfast			
Diodinatio			
8:45 AM – 9:00 AM	Gracia Ballroom 3 & 4		
Welcome and Opening Remarks Gerald Iwan (NESC)			
	Cracia Pallroom 2 8 1		

9:00 AM – 10:00 AM Gracia Ballroom 3 & 4

Feature Presentation–Regulations Must Adapt to Reuse

Increasing stresses on water resources, exacerbated by climate and population growth, are driving water agencies around the world to look increasingly to reuse as a source of supply. While public perception continues to present a challenge, so too does the lack of comprehensive and consistent regulation. As more communities embrace aquifer replenishment and even direct reuse projects, regulators must proactively evaluate issues of concern and develop rules that protect public health while allowing water agencies to capitalize upon this resource. *Zane Marshall, Director, Water & Environmental Resources Department, Southern Nevada Water Authority*

Gracia Ballroom 3 & 4

10:00 AM - 10:30 AM

Break

10:30 AM - 12:00 PM

SORA Business Meeting

• President's welcome and introduction

Old Business:

- Dues and Memberships Report
- MOU with EPA and other partners
- White Papers: Open Discussion, Decentralized Sustainability, Decentralized Funding

New Business:

- Election of Board Members (Regions 2, 5, 8, & Canada)
- By-Law Amendments and Discussion
- SORA Strategic Planning Committee Report
- SORA Conference Planning Committee Report
- COI and Nonpoint Source Adhoc Committee Report
- Present/Recognize COI Members
- Introducing SORA 2014
- Open Forum
- Adjournment



12:00 PM - 1:00 PM

Lunch

1:00 PM – 2:00 PM

Gracia Ballroom 3 & 4

Market Impacts of Product Testing, Product Acceptance and Regulations

Treated effluent testing standards have been utilized for many years, including NSF/ANSI Standard 40, ETV, BNQ, and CEN. Furthermore, some regulatory authorities are requiring product field verification. While economic globalization has facilitated technology distribution throughout the world, broad acceptance of different third party standards is lacking. This regulatory rigidity may result in the stifling of innovation and impedance of trade. This session will compare standards and discuss product approval challenges before proposing a regulatory framework for product/technology acceptance that is risk-based, yet provides flexibility and accountability. *Colin Bishop, REHS, RS, Director Environmental North America, Anua*

2:00 PM - 3:00 PM

Gracia Ballroom 3 & 4

Currumbin–A Community Designed Around Environmental Sustainabilty and Wastewater Reuse in Queensland Australia

On the Gold Coast of Queensland, Australia, EcoVillage at Currumbin is a community focused on implementing and teaching sustainable development principles. Wastewater systems were chosen that created the lowest total impact to the environment in its manufacturing, construction, and operation. After treatment followed by UV and chlorine disinfection, the wastewater from 144 homes and numerous community facilities is recirculated to homes for reuse via toilet flushing, car washing, garden watering, and landscape irrigation. See how these award-winning techniques could make a difference in your community.

Joe Soulia, Government Relations Representative, Orenco Systems

3:00 PM - 3:30 PM

Break (Group Pictures, Break, Networking)

3:30 PM – 5:30 PM

Gracia Ballroom 3 & 4

Technology Acceptance and Data Sharing: Facilitated Discussion

The efforts to implement the Chesapeake Bay Protection and Restoration Executive Order brought attention to an issue that has been discussed in one form or another since SORA had its first meeting 15 years ago. During the past year, EPA has focused discussions on this topic in context of the Chesapeake Bay initiative. However, the discussion is also appropriate for the broader national audience. This facilitated discussion will summarize the recent efforts to find a solution for this problem and put it in context with the historical efforts on this issue. With the audience's participation an outline for how to move forward will be developed that will be the foundation of a position for SORA.

Eleanor Krukowski, President, SORA; James Bell, Executive Vice President, Bio-Microbics, Inc.

5:30 PM – 5:45 PM SORA Board Meeting

6:30 PM – 8:30 PM

Gracia Ballroom 3 & 4

Yaletown 3

Closing Reception

Friday, Saturday & Sunday Agenda

FRIDAY, JULY 11

7:30 AM-5:00 PM	Registration/Information Desk	Belmont Registration Desk 1
8:00 AM-12:00 PM	CCFS Exam	Nolita 2
8:00 AM-5:00 PM	CP-FS Review Course Day 1	Yaletown 2
8:00 AM-5:00 PM	REHS/RS Review Course Day 1	Yaletown 3
8:00 AM-5:00 PM	HACCP Retail & Processors Course Day 1	Yaletown 4
8:00 AM-5:00 PM	Certified Pool Operators Workshop	Nolita 3

SATURDAY, JULY 12

8:00 AM-12:00 PM	HACCP Retail & Processors Course Day 2	Yaletown 4
8:00 AM-5:00 PM	CP-FS Review Course Day 2	Yaletown 2
8:00 AM-5:00 PM	REHS/RS Review Course Day 2	Yaletown 3
8:00 AM-5:00 PM	Pool Operators Workshop Day 2	Condesa 8
3:00 PM-5:00 PM	HACCP Retail & Processor Exam	Yaletown 4

SUNDAY, JULY 13

8:00 AM-10:30 AM	CP-FS Exam	Condesa 3
8:00 AM-12:00 PM	REHS/RS Review	Yaletown 3
1:00 PM-5:00 PM	REHS/RS Exam	Yaletown 3

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International Federation of Environmental Health (IFEH)

NEHA is honored to be the host country for the 13th World Congress in partnership with the NEHA 2014 AEC. All conference attendees are welcome to attend the IFEH special sessions. The Federation currently has members from 42 countries that are national associations representing the interests of environmental health professionals throughout the World. The Federation works to disseminate knowledge concerning environmental health and promote cooperation between countries where environmental health issues are trans-boundary.

