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TER0601: Assessment, Compliance and Corrective Action: Application to Catastrophic Incident Planning and Response: Katrina – 1 CE Credit

Omar K Helferich, Ph.D. MS  
Civil Environmental Engineer  
Lead Researcher; DHS, GSC Mobile Solutions

Abstract:
This session provides an overview of supply chain food security initiatives and a brief summary of food supply chain challenges and potential practical solutions based on the presenter’s direct field experience at international incidents (Oklahoma Bombing and the World Trade Center), as well as recent field experience in a senior logistics position in support of the food supply chain for hurricane Katrina in Louisiana. This recent disaster has most of the attributes of a catastrophic disaster; largest recorded disaster requirement for massive evacuation, mass casualties, requirements for Federal assistance including DOD support, and potential major health issues following the disaster due to contamination. An understanding of these disaster challenges should provide significant insight into the NCFPD research mitigation and response solutions for future catastrophic incidents.

Learning Objectives:
1. Better relate the commonalities between recovery from natural and planned disasters (based upon on-the-ground experience);
2. Relate local response to food-specific acts of bioterrorism and the required response and cooperation across the entire food supply chain;
3. More clearly understand the relationships between routine inspections, dealing with abnormalities and incidents.

TER0602: Environmental Health and Emergency Preparedness: Bridging the Gap – 1 CE Credit

Brian Golob, MS, CHMM  
Sr Environmentalist, Environmental Health and Emergency Preparedness  
Hennepin County Human Services and Public Health Department  

Susan Kulstad  
Consultant, Env Mgmt & Safety  
City of Minneapolis, Minneapolis, MN

Abstract:
Under the nationally-funded Twin Cities Metro Advanced Practice Center (APC), Hennepin County, St. Paul–Ramsey County, and the City of Minneapolis have produced a number of products developed to strengthen local environmental health (EH) capacity to respond to public health emergencies. These include an online training curriculum developed for EH professionals, and an Emergency Handbook for Food Managers, with step-by-step protocols for food service establishments to follow in the case of a specific emergency. This session provides an overview of the APC project, an introduction to the training curriculum and the handbook, and a sneak preview of new tools being developed to:
1. Provide guidance for EH professionals in working jointly with local Red Cross chapters to ensure safe mass shelters during emergencies,
2. Provide EH field staff with a resource kit of technical information for emergency response, and
3. Support the development of local EH emergency preparedness and response plans.

Learning Objectives:
1. Describe the value-added role of the EH professional in emergency preparedness and response
2. Define emergency preparedness for the food service sector
3. Assess whether resources developed by APC is applicable to the needs of your jurisdiction
TER0603: CDC Response to Environmental Health Concerns from Hurricane Katrina in New Orleans – 1 CE Credit

Capt. Michael Herring, REHS, MPH
*CDC, National Center for Env Health*
*Env Health Services Branch*

Capt. Jan Manwaring, REHS, MPH
*Env Health & Safety Officer,*
*USPHS, CDC, NIOSH*

**Abstract:**
Hurricane Katrina made landfall in the Gulf region on August 29, 2005, causing severe wind and flood damage in and around New Orleans. This greatly compromised water systems, sewage systems, food establishments, solid waste disposal, vector control, and other public services. On September 4, 2005, the State of Louisiana and the City of New Orleans invited the CDC to assist in re-establishing public health infrastructure. A CDC team deployed on September 7, 2005, to support city and state public health partners as part of the Emergency Support Function-8 (ESF-8) of the National Response Plan. The team mission was to provide critical public health functions for remaining citizens and responder personnel, restore essential public health functions for returning citizens, and construct a new framework for a model public health department.

**Learning Objectives:**
1. State the three-fold mission of CDC’s role in New Orleans after Hurricane Katrina according to the Emergency Support Function-8 (ESF-8) of the National Response Plan, relative to environmental health activities.
2. Identify the environmental health support activities that CDC was involved in during the response and recovery operations for Hurricane Katrina in the New Orleans area.
3. Describe the short, intermediate, and long term environmental health recommendations from the CDC support mission.

TER0604: Introduction to State Emergency Management Assistance Compact (EMAC) – 1 CE Credit

Fred W. Liebe
*Deputy Director*
*Oklahoma Department of Emergency Management*
*Oklahoma City, OK*

**Abstract:**
The Emergency Management Assistance Compact (EMAC) is a national Governor's interstate mutual aid compact that facilitates the sharing of resources, personnel, and equipment across state lines during times of disaster and emergency. EMAC is formalized into law by member parties, and in 1996, it was ratified by the U.S. Congress and signed into law (PL 104-321). The mission of EMAC is to facilitate the efficient and effective sharing of resources between member states during times of disaster or emergency.

**Learning Objectives:**
1. Understand the EMAC process and how it provides assistance and support during disasters
2. Understand the legal authority for EMAC
3. Define what EMAC is and what it is not
TER0605: Local Perspective: The Sanitarian’s Role during Disaster Relief Efforts – 1 CE Credit

Chirag H. Bhatt, RS  
*Bureau Chief, Consumer Health Svcs*  
*Houston Dept of Health & Human Svcs*

Courtney Bock, RS  
*Field Sanitarian, Consumer Health Svcs*  
*Houston Dept of Health & Human Svcs*

**Abstract:**
While operating disaster relief centers established in Houston, Texas the role of a Registered Sanitarian was distinguished to be a vital role to public health. Sanitarians performed multiple disease-prevention tasks throughout the main shelter and other sheltering operations scattered throughout Houston. The mass-sheltering operation compounded the sanitarians’ responsibilities. Houston sanitarians performed daily on-site inspections, monitored living quarters, and gave guidance on how to reduce health risks in all areas. Problematic situations were evaluated, findings presented in daily briefings, and solutions were communicated in a variety of forms, in several languages. Sanitarians provided in-time training to novice food handlers, workers and volunteers in order to quickly and effectively control any situation that might occur. With the hard work of many volunteers, government agencies and City of Houston departments, the first mass-shelter was successfully closed on September 20, 2005 with zero outbreaks.

**Learning Objectives:**
1. Know your role during disaster recovery and relief efforts.
2. Assign duties related to disaster recovery
3. Delegate duties related to disaster recovery

TER0606: Environmental Health in Emergency Response and Preparedness: The Louisiana Experience – 1 CE Credit

Cory Frank  
*IA-EHRT Coordinator*  
*Iowa Department of Public Health*

**Abstract:**
Environmental health practitioners are the front-line troops in the protection of public health systems. They conduct regular inspections and provide education on a daily basis to prevent food, water, or air outbreaks. Six environmental public health professionals from the State of Iowa were deployed to Louisiana following Katrina. The team was deployed September 3rd through the 18th, 2005, through an EMAC agreement with the State of Louisiana. They were called to action immediately as the first state to respond to environmental public health needs in Louisiana, and worked directly with the Louisiana Department of Health and Hospitals. Overview of the Iowa Public Health Response Team concept and the IA-EHRT (Environmental Health Response Team) involvement in responding to a disaster such as Katrina will be discussed to the target audience. Lessons learned by the Iowa team will be presented and solutions discussed to their deployment objectives.

**Learning Objectives:**
1. Define what environmental health emergency response is and what local, state, and possible federal roles are related to the response effort.
2. Review the logistical challenges presented to the Iowa response team and contrast those issues with those at their local or State jurisdiction.
3. Apply the practical knowledge gained by the IA EHRT response team to their local response plans.
TER0607: The Use of Chemicals as Weapons: Myths and Realities – 1 CE Credit

Erik R Janus, M.S.
Toxicologist
Michigan Dept of Community Health

Abstract:
Much information is available in the public sphere regarding the use of chemicals as weapons, including military warfare agents. Through the use of prior examples and existing epidemiologic data, this presentation will explore some of the misunderstood or little understood aspects of "chemical terrorism." Topics covered include the use of chemicals in an open-air deployment, accident epidemiology of transportation and fixed facility releases of hazardous materials, and chemical contamination of water and water systems.

Learning Objectives:
1. Discuss the origins of "myths" and misinformation
2. Take a realistic look at the use of chemicals as weapons
3. Learn details of past releases of hazardous materials and discuss the factors that increase/decrease potential for mass effect

TER0608: Training to Type, Typing to Train – 1 CE Credit

Mitch Stripling
Preparedness Education and Media Coordinator
Division of Environmental Health
Florida Department of Health, Tallahassee, FL

Abstract:
The National Incident Management system stipulates across-the-board asset typing for grantees by 2007. This presentation will cover how to use local needs and NIMS best-practices to type environmental health staff for preparedness, how those types can help you decide what people and teams would be needed in an emergency, and then how to focus specific training practices (like workshops and exercises) on helping staff achieve the goals in those types. Using typing correctly, and developing your training plan, can help you build your EH professional skill set and more effectively integrate your state and federal partners prior to and during a response.

Learning Objectives:
1. Understand the nature of asset typing and how to apply it to environmental health
2. Outline how to create competency-based training related to typing
3. Link the success of team deployments to the robustness of your typing and training
All-Hazards Preparedness

GEH0601: Poison Center's Role in Disaster Response – 1 CE Credit

Rebeca Gracia, PharmD, DABAT
Director, North Texas Poison Center, Dallas, TX

Abstract:
Disasters may create a vast array of problems and questions among the public, first responders, other health care professionals, and agencies. Poison Centers are available 24/7 to provide free access to vital information and treatment recommendations for exposures through the national 1-800-222-1222 number. Case information is documented and submitted to the American Association of Poison Control Centers and CDC’s toxicosurveillance program. This nationwide Poison Center system is capable of collecting disaster-related data that may assist various agencies.

This presentation will highlight the utility of Poison Centers in disaster situations. Specific examples of Poison Center Disaster Response will be used to demonstrate response capacity, interagency involvement, toxicosurveillance, and data reporting capabilities. This presentation will describe the Poison Center structure and provide details regarding types of resources available to the public, first responders, healthcare professionals, and other agencies.

Learning Objectives:
1. Describe the Poison Center's role in disaster response
2. Identify available Poison Center disaster resources
3. Understand when and how to access Poison Center disaster resources

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CDC0701: Environmental Health Training in Emergency Response – 12 CE Credits

Sponsored by:
Environmental Health Services Branch of CDC’s National Center for Environmental Health

This introductory level training addresses a range of environmental health topics commonly faced in response to emergency events. The training helps prepare practitioners with the skills and knowledge to effectively respond to environmental health issues. The training includes a combination of lecture, hands-on, and demonstration components. You will learn about emergency response aspects such as assessing shelter operations, food, water, wastewater, building environments, and vector control. This training is sponsored by the Environmental Health Services Branch of CDC’s National Center for Environmental Health.

The training is intended for environmental health, safety, or industrial hygiene professionals from federal, state, and local programs with the responsibility to perform one or a combination of the following functions in an emergency response: food services; sanitation, vector control, drinking water, wastewater, institutional sanitation, and safety inspections.
All-Hazards Preparedness

AHP0701: Integrating Traditional Emergency Response Methods into the Local Health Department's Preparedness Procedures – 1 CE Credit

Kevin G. Sumner, MPH  
Middle-Brook Regional Health Commission

An interactive session focusing on defining Public Health Preparedness and providing tools and strategies to facilitate a local health agency’s development of a workplace culture that is responsive to its community in the case of a natural disaster, Bioterrorism or other emergency event. Activities are introduced that can be used by local public health agency staff to develop a cohesive response unit and culture within the agency for use during day to day operations and emergencies.

Traditional Emergency Response agencies operate in a paramilitary style that fosters a disciplined, organized, and efficient response. Public health can and must learn from this style of operation and integrate it into its efforts to improve public health emergency response.

Learning Objectives:

1. Participants will have a better understanding of the methods utilized by traditional emergency responders to affect an efficient and successful response.
2. Participants will take away proven techniques that can be integrated into their day-to-day operations and emergency response procedures.
3. Participants will learn how to collaborate with their emergency response partners to develop and understand a language common to all and to better prepare for an integrated cooperative emergency response.

AHP0702: Disaster Strikes—Environmental Health Responds: “Stories from the Field” – 1 CE Credit

Brian R. Golob, MS, REHS, CHMM  
Hennepin County Human Services and Public Health Department

Abstract:
This session focuses on training material that addresses environmental health and emergency preparedness. The material provides practical information on how environmental health professionals can prepare for, respond to, and recover from an emergency or disaster.

Experience is a powerful tool, especially in the realm of disasters and emergencies. To develop this material, environmental health professionals from around the country were interviewed to learn how they dealt with actual disasters and emergencies. The session relates their real-world stories and shares their valuable tips, techniques, and lessons learned. The information helps guide you through the preparation, response and recovery stages of a disaster/emergency.

The training material focuses on eight Environmental Health Core Competencies, as defined by the National Center for Environmental Health, the Centers for Disease Control and Prevention, and the American Public Health Association. The competencies provides the framework environmental health professionals need to be effective in all kinds of disasters and emergencies. Each competency is brought to life through the stories of environmental health professionals.
Abstract:

The new Department of Homeland Security Target Capabilities are radically shifting the ground of environmental health preparedness. In fact, environmental health issues are mentioned in important ways throughout the document, giving them a greater focus than they have under the current CDC guidance.

This session looks at the groundbreaking work that Florida has done to begin to meet these target capabilities and presents concrete tools to help your state meet them. In a world of uncertain preparedness budgets and even more uncertain threats, this session is crucial to make sure that your environmental health team can continue to meet the very real challenges faced by practitioners trying to prepare for all types of hazards.
Abstract:

Background: E. coli O157:H7 and other enterohemorrhagic E. coli (EHEC) infections cause hemorrhagic colitis and hemolytic uremic syndrome (HUS). An estimated 73,000 EHEC related infections and 61 deaths occur annually in the United States. Contaminated foods, beverages, water and livestock contact have caused outbreaks. In 2004, an E. coli O157:H7 outbreak occurred among North Carolina State Fair visitors.

Methods: We conducted a matched case-control study among fair visitors using randomly recruited controls who purchased tickets in advance. We defined cases as persons with culture-confirmed E. coli O157:H7 infection, HUS, or bloody diarrhea with illness onset after visiting the fair. Clinical specimens and environmental samples were tested by culture and pulsed-field gel electrophoresis (PFGE).

Results: Of 108 reported cases, we enrolled 45 confirmed or probable case-patients and 188 controls in the case-control study. Median case-patient age was 3.2 years (range: 1-61). Thirty-six case-patients (80%) reported visiting the same petting zoo (Odds Ratio [OR]: 7.7, 95% Confidence Interval [CI]: 3.5-17.0). Among visitors to this petting zoo, illness was associated with stepping in or touching manure (OR: 4.9, CI: 1.9-12.8), falling or sitting on the ground (OR: 3.4, CI: 1.3-8.6) or contact with sheep or goats’ front legs (OR: 2.5, CI: 1.03-5.9). Hand hygiene upon exiting the petting zoo was not protective (OR: 1.7, CI: 0.5-5.8). Of 38 patient isolates, 33 (87%) had indistinguishable PFGE patterns. Environmental isolates from the petting zoo area were indistinguishable by PFGE from these 33 clinical isolates.

Conclusions: In this study, most illnesses were associated with animal or manure contact in a single petting zoo. Hand hygiene was not protective. Contact with animals and manure in petting zoos should be restricted to prevent EHEC infections.

Keywords:
- Escherichia coli O157:H7
- EHEC
- hemolytic uremic syndrome
- petting zoo
- zoonosis

Learning Objectives:
1. Describe hazards associated with animal contact in fairs and petting zoos with a focus on E. coli O157:H7
2. Describe difficulties involved in site remediation once contamination is recognized.
3. Describe prevention measures to prevent human exposure and site contamination.
Emerging Pathogens

EP0602: Avian Influenza: A Case Study at the Interface of Environmental Health, Agriculture, and Public Health Medicine – 1 CE Credit

John Herbold, DVM, MPH, PhD, DACVPM, FACE
Associate Director, Center for Biosecurity and Public Health Preparedness
UT–School of Public Health, University of Texas Health Science Center

Abstract:
Media attention and global health organizations attention to the risk of avian influenza infecting humans has highlighted the need for coordination and interaction between multiple agencies.

The science of avian influenza and current issues regarding planning for a worldwide epidemic will be discussed.

Learning Objectives:
1. Outline the basic biology of influenza A in the animal kingdom
2. Differentiate between enzootic avian influenza and seasonal human influenza A
3. Identify the roles of environmental health, agriculture, and public health medicine in planning for, and responding to, pandemic influenza A


Roberta M Hammond, AA, BA, MA, PhD
Food and Waterborne Disease Coord., Florida Department of Health

Abstract:
Typical vehicles of past Cyclosporiasis outbreaks include raspberries, basil, lettuce, snow peas and water. Though water has been implicated, 90% of outbreaks of Cyclosporiasis are foodborne. Cyclosporiasis is endemic in many developing countries and is often associated with diarrhea in travelers to Asia, the Caribbean, Mexico and Peru. CDC reports that there have been 5,000 cases reported in the last 5 years. The 2005 Florida outbreak was the single largest reported Cyclosporiasis outbreak in Florida history. Illness is caused by Cyclospora cayetanensis, a single celled protozoan with symptoms of watery diarrhea, nausea, loss of appetite, abdominal pain, fatigue and weight loss. The case fatality rate is very low. The incubation period is 1-7 days, usually about 1 week and the ensuing illness can last anywhere from 1-3 weeks.