State Onsite Regulators Alliance and Captains of Industry (SORA/COI®)

Thanks to SORA for their contributions to advance the field of knowledge and practice of those who regulate onsite wastewater programs by increasing awareness of the latest technology, research, environmental health issues, and new federal initiatives that will affect the decentralized wastewater industry. Their contribution enriches the Onsite Wastewater educational track, which is open to all conference attendees.



Thanks to all our partners for supporting NEHA in a myriad of ways, including but not limited to:

- Providing programs, research, and educational content from leaders in the field
- Ensuring information is relevant and timely
- Providing a broader perspective of the environmental health profession
- Offering technical assistance and expertise
- Field trips that highlight area best practices

Association of Pool and Spa Professionals (APSP)

Centers for Disease Control and Prevention/ National Center for Environmental Health (CDC/NCEH)

Food and Drug Administration (FDA)

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- Center for Environmental Research & Technology, Inc. (CERTI): CERTI supports NEHA education by assisting with video recording of the AEC sessions, which are archived in the Virtual AEC and e-Learning for online viewing.
- The Kroger Co.: AEC Student Scholarship Fund
- Lieutenant Commander James Speckhart: AEC Student Scholarship Fund

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EDUCATION Knowledge. Understanding. Expertise.

The NEHA AEC offers many educational opportunities for you to obtain practical and real-world information and expertise. Enhance your understanding of environmental health topics and acquire knowledge, strategies, and processes that you can implement daily on the job.

NETWORKING Friends. Contacts. Connections.

The NEHA AEC brings together environmental health professionals and experts. It is also the event that affords you the opportunity to connect with professionals in related industries (like retail food and onsite wastewater); collaborate with officials from other levels of government (such as city managers, policy makers, and state legislators); and dialogue with peers in federal programs (including CDC, FDA, and EPA).

ADVANCEMENT Careers. Aspirations. Respect.

To help you—the practitioner—advance, the NEHA AEC provides the tools needed to enable you achieve your aspirations as an environmental health professional.

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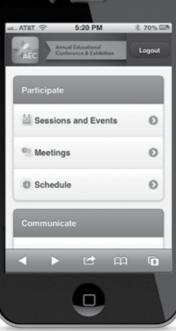
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Emergency Preparedness & Response

- Disaster Management Challenges from Non-communicable Diseases: Lessons Learned & Questions Going Forward
- Enhancing Planning and Preparedness: Demonstration of an E-Learning Tool for Public Health Management of Chemical Incidents
- Environmental Health and Disaster Management An International Effort for Training and Awareness
- Hurricane Sandy: A Complex Environmental Health Communications Challenge

Food Protection and Defense

- Applying a Behavior Change Model Proven to be Effective in Child Care Settings to Licensed Food Establishments
- FDA's Oral Culture Learner Project: Helping Food Employees Understand the Importance of Food Safety
- Flip the Fear: Food Allergen Lawsuits, Training Requirements, and Tools
- The Great Food Truck Race...for Food Safety

Healthy Homes and Communities

- Fungal Bioburden in Foreclosed Upon Homes Using ERMIsm as an Indicator
- Pesticide Usage and Pesticide Dust Concentrations in Residences of Asthmatic Children Living in Subsidized Housing
- The Green & Healthy Homes Initiative Implementing a Collaborative Model to Address Home Based Environmental Health Hazards
- VOCs: Sneaky Sources and Sustainable Solutions

International EH: IFEH Special Sessions

- Emerging Products and Human Health: Characterizing the Potential Risks Posed by Nanoparticles
- A Review of Food Safety Practices, Regulations, and Challenges in Lima, Peru
- An Integrated Approach to Environmental Regulation and Inspection of Industrial Sites in the European Union
- Collaboration, Cooperation, and Development in Environmental Health
- Intelligent Service Delivery through a Web Based Environmental Health Knowledge System

• Using Underreporting Estimates to Mobilize the Development of Targeted, Proactive Food Safety Policy

Leadership/Management

- Building Agency Capacity
- Building an Environmental Health Program of Excellence in a Time of Austerity
- Organizational Culture Change: Moving the Needle from Fair to Great

Pathogens and Outbreaks

- Don't Gamble with Norovirus: Prevention, Control and Containment of a Norovirus Outbreak in a Casino
- Investigation of Foodborne Illness Outbreak in Toronto, Canada
- Issues and Challenges: Investigation of Foodborne Illness Outbreak in Jamaica
- Restroom Infection Control: Chlorhexidine, the Final Frontier
- Who's Missing From The Table? Building Partnerships with the Medical Community in Foodborne Illness Surveillance

Sustainability/Climate Change

- Building Resilience Against Climate Effects: A Framework for State and Local Health Departments
- Climate Change Impacts and Options: Case Studies in the Northwest Arctic Borough, Alaska
- Triggers for Change in the Safest Place on Earth

Technology and EH

- Public Health Mythbusters
- Help! Everyone Wants My Data: A Look at Streamlining Data Collection for Environmental Health Programs

Water Quality

- An Online Class for Private Well Owners to Protect Public Health
- Arsenic in Groundwater The Unknown Threat
- Broadening the National Dialogue on Public Health and Water Quality
- Innovative Methods to Control, Investigate, and Monitor for *Legionella*: A Panel Discussion
- Colorado's Private Well Initiative: Collaboration and Data Use

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FOOD SERVICE EQUIPMENT UL.COM/APPLIANCES FOOD SAFETY & BRAND PROTECTION UL.COM/FOOD

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