Learning Objectives:
1. Outline the etiology of Cyclospora cayetanensis.
2. Discuss the challenges in investigating a foodborne outbreak implicating a "stealth" ingredient.
3. Name the typical food vehicles of cyclospora.
**Emerging Pathogens**

**EP0604: Not IF, but WHEN: The Threat of Pandemic Influenza – 1 CE Credit**

Michael Olesen  
*Manager, Infection Control & Epidemiology*  
*Abbott Northwestern Hospital (Minneapolis, MN)*

**Abstract:**
This presentation links the 1918 pandemic, Avian influenza, and how this could become a pandemic today. In addition to the history of the 1918 pandemic, the presentation discusses the biology of influenza viruses, including their naming and pathophysiology. The ecology of these viruses explored, explaining why pigs, people, and birds interact in the development of new strains and why vaccines and antiviral agents may be ineffective.

Social impacts are reviewed, including the impact at the end of World War I and the potential impact on our current society. Ethical decisions will be discussed in light of the lack of healthcare resources for an event of this scale. Examples of poor communication are provided with some risk communication strategies and prevention messages that will be helpful for the public. Finally, there is a discussion on the management of a pandemic and resources to help in this planning.

**Learning Objectives:**
1. Explain the causes for the differences in the epidemic curves for a normal influenza season and that which occurred during the Spanish Flu of 1918.
2. List the characteristics required for an influenza virus to trigger a pandemic and which of these have been met by the H5N1 avian flu virus.
3. Identify problems that will arise in healthcare facilities during a pandemic and resources to assist in planning a response.

**EP0605: Shortage Situations to Pandemic Protocols: Influenza Lessons from a Local Health Department – 1 CE Credit**

Michele Samarya-Timm, MA, CHES, REHS, DAAS  
*Health Officer, Health Educator*  
*Franklin Township Health Department*

**Abstract:**
The 2004 shortage of influenza vaccine challenged the existing immunization policies and practices of many local health departments. Managing information/distribution of limited and fluctuating vaccine supplies to health care agencies, private practitioners and directly to the public forced Franklin Township Health Department (FTHD) to rapidly create and evaluate event-specific protocols. Approval of local politicians was essential; public education and comprehension were critical.

This presentation will address the failure of existing health protocols to ensure effective communication during a communicable disease event, and encourage all in public health to re-examine existing policies/procedures to improve routine and pandemic communicable disease and influenza preparedness.

**Learning Objectives:**
1. Evaluate and update existing agency protocols to support emergency health efforts.
2. Identify elements essential to emergency health policy development.
3. Apply lessons learned to improve the provision of necessary health services in unexpected or emergency situations.
EMERGING PATHOGENS

EP0606: Surveillance and Monitoring of Infectious Diseases in San Antonio Shelters Following Hurricanes Katrina and Rita – 1 CE Credit

Cherise J. Rohr-Allegrini, PhD, MPH
Epidemiologist, Public Health Preparedness
San Antonio Metro Health District

Abstract:
On August 30, 2005, San Antonio began receiving evacuees from Hurricane Katrina. By September 3, nearly 13,000 evacuees had passed through San Antonio shelters. Upon arrival, each individual was offered Hepatitis A and tetanus vaccinations. Approximately two weeks later, another 12,000 evacuees from Hurricane Rita entered San Antonio shelters. With the assistance of Epidemiology Field Officers from CDC, the San Antonio Metro Health District (SAMHD) established a syndromic surveillance system in each shelter. Health care services were maintained by three providers: Barrio Comprehensive, CentroMed, and DMAT TX-1.

A Microsoft Access database was used to record each visit by date, demographic information, chief complaint, and medical dispositions, which was transmitted to SAMHD daily. The data were analyzed in SAS and Excel. The presence of health care services and syndromic surveillance provided the opportunity to recognize and document any disease outbreak at this long-term shelter. Constant vigilance allowed SAMHD to reassure a concerned community.

Learning Objectives:
1. Gain insight into practical considerations involved in establishing a surveillance system
2. Identify key elements of long-term shelter surveillance design and maintenance
3. Recognize usefulness in response to potential outbreaks of infectious disease

EP0607: The Avian Flu Threat and its Implications for Environmental Health – 1 CE Credit

Nelson E. Fabian, MS
Executive Director, NEHA

Thomas Gonzales, REHS, MPH
Sr Environmental Health Specialist
Larimer County Dept of Health

Abstract:
Preparing for the possibility of a pandemic flu represents a new experience for many professionals in environmental health. Many of our people appreciate what is involved in emergency preparedness. However, the challenge of a pandemic flu, which is likely to hit every community in the nation, cause unprecedented numbers of fatalities, disrupt societal order in ways we have never seen, quickly takes us into an entirely different planning realm. What will be expected of us as public health professionals become one of the front lines that separates managing a crisis from becoming widespread social disorder?

This presentation will focus on the scope of the challenge and will report on what environmental health professionals are currently doing as their roles are starting to take on some definition. It will also explore what we should be doing and what our roles should encompass.

Learning Objectives:
1. Better understand and define the scope of the challenge
2. Better understand what the role of an environmental health professional should encompass
3. Better understand what they need to know in order to perform their roles
Emerging Pathogens

EP0704: Produce Safety—What’s Going on Here? – 1 CE Credit

Shirley Bohm, RS, MPH
Consumer Safety Officer, U.S. Food and Drug Administration

Abstract:
This presentation examines the sources of biological contamination and the methods of entry of pathogens into fresh fruits and vegetables based on laboratory studies and foodborne outbreak investigations. It describes voluntary industry and regulatory strategies and recommendations for preventing contamination and controlling growth of these pathogens. It also highlights environmental factors that, because of their critical nature, emphasize the need to bolster the environmental health infrastructure to ensure adequate food protection.

EP0705: Norovirus: A Community and Institutional Threat—Yellowstone County’s 2006 Norovirus Outbreak – 1 CE Credit

Jennifer L. Pinnow, REHS/RS, CFSP
Yellowstone City-County Health Department

Ted Kylander, REHS/RS

Abstract:
In 2006, Yellowstone County (Billings), Montana experienced a Norovirus outbreak that resulted in over 1100 cases and nearly 100 hospitalizations. In response, the Yellowstone City-County Health Department activated their emergency operations center and tailored the incident command system for an infectious disease outbreak. In this presentation, participants will recognize how the incident command structure can be used in illness control and prevention activities as well as recognizing the potential risks and impacts a Norovirus outbreak can have on a facility or community. Successful strategies for working with the local media and community partners are also included.

Learning objectives:
1. Describe the basic history, morphology, key control and prevention activities of a Norovirus outbreak
2. Recognize the potential risk and impact of a Norovirus outbreak in a facility or community
3. Identify strategies for engaging the local media and community partners in illness prevention activities through the use of the incident command structure to manage a Norovirus outbreak
Emerging Pathogens

**EP0706: Collaborative Planning for Drive-Thru Flu Vaccination Clinics – 1 CE Credit**

**Colleen McKay-Wharton, MA, CHES**
**CMW Consulting**

**Abstract:**
In November and December of 2006, the Somerset County Health Department, together with more than ten county and local agencies, implemented the county’s first ‘Drive-Through Flu Vaccination Clinics’. The November clinic was targeted to the First Responders and their household members in the county, and the second was for the general public. This exercise was part of the county’s pandemic flu planning, as one possible mode of providing mass vaccination in the event of a public health emergency. Both exercises were successful, resulting in extremely positive feedback from both those receiving the vaccine and those participating in the implementation of the clinics. In addition, valuable ‘lessons learned’ were also identified. Details regarding the implementation of these clinics are shared during the presentation.

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**EP0701: Pandemic Planning: How to Implement a Pandemic Plan – 1 CE Credit**

**Sara Wade**
**Department of Health and Human Services, Oakland County Health Division**

**Abstract:**
The pandemic presentation provides innovative ways to prepare for a pandemic at a personal and organizational level. This presentation is complete with facts about prevention and planning techniques, as well as best practice methods. Innovative ways of using community collaboration is also be discussed.

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**EP0702: Salmonellosis Outbreaks Associated with Tomatoes, 2002 to the Present: What Have We Learned? – 1 CE Credit**

**CAPT Thomas Hill, RS, CFSP**
**U.S. Food and Drug Administration**

**Abstract:**
The presenter reviews Salmonellosis outbreaks associated with tomatoes from 2002 to the present including the epidemiology, traceback and environmental findings that may have caused or contributed to the outbreaks. The presentation includes initiatives by FDA and industry to address the problem, including research, guidance and safety action plans.
Wolf Maier  
European Commission

Abstract:
The European Commission, in collaboration with the European Food Safety Authority publishes a yearly Community report on trends and sources of zoonotic disease. By far the most frequently reported zoonotic diseases in Europe are salmonellosis and campylobacteriosis.

For *Salmonella*, tightened control measures have now been adopted. Consistent with the food chain orientation of General European Food Law, the control programs are aimed primarily at the farms and the animal feed supply.

*Salmonella* control programs must be implemented for breeding flocks of chicken by 1 January 2007 and gradually expanded downwards over the animal production chain towards laying hens and broilers until 2009. Similar programs are in preparation for turkeys and pigs.

In a pilot program, Sweden is developing control strategies for Campylobacter.
GEH0604: Lessons Learned From the Implementation of a GIS Program at the Bernalillo County Office of Environmental Health – 1 CE Credit

Kevin Troutman, REHS
Environmental Health Scientist/GIS
Bernalillo County EH

Abstract:
The Bernalillo County Office of Environmental Health (BCOEH) began a well location program using GPS in mid-2001 and expanded data collection to include septic systems and dumping sites by January 2002. ESRI and Trimble software is used with this data. BCOEH operates 5 data collection units. BCOEH has learned several lessons. A training program must be developed to ensure quality data collection. Staff utilizes GPS equipment sporadically, so refresher courses may be necessary. Software training is also needed so staff feels comfortable. Once GIS has become established for a particular purpose, it will expand rapidly to other uses, requiring additional staff time.

Learning Objectives:
1. Learn what BCOEH has done to incorporate GIS and GPS into daily activities and the effects it has had on performance.
2. Learn how the program was developed and what steps were necessary to keep the program running.
3. Learn what BCOEH may have done differently with the gained experience of the past four years.

GEH0605: How GPS Works – 1 CE Credit

Kevin Troutman, REHS
Environmental Health Scientist/GIS
Bernalillo County EH

Abstract:
The Bernalillo County Office of Environmental Health (BCOEH) began a well location program using GPS in mid-2001 and expanded GPS data collection to include on-site wastewater systems and illegal dumping sites by January 2002. To date, BCOEH has located approximately 1000 wells and nearly 1500 on-site wastewater systems. The processing and display of this information is done using ESRI ArcGIS, ArcReader, and ArcIMS software and Trimble GPS Pathfinder Office. BCOEH operates 3 Trimble GeoExplorer 3 data collectors and 2 Trimble GeoExplorer XT data collectors. The use of GIS software has been expanded to include the evaluation of sites prior to a field investigation.
Environmental Public Health Tracking (EPHT) is the ongoing collection, integration, analysis, interpretation, and dissemination of data on environmental hazards, exposures to those hazards, and health effects that may be related to the exposures. The goal of tracking is to provide information that can be used to plan, apply, and evaluate actions to prevent and control environmentally related diseases. The Centers for Disease Control and Prevention (CDC) is currently leading the initiative to build a National EPHT Network, which will integrate these three types of data into a standardized electronic network, which will provide valid scientific information on environmental exposures and adverse health conditions as well as the possible ways they may be related temporally and spatially.

This course, Environmental Public Health Tracking 101, gives an overview of the major components of Environmental Public Health Tracking (EPHT). The course is divided into 12 modules. Each module focuses on a different subject. You may choose to take as many of the modules as you like, in any order. After completion of all tracks and then taking the online quizzes, you can download your course certificate for 4 NEHA Approved CE Credits.
Abstract:
In this qualitative study, barriers to the distribution of food safety information to consumers via the use of a safe food handling label affixed to take-out food containers were evaluated. In-depth interviews (n=10) were conducted with a convenience sample of restaurant personnel who reported that 3 key barriers exist in transferring the labels from the roll onto the take-out container. These are: employee forgetfulness, laziness and time constraints. It is recommended that labels be applied to a specified number of take-out containers at the beginning of each shift as part of an opening duty and that staff be given frequent reminders about the importance of recording the time and date the food was packaged. Lastly, perhaps the greatest barrier to distributing food safety information to consumers is the belief that consumer food safety educational material will stimulate negative publicity for the restaurant.

Learning Objectives:
1. To understand the key barriers to transferring food safety information to consumers at the restaurant level.
2. To develop an awareness of some of the attitudes that restaurant gatekeepers have about transferring food safety information to their guests.
3. To appreciate the complexity of conducting research with foodservice personnel.

Abstract:
Environmental Health professionals who inspect ethnic restaurants may encounter many challenges. The University at Albany School of Public Health, as a partner in the New York-New Jersey Public Health Training Center, has developed a series of online courses on cross-cultural communication. One case study module in this series involves inspection of a Chinese restaurant. This presentation will give an overview of “Communicate to Make a Difference: Exploring Cross Cultural Communication” with a focus on the development of the case study “Practicing Cross Cultural Communication: The Bamboo Dragon Restaurant.” The presentation will also give participants an opportunity to discuss ways this module might be used to raise awareness about cultural issues in food safety and protection.

Learning Objectives:
1. Discuss the benefits of scenario-based online training
2. Describe ways the case study might be used for training
3. Provide feedback on the effectiveness of the case study

Additional Info:
While this online training module involves food protection, it might be of interest to any environmental health professions, particularly those involved in regulatory functions.
FS0603: Enhancing Community Food Safety Awareness: Street Vendors – 1 CE Credit

Hector S Dela Cruz, REHS, M.S.
Chief EHS, L.A. County Environmental Health, CTS

Terrance Powell, REHS
Bureau Dir., L.A. County Environmental Health, Bureau of Special Operations

Abstract:
Unlicensed food vending has become a pervasive element in many Los Angeles County Latino communities. The combination of poor food sanitation practices by vendors and limited healthcare access for many residents has compounded public health concerns surrounding this issue. Moreover, community familiarity and patronage of unlicensed food vendors has resulted in uninformed opposition to enforcement efforts that target unlicensed vendors. This presentation will discuss a unique approach (as a case study) in responding to the community’s need for food safety knowledge/awareness, specifically an identified at-risk population for foodborne illness (children).

Environmental Health initiated the program “Enhancing Community Food Safety Awareness: Street Vendors” with the goal of going beyond traditional enforcement efforts by supplementing such efforts with an aggressive educational outreach campaign. The program targeted elementary schools claiming a high prevalence of unlicensed food vendors; bilingual food safety presentations for students and parents were coordinated concurrently with illegal food vending enforcement efforts in the surrounding community.

Learning Objectives:
1. Identify a problem and need for a program
2. Develop a cost-effective program by utilizing existing resources to address the problem
3. Achieve community “buy-in” and inter-departmental cooperation (utilize partnerships)

FS0604: Establishing Asian Retail Food Relationships with Chinese Liaison – 1 CE Credit

Li Hwang, RS
Chinese Liaison
Maricopa County Environmental Services Department

Abstract:
Asian Americans are the fastest growing minority group in the U.S. There are now close to 36,000 Chinese restaurants in the U.S. according to Chinese Restaurant News, a trade publication. The people of Asia value hard work, patience, humility, friendliness, and respect for others. However, a lack of English language skills is a major problem facing recent Asian immigrants. For this reason, their ability to adapt to the new culture, to obtain the necessary knowledge, and to learn from inspectors who are trying so hard to help them understand the public health issues, is compromised. They become fearful, and often misunderstand the intentions of the public health officials, and may, therefore, exhibit a hostile attitude and resentful feelings. Establishing culturally sensitive relationships with people in the Asian retail food industry could help to improve this situation and create a win-win environment for both the Asian food retailers and the public health officials. Methods to bridge this gap will be discussed.

Learning Objectives:
1. Dispel the fear of communicating with Asian retailers
2. Create a win-win situation for regulators and the food industry
3. Build a successful and culturally sensitive relationship with Asian food retailers
Food Safety and Protection

**FS0605: Food Safety on Tribal Lands – 1 CE Credit**

**Abstract:**
Food safety activities in tribal communities are not well understood. This presentation will provide information on the activities of the Indian Health Service and tribal environmental health specialists to ensure safe food for the residents and visitors.

The focus of this presentation is to highlight the unique nature of food safety on sovereign tribal lands, to explain the role of the IHS in food safety activities at both the regional and local levels, and to highlight the role of tribal environmental health specialists in ensuring safe food in their communities.

**Learning Objectives:**
1. Define the role of IHS and tribes in ensuring food safety
2. Compare the unique opportunities and challenges of food safety activities in tribal communities to those of regulatory food agencies
3. Identify and apply successful approaches to food safety in a non-regulatory environment, including education by example and reinforcement

**FS0606: The First Sanitarians: Kashrut and Faith-Based Food Codes – 1 CE Credit**

**Abstract:**
Kosher food is one of the fastest growing segments of the food market while being one of the oldest versions of a food safety code. This session will instruct participants in the fundamentals of the Jewish Kosher code, its 3,000-year history and its relation to food safety. We will explore the "fourth hazard" to food safety and learn some of the primary laws of Kosher and their sources. We will identify some of the parallels with modern food safety practices and some of the situations where kosher fails as a food safety practice. Finally, we will note special issues in inspection and plan review in kosher and other faith based food facilities to help environmental health professionals in working with these special populations.

**Learning Objectives:**
1. Identify the "fourth hazard" to food safety in faith-based populations and its origins in Jewish law
2. Identify four major practices of kosher law: permitted animals, proper slaughter, Dairy/meat interactions, and cross-contamination sources.
3. Identify whether food items in general are "kosher" or "treif"
4. Identify parallels and breakdowns in kosher law compared to the 2005 Model Food Code.
5. Practice respectful inspection procedures in Kosher and Halal certified facilities.
6. Identify special issues in plan review in Kosher facilities
Abstract:
The catastrophic devastation produced by hurricane Katrina will long be remembered in our history as an event that forever changed our nation. The 30 foot storm surge up the Mississippi river gulf coast resulted in 5 levee breaches and flooded 80% of the city of New Orleans. The levee breaches added to a death toll from Katrina that has exceeded 1600 people, with more than 200 unaccounted for, 1.5 million displaced, 527,000 homeless, and an estimated 75 billion in damages. Katrina’s devastation covered 108,456 square miles, reached across several gulf coast states, left us with memories that will stay with us forever, and lessons learned that will help us in preparing for the next disaster. This presentation will cover the emergency response experience and food safety issues after Katrina in Louisiana from a local and a federal perspective. The combination of resources and teamwork of the Public Health Service officers, local, state, and federal environmental health specialists that worked together on a daily basis were essential part of the response.

Learning Objectives:
1. Gain an understanding of the environmental problems that can develop from a disaster like this.
2. Gain an understanding of the issues food facilities will face in recovering from this type of disaster.
3. Gain an understanding of the value of teamwork in responding to a disaster.
4. Name at least three post-disaster issues faced after Katrina and other hurricanes
5. Name three types of post-hurricane foodborne illness surveillance efforts
6. Name three reasons for lack of post-hurricane foodborne illness activity
7. Plan and prepare a restaurant for food service following a hurricane
8. Prepare a restaurant for serving safe food while operating under a boil water notice and other food safety challenges
9. Learn best practices for safe food handling, personal hygiene, utensil washing, and menu selection for a safe and efficient food service.
Food Safety and Protection

FS0608: What is Reduced Oxygen Packaging (ROP) and What Are the Food Safety Concerns and Controls? – 1 CE Credit

Shirley B. Bohm, RS, MPH
Consumer Safety Officer, FDA/CFSAN

Abstract:
Retailers, restaurateurs and regulators were unsure whether cook chill and sous vide were forms of reduced oxygen packaging (ROP) and whether cheeses could be vacuum packaged in food establishments without a variance. What are the food safety concerns related to reduced oxygen packaging and what controls could be put in place to safely allow these types of processing and packaging in food establishments? Finally, what are the practical applications of this guidance for ROP in a routine inspection of a restaurant or retail food store?

The microbiology of two pathogens of concern, Clostridium botulinum and Listeria monocytogenes, drives the controls needed for safe reduced oxygen packaging. Cook chill and sous vide present a unique problem in that both pathogens of concern grow well below normal 41°F refrigerated storage temperatures and secondary barriers are unlikely in most foods using this methodology. Most cheeses also do not have a single secondary barrier such as pH or aw in addition to refrigeration as a protective control for extended shelf life. This presentation will identify available controls appropriate to the type of reduced oxygen packaging and food being packaged and explain why they are needed or effective. It will also provide step-by-step instructions to evaluate a cook chill or sous vide process for small volume and high volume ROP as well as for vacuum packaging cheeses in restaurants and retail food stores.

Learning Objectives:
1. Identification of food safety concerns of reduced oxygen packaging conducted in a retail food establishment.
2. Implementation of reduced oxygen packaging safeguards and food safety controls to protect consumers.
3. Evaluate application of code requirements during an inspection of a reduced oxygen packaging operation in a retail food establishment.

FS0701: Sacramento County Environmental Management Department's Comprehensive Food Safety Program Enhancements--Targeted Improvements for Food Safety and Disclosure Methods at Retail Food Facilities – 1 CE Credit

Alicia Enriquez, REHS
Sacramento County Environmental Management Department

Abstract:
The Sacramento County Environmental Management Department (EMD) is responsible for administering the Retail Food Program in Sacramento County in accordance with the California Health and Safety Code. In an effort to improve food safety in retail food facilities and improve public disclosure methods, several food safety program enhancements (Phase I and II) were implemented during the course of a five-year period. Phase I was implemented in 2003 and included: 1) Requirement to post full inspection reports at the food facility, 2) Risk-based inspections and increased inspection frequencies, 3) Awards of Excellence, and 4) Mandatory Food Safety Education.
Food Safety and Protection

FS0702: Illness, Investigation, and Information - A Case Study of Foodborne Illness Response – 1 CE Credit

Barbara Kowalcyk, MA,
Center for Foodborne Illness Research and Prevention

Patti Waller, MS, Marler Clark, LLP, PS

Abstract:
According to the Centers for Disease Control and Prevention (CDC), an estimated 76 million Americans are sickened, 325,000 are hospitalized and 5,000 die each year from foodborne illness. Yet, only a fraction of these cases are reported to public health officials, even though they play a critical role in America’s food protection network. As a result, public health response to foodborne illness is inadequate. In addition, since public health does not fully appreciate the scope of foodborne disease, necessary resources are not allocated to address this serious public health issue.

In recent years, the CDC’s ability to monitor foodborne illness has improved significantly with the development of surveillance systems, such as FoodNet and PulseNet. Consider the 2006 *E. coli* O157:H7 outbreak associated with raw spinach products that sicken over 200 people in 26 states. One third of the states involved in this outbreak reported only one or two cases. Without CDC’s surveillance through OutbreakNet, these cases may have never been recognized as part of a larger multi-state outbreak. Further, CDC estimates that for each reported case of *E. coli* O157:H7, there are 20 unreported cases, which could put the total number of illnesses from the spinach outbreak at over 4,000. Knowing this, what can public health do to better protect Americans from future foodborne illnesses?

This presentation focuses, through one case study, on the impact of foodborne illness, public health’s responsibility when investigating a laboratory confirmed case of foodborne illness and ways in which local and state public health departments can improve surveillance of foodborne illness and respond more appropriately to foodborne illness victims.

Learning Objectives
At the end of this presentation, you will be able to:

1. Appreciate the scope and impact of serious foodborne illness in the United States.
2. Identify at least four difficulties/gaps that contribute to inadequate foodborne illness surveillance and public health.
3. Improve public health surveillance of foodborne illness and responsiveness to foodborne illness victims.
FS0703: Enhancing Food Program Capacity with Meaningful Measurements: The 2006 Samuel J. Crumbine Consumer Protection Award Winner – 1 CE Credit

Lila Wickham, RN, MS  
*Multnomah County Health Department*

Jon Kawaguchi, REHS,  
*Multnomah County Health*

James Mack, MPA, RS  
*Oregon State Health Division*

**Abstract:**
Multnomah County Environmental Health transitioned from license fees as their sole resource to a program receiving enhanced license fees, general funds and grants based upon a changed perception of the value of public health/environmental health at the community, state and federal perspective. The pursuit for excellence led to receipt of the Crumbine Award and the strategies used have continued to be enhanced for future improvements.

FS0704: Fundamentals of Water Activity and in Usefulness in Conducting Food Service Inspections and Audits – 1 CE Credit

Robert W. Powitz, PhD, MPH, RS, CFSP, DLAAS  
*R.W. Powitz & Associates, PC*

**Abstract:**
The 2005 *Food Code* included Water Activity and its relationship to pH in the definition of potentially hazardous foods. This presentation outlines the fundamentals to understand water activity and its relationship to the wholesomeness of food as well as its measurement and interpretation in the field.
GEH0603: Emerging Trends in Connecting Public Health and the Built Environment – 1 CE Credit

Ellen M. Bassett
Assistant Professor of Urban and Regional Planning
Michigan State University

Valerie Rogers, MPH
Program Manager, NACCHO

Abstract:
Given the range of health implications related to land use and community design decisions it is pertinent that health considerations are prioritized in community design processes. While local health departments (LHDs) have been increasingly partnering with local planning departments to address built environment issues, LHDs are also learning to use planning tools such as GIS to consider key community issues and connect all hazards preparedness issues with local planning efforts. This session will explore a local health department’s partnership with their local planning agency and use of GIS to address environmental health issues related to community design and also learn how a state connected all-hazards preparedness to planning efforts.

Learning Objectives:
1. Use community planning strategies to apply public health messages to advance work around built environment issues
2. Determine their department’s ability to use innovate tools (GIS, health impact assessment) for research or program planning.
3. Determine if their preparedness efforts can contribute to community design decisions

EHR0601: Carbon Monoxide Exposures On and Near Roadways in Addis Ababa – 1 CE Credit

Hailu Kassa, PhD, MPH, MS
Assistant Professor, Department of Public and Allied Health
Bowling Green State University

Abstract:
Air pollution levels in the Ethiopia capital of Addis Ababa are presumed to be high based on qualitative assessments and limited monitoring efforts. To address large data gaps regarding air pollution levels, a preliminary survey of carbon monoxide (CO) exposures was conducted in Addis Ababa in January and March 2005. CO levels were monitored near roadways and during short and long commutes. Mean exposure levels ranged from 9.0 to 31.2 ppm. One-minute maximum levels ranged from 15 to 60 ppm. The data suggests that the World Health Organization CO exposure guidelines of 26 ppm as a one hour average and 9 ppm as an eight hour average may be exceeded on a regular basis. This data set affirms that a more complete assessment of air pollution levels is warranted to develop data-driven policy, balancing the need for economic development and the protection of public health.

Learning Objectives:
1. Outline the general air pollution conditions in Addis Ababa and list drivers of the worsening air pollution situation in the city
2. Identify the resources and information needs required for a comprehensive assessment of air quality conditions in Addis Ababa
3. Compare the social/political/economic context for developing air pollution control policy in Ethiopia and the U.S.
EHR0603: Housing, the Environment, and Health: The 2005 Sabbatical Exchange – 1 CE Credit

Michele Morrone, PhD, RS
Associate Professor, Ohio University

Abstract:
Environmental health professionals have known for a long time that housing conditions are an extremely important determinant of health. People who live in homes with adequate ventilation, sanitary conditions, good drinking water, and low levels of lead for example, are healthier than those who do not. Helping people understand the connection between housing and health has become an important component of the job of the environmental health professional. This is evident when reviewing environmental public health programs across the country; most of these programs list housing and shelter environments as duties that fall into their departments. The 2005 Sabbatical Exchange revolved around housing issues, specifically developing lesson plans for teaching about environmental health and housing and outlining a textbook relative to housing and health. This presentation offers the summary of the sabbatical experience and an update on efforts to improve our understanding of housing and environmental health.

Learning Objectives:
1. Discuss the role of housing conditions and environmental health of various populations.
2. Obtain some teaching tools for training related to housing and environmental health.
3. Explain the benefits of the NEHA Sabbatical Exchange program.

EHR0604: Understanding the Impact of Study Design on Results: A Comparison of Two Radioactive Iodine Studies in Washington State – 1 CE Credit

Capt. Steven G. Inserra, MPH REHS
Epidemiologist, ATSDR,
Div of Health Studies

Caroline Cusack, MSPH
Epidemiologist, ATSDR
Div of Health Studies

Abstract:
The purpose of this presentation is to recognize and understand the impact of study design and methodology for assessing burden of environmental-related disease. We reviewed and compared study publications that evaluated thyroid disease burden in a region of Washington State from the mid-1990s and forward. Radioactive iodine was released into the air from the Hanford Nuclear Site in Washington from the 1940s through the 1970s. Because iodine-131 concentrates in the human thyroid when inhaled or consumed, various investigators studied possible iodine exposure effects using population-based studies. The compared studies arrived at seemingly different conclusions regarding thyroid disease prevalence levels and risk from environmental exposures. These results and the communication thereof may generate questions from the public and officials. This presentation will review the studies' methodologies to better understand their impact on overall results. We will highlight conceptual constructs-study design, time period, case ascertainment, sampling strategy, data sources, and analysis-for the purpose of improving professional understanding. Knowledge imparted through this presentation may be applied to future reports and publications for both advancing professional practice and improving health communications with scientists, policy makers, and the public.

Learning Objectives:
1. Understand the potential for similarities and differences in study results
2. Understand an approach to review and compare study methodologies
3. Improve health communications with the public and health officials
HM0601: Meth Lab Decontamination: A Review of Current Practices – 1 CE Credit

Sheila D Pressley, M.S.
Assistant Professor
Eastern Kentucky University

Abstract:
Methamphetamine (meth) is a synthetic amphetamine that can be made with common household items such as drain cleaner and cold medications. In addition to the people who cook or use meth, first responders, hazardous materials technicians, and property owners are also at risk to the dangers of meth. Hazardous materials technicians are involved in decontaminating meth labs after an arrest or drug lab seizure is made. For each pound of methamphetamine produced, five to six pounds of toxic waste are produced. The hazardous and explosive toxic chemicals involved in making meth are absorbed into the walls, vents, drains and carpets of homes, motel rooms, or other locations where meth is produced. Since meth labs are an emerging problem, there are currently no federal guidelines or regulations on how to clean up former meth lab properties for reoccupation.

Learning Objectives:
1. The best methods for decontaminating meth labs, especially those found in single-family homes.
2. The various levels of training recommended for workers who are involved in decontaminating meth labs.
3. Understand current policies and regulations that attempt to protect the public from meth lab exposures.

HM0602: You Do This and We'll Do That: An Interactive Health Risk Communication Case Study for the Conrail Rail Yard in Elkhart, Indiana – 1 CE Credit

Capt. Steven G. Inserra, MPH REHS
Epidemiologist, ATSDR,
Div of Health Studies

Abstract:
The Agency for Toxic Substances and Disease Registry (ATSDR) presents how sharing fact-finding responsibilities with stakeholders keeps health messages on point and increases the likelihood that messages are heard. Conrail Rail Yard, one of the largest switching facilities for locomotives in the US, has a history of poor environmental compliance. In 1988, the Environmental Protection Agency designated the yard and adjacent neighborhood as a Superfund hazardous waste site. In 2000, a community group petitioned ATSDR to address those concerns and evaluate new data. In response to this petition, ATSDR developed an interactive approach to ensure a successful evaluation and improve risk communications. The interactive approach demonstrated ATSDR’s commitment to identify and evaluate community concerns, the community’s commitment to provide information regarding health concerns, and a commitment among the parties to advance health education goals.

Learning Objectives:
1. Identify and define major components of an Action Plan for organizing community-based participatory activities.
2. Construct and implement an Action Plan to address scientific, health communication, and community participation components.
3. Become more skillful in use of an Action Plan for synthesizing inputs of health investigations, and for constructing health communications.
GEH0701:  Environmental Health in the “Broadest” Sense: Obesity and the Built Environment – 1 CE Credit

Shari McMahan, PhD
California State University Fullerton

Abstract:
During the past 20 years, obesity among adults has risen significantly in the United States. Obesity and overweight are now common in American society. Obesity is highly correlated with the development of several chronic diseases, including cardiovascular disease and diabetes. Unless current eating and exercise habits change, one-third of all children born in the United States in 2000 will become diabetic. Obesity-related conditions kill an estimated 300,000 people per year in the United States.

Poor nutrition, physical inactivity, genetics and the built environment are factors that contribute to the obesity epidemic. The built environment includes urban design factors, land use, and available public transportation for a region, as well as the available activity options for people within that space. The built environment can both facilitate and hinder physical activity and healthful eating. This presentation covers built environment strategies that help promote and encourage physical activity.

GEH0702:  Innovative Land Use Planning and Design for Health and Climate Change – 1 CE Credit

Karen Roof, Kroof EnviroHealth Consulting
Anne Bikle, PhD, MS, Seattle-King County Public Health

Abstract:
Nationwide evidence shows that land use decisions can have significant impacts on the environment, chronic disease, and social health status. Many environmental public health professionals have taken the lead on this issue, in policy, built environment and climate change and innovative programs.

Case studies, examples, and strategies will be presented highlighting the work of some local health departments including details from Seattle-King County who are spearheading the effort to make health a more explicit and recognizable part of decisions involving land use, planning, design, environmental issues and climate change. The presentation covers updating land use plans and policies, preparing climate plans, and conducting health impact assessment and more.
GEH0703: Safe Body Piercing: Choosing the Safe Piercer – 1 CE Credit

Gina M. Vallone-Hood, Florida Department of Health

Abstract:
The purpose of this presentation is to assist minors in making an informed decision when getting a body piercing. Body art is a growing industry with more and more people getting body piercings and tattoos. Due to age limitations minors seek alternative routes for obtaining piercings and tattoos. This presentation was created as a result of several minors having a classmate pierce their tongue on the school bus. These minors attended an alternative school, which contacted the department requesting a body piercing presentation, which was to be presented to all students attending the school.

This presentation provides an overview of the body piercing regulation in Florida, blood borne pathogenic diseases, and compares and contrasts the differences of getting pierced by a piercer who works in a licensed body piercing establishment versus an acquaintance.

GEH0704: Managing for Results—Dev a Workable Outcome Strategy Fully Supported by an Industry-accepted Cost/Fee Recovery System – 1 CE Credit

David F. Ludwig, MPH, RS
Maricopa County Environmental Services

Abstract:
Maricopa County has developed a Managing for Results system capable of tracking our efforts to gain key Environmental Health Outcomes. Results are measured based on goals, staffing, output and cost effectiveness. A key supportive component to this system is having a 100% cost recovery system. This presentation explains the detail process in developing such a tool and how to recover cost and justify additional personnel.
**Indoor Air Quality**

**IAQ0601: Healthy Homes: The Essentials, the Players, and the Potential – 1 CE Credit**

**Tom Neltner, JD, CHMM**  
*Director of Training and Education*  
*National Center for Healthy Housing*

**Abstract:**  
Asbestos, carbon monoxide, lead-based paint, pests, radon, and mold—you now that there is a connection between housing and health. Too often, as environmental health specialists, we find ourselves struggling to respond to specific problems, especially indoor air quality problems, without an overall strategy that brings together both health and housing science into an integrated system that protects the public in an efficient manner. The healthy homes movement provides that strategy. This session will help you understand the healthy homes movement and what you can do to bring it to your community.

**Learning Objectives:**  
1. Identify health impacts that stem from housing problems  
2. Describe how a healthy homes approach provides an integrated approach to resolving housing problems  
3. Implement a healthy homes approach in your community

**IAQ0602: Indoor Air Quality and Mold Contamination Following Catastrophic Events – 1 CE Credit**

**Linda Stetzenbach, PhD**  
*Professor, Department of Environmental and Occupational Health*  
*School of Public Health, University of Nevada, Las Vegas, NV*

**Abstract:**  
The proliferation of airborne and surface-associated mold in indoor environments following water intrusion/water damage can adversely affect the health of building occupants. Historically, monitoring and remediation/repair recommendations have been developed to address mold contamination indoors resulting from water damage due to plumbing problems, rain, and flooding, but these guidance documents focus on a limited problem area. The massive water intrusion experienced by buildings in the gulf coast of the U.S. following the 2005 hurricanes emphasized the need for comprehensive information and response strategies following catastrophic events for use by public health officials, building managers, and other affected groups.

This presentation will summarize the current information on mold contamination and highlight strategies for minimizing the risk of mold exposure in water-damaged buildings following catastrophic events.

**Learning Objectives:**  
1. List public health concerns regarding mold in water damaged buildings  
2. Identify ways to assess exposure to mold in water damaged indoor environments  
3. Identify clean up and prevention strategies for buildings impacted by the proliferation of mold
Indoor Air Quality


Eugene C. Cole, DrPH
Department of Health Science
Brigham Young University, Provo, UT

Abstract:
Life-threatening infections from common indoor environmental molds such as Aspergillus, Fusarium, Alternaria, Paecilomyces and Rhizopus, have continued to increase in those immunocompromised due to HIV/AIDS, neoplasms, cancer chemotherapy, transplantation, and underlying lung disease. Children with neutropenia or prolonged corticosteroid therapy are especially susceptible to infection. Species of Aspergillus in particular, are recognized as significant emerging pathogens in persons with AIDS. It is thus critical that the home environment be properly cleaned and environmentally managed to reduce fungal reservoirs at least one week prior to the arrival of the susceptible patient. Guidance for this risk reduction has been developed and includes: 1) controlling moisture in the air and on surfaces and materials; 2) cleaning reservoirs, by removing soil, dusts, and other potential growth substrates, 3) preventing amplification of residual fungi remaining after cleaning through disinfection, 4) restricting pollutant build-up and entry from outside the home, and 5) using efficient air-cleaning devices. Understanding and adherence to these recommendations for both resident occupants and experienced cleaning professionals is essential for achieving a meaningful risk reduction.

IAQ0604: The "Top Ten" Reasons Radon Is a Major Environmental Health Risk – 1 CE Credit

R. William Field, MS, PhD
Associate Professor, Dept of Occupational and Environmental Health
Department of Epidemiology, College of Public Health
University of Iowa, Iowa City, IA

Abstract:
EPA estimates that prolonged residential radon exposure is responsible for over 20,000 lung cancer deaths each year in the U.S. However, radon has many characteristics that reduce the perceived risk. The talk focuses on the “Top Ten” reasons why radon is a major environmental health risk. The presentation is constructed so that attendees can download the presentation from the Web and modify it for use in public health outreach within their local communities.

Learning Objectives:
1. Identify the major reasons people should take action to reduce radon exposure
2. Describe the scientific evidence supporting the fact that radon is a major environmental carcinogen
3. Present a similar talk in your community using a modified version of the presentation slides, which are available with the course materials.
Indoor Air Quality

IAQ0605: The Use of Air Cleaning Systems to Reduce Radon Related Health Risks – 1 CE Credit

Douglas L Kladder, BSChE
Director, Center for Environmental Research & Technology
Colorado Springs, CO

Abstract:
An increased recognition of indoor air cleaners has led to more frequent use of air cleaners, either as stand-alone units or as integral parts of central air handling systems. The primary health risk associated with radon is its decay products, which are electrostatically charged and readily adhere to dust particles. The use of air filters (provided these systems are properly designed and consistently operated) can be used to reduce radon related risks as well as other indoor air quality concerns. This paper will discuss a number of case studies where air filters were used to successfully treat radon decay products, especially in situations where conventional radon mitigation is not as effective as desired.

Learning Objectives:
1. To be able to advise individuals on the ability of air cleaners to reduce radon decay products in conjunction with other indoor air quality applications
2. To be able to recommend specialty measurement devices needed to determine the efficacy of air cleaners in reducing radon decay products
3. To better understand exposure and dose reductions that occur with the use of air cleaners.

EHR0602: Community Urbanization and Hospitalization of Adults for Asthma – 1 CE Credit

Rosemarie G Ramos, PhD, MPH
NIH Postdoctoral Fellow, NIEHS

Abstract:
Few studies have assessed the incidence of adult asthma hospitalizations in urban vs. non-urban areas. Using population size, population density, and traffic-related factors to define urban vs. non-urban environments, six Pennsylvania counties were selected to test the hypothesis that the degree of urbanization influences the asthma hospitalization rate for adults. To define traffic-related urbanization, daily vehicular traffic count and miles of roads/highways for each of the 6 counties were used. We found, in some of the counties, a decrease in the adult asthma hospitalization rate as urbanization decreased. However, for other counties, the rate increased as urbanization decreased. The counties in which the latter was observed had depressed measures of socio-economic status (SES) and were located "downwind" of industrial facilities in Pennsylvania and neighboring states. Our findings suggest that other factors may supersede exposure to local traffic-related pollution in those hospitalized for asthma.

Learning Objectives:
1. Address how designations of urban versus rural are made in the US
2. Appreciate the multifactorial nature of asthma
3. Realize the research barriers with respect to assessing the relationship of regional ambient air quality and respiratory health morbidity
Onsite Wastewater Systems

OWS0601: Can We Afford Performance? – 1 CE Credit

Richard J. Otis, PhD, PE, DEE
Vice President, Applied Technologies
Ayres Associates, Madison, WI

Abstract:
Many states and counties are considering revising their onsite treatment regulatory programs to performance-based programs. Performance-based programs use treatment performance rather than system design and installation as the compliance criterion. This implies that each system will require regular performance monitoring to confirm compliance to the stipulated performance requirements. Can we afford this? This presentation will explore how we might be able to monitor affordably.

Learning Objectives:
1. Analyze the implications of performance-based programs on state and county programs
2. Understand how to evaluate the risks associated with onsite system discharges
3. Identify other approaches to ensuring compliant performance of onsite systems

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OWS0602: Decentralized Wastewater Treatment in Texas Watersheds – 1 CE Credit

Bruce J. Lesikar, MS, PhD, PE
Professor, Assoc Dept Head, and Extension Agricultural Engineer
Department of Biological and Agricultural Engineering
Texas Cooperative Extension, Texas A & M University

Abstract:
This presentation will discuss the implementation of watershed management programs in Texas to reduce potential for non-point source pollution due to residential wastewater. The current status of decentralized wastewater treatment in Texas will be discussed, along with how the need for decentralized wastewater infrastructure is being addressed.

Learning Objectives:
1. Understand how wastewater treatment infrastructure is currently managed in Texas watersheds
2. Identify the components necessary to manage onsite wastewater treatment infrastructure for water quality protection
3. Summarize how operation, maintenance, and monitoring of onsite wastewater treatment systems is being implemented in Texas
Abstract:
The Consortium of Institutes for Decentralized Wastewater Treatment (CIDWT) is actively developing educational materials to meet the educational needs of wastewater practitioners. CIDWT has completed the University curriculum project, the practitioner training materials, and O&M Service Provider Training Materials. The Decentralized Wastewater Treatment Glossary and Installer Training materials are currently being developed. The current status of CIDWT projects will be discussed.

Learning Objectives:
1. Understand how practitioner training materials can assist in increasing industry credibility
2. Outline how NEHA, CIDWT, and NOWRA are partnering together to develop an installer credentialing program
3. Identify the different aspects of being a professional providing a service to the public
Swimming Pools / Recreational Waters

SP0601: Chlorine Chemistry: What Inspectors Need to Know – 1 CE Credit

Stanley R. Pickens, PhD
Senior Research Associate
PPG Industries, Inc.

Abstract:
Basic disinfection principles of pool/spa water chemistry will be discussed. Review of the six chlorine sanitizers presently being marketed will be presented. Stress is placed on the current status of chlorine levels and fouled pools. In depth comparison of bromine versus chlorine sanitation systems will be discussed. Special topics, such as ORP and "alternative sanitizers" will also be covered.

Learning Objectives:
1. appreciate the key principles of chlorine and bromine disinfection, and the levels needed for healthy pools
2. acknowledge the functions of "alternative sanitizers" in pool disinfection
3. understand the role of ORP versus wet chemistry in the determination of sanitizer levels

SP0602: Pool and Spa Water Chemistry: What Inspectors Need to Know – 1 CE Credit

Stanley R. Pickens, PhD
Senior Research Associate
PPG Industries, Inc.

Abstract:
The efficacy of chlorine as a sanitizer is impacted by pH. The pH stability is in turn impacted by alkalinity. This session, a companion to the previous lecture on chlorine in water treatment, will focus on the impact of such secondary variables as pH, alkalinity, and hardness, the relationships between them, and the natural phenomena that limit the practical ranges for these parameters.

Learning Objectives:
1. name key water parameters that impact the efficacy of chlorine and how these variable interrelate
2. understand how pH, alkalinity, water hardness, etc., can influence the corrosiveness of water
3. understand how the relationships between alkalinity, hardness, and pH limit the available ranges of variation for each
Swimming Pools / Recreational Waters

SP0603: Solutions to Suction Entrapment for Pools and Spas and the New IAF-7 Standard – 1 CE Credit

Steve Barnes
Product Manager, Safety and Compliance
Pentair Water Pool and Spa, Phoenix, AZ

Abstract:
Suction entrapment hazards exist in almost all pools and spas, yet these hazards are largely unrecognizable. This straightforward presentation will teach attendees how the five suction entrapment hazards endanger public health and safety, how to easily recognize suction entrapment hazards, and how they can be effectively addressed with readily available technology. The content of this presentation is based on IAF-7 Standard for Suction Entrapment Avoidance. Armed with this basic knowledge, attendees will be given a quick overview of current initiatives to improve product standards, building codes, health codes, and how attendee leadership in environmental health puts them in a great position to raise awareness and help eliminate these hazards.

Learning Objectives:
1. Identify the five suction entrapment hazards found in most pools and spas
2. Know how suction entrapment hazards can be addressed in new and existing pools and spas
3. Understand how laws, codes, and building standards are changing to force compliance

SP0701: Recreational Water Illness Training and Prevention – 1 CE Credit

Louis "Sam" Fruia, Med, CPO, AFO, CPI
Brownsville Indiana School Dist

Abstract:
The Recreational Water Illness Training and Prevention module augments current certification processes for Aquatic “Specialists”. This module provides awareness training in disease transmission and waterborne pathogen education presented before aquatic certification or as a continuing education module. Everyone in the aquatics industry or those who make aquatics their business, including coaches, service technicians, and pool operators are responsible to provide the safest aquatic environment for individuals who use pools and spas for employment, recreational or competitive reasons.

The participant will understand the need and be, provided training in the General Duty Clause known as the “Occupational Safety and Health Act of 1970 and its scope to RWI pathogen transmission; RWI pathogens of most concern; RWI preventing transmission; and outbreak documentation.
SP0702: Water Chemistry 101 – 1 CE Credit

Tom Seechuk
LaMotte Company

Abstract:
Water chemistry plays an important part in the safety of recreational waters. An understanding of the reactions of sanitizers is the key to properly assess the condition of water. pH is also important, not only in relation to sanitizer activity, but with alkalinity and hardness in water balance. Cyanuric acid stabilizer can contribute to alkalinity readings and should be properly monitored and controlled.

Water testing is subject to interferences. These will be described and techniques to overcome these interferences will be offered.

SP0703: Salt Water Generators – 1 CE Credit

Marty Fisher
Balboa Direct

SP0704: What Really Happens at Aquatic Facilities Between Inspections? – 1 CE Credit

CAPT Charles S. Otto, III, MPA, RS, CFSP
USPHS - Environmental Health Services Branch
Centers for Disease Control and Prevention

Abstract:
Using the Environmental Health Systems Approach methodology, CDC Environmental Health Services Branch, the Healthy Swimming Program, and National Institute of Occupational Safety and Health, conducted a comprehensive research project on a large indoor swimming pool. Along with the primary study objective of examining factors related to chloramines in the aquatics area, it was an excellent opportunity to perform a longitudinal study of operational factors. Over 100 chemical and physical parameter measurements and samples were taken each day, and others were measured using continuous monitoring and data logging. The data was collected for 12 hours per day, 6 days per week, for 13 weeks to fully characterize the pool water and air. Hourly patron data and pool maintenance were also noted. Through this extensive data collection and analysis, the findings can be generalized to assist environmental public health professionals and aquatic facility operators be better prepared to protect the health of patrons.
SP0705: National Model Aquatic Health Code and Risk Reduction Plan – 1 CE Credit

Douglas C. Sackett
New York State Department of Health

Abstract:
In the United States, pool codes are reviewed and approved by state and/or local public health officials. There are no uniform national standards governing design, construction, operation, and maintenance of swimming pools and other recreational water venues. Thus, the code requirements for preventing and responding to recreational water illnesses can vary significantly among local and state agencies. A model national code would insure that the best available standards and practices for protecting public health are available for adoption by state and local agencies.

SP0706: Current Technology and a Distributed Beach Monitoring Program – 1 CE Credit

Jon A. Dinneen, Med
State of Connecticut Department of Public Health

Abstract:
The Connecticut Department of Public Health (CT DPH) has implemented a distributed beach monitoring/notification tracking and reporting effort with assistance from the US EPA Beach Grant. The agency quickly adopted current technologies to support and manage this contemporary public health program.

This illustrated talk provides an integrated how-we-do-it introduction to our work that includes: meeting with our many partners who contribute to this coastal public health effort; receiving, managing and using monitoring and notification data from the state laboratory and selected municipalities; maintaining and using our data inventories, providing beach data and other public health responses to non-governmental agencies, third parties, and the public; and presenting Connecticut’s distributed beach program.
Abstract:
Recent *Cryptosporidium* outbreaks at community pools and waterparks have demonstrated the need to move beyond simple chlorination as a means of disinfecting recreational water. While the use of ultraviolet radiation and ozone to treat commercial swimming pools has increased in recent years, operators and facility managers often do not have the technical resources to determine if a particular disinfection system is appropriate for their facility. In fact, some ozone generators are designed mainly to break up tanning oils and aid filtration, and are not intended for disinfection. This presentation discusses the current disinfection efficacy requirements in various standards and regulations as well as new validation requirements for *Cryptosporidium* inactivation.

The presentation focuses on readily available tools that operators and facility managers can use to determine if the equipment they are considering purchasing will provide adequate public health protection.

Learning Objectives
After attending this session, attendees will be able to:

1. identify the limitations of certain disinfection practices and technologies for public swimming pools and water parks;
2. determine if the disinfection equipment is appropriate for the size of the water body and desired type of treatment; and
3. determine if the disinfection equipment meets national standards.
CDC0702: Biology and Control of Insects and Rodents – 12 CE Credits

Abstract:
This program includes lecture and group discussion on the biology of insects and rodents of public health significance; effective physical and chemical insect and rodent control methods (including integrated pest and sanitation management); and insect and rodent-borne diseases of public health significance, including possible Bioterror agents. This program is sponsored by the Environmental Health Services Branch of CDC’s National Center for Environmental Health.

Topics include:
- Vector-borne Diseases of Public Health Importance
- Vector-borne Diseases of Bio-terror Agents
- Integrated Pest Management
- Health Effects of Pesticides
- Mosquito Control
- Biology and Control of Rodents
- Biology of Ticks and Mites
- Tick Control for Lyme Disease Prevention
- Miscellaneous Pests
- Vector Control and the Built Environment

VCT0701: Bed Bugs: Are You Ready for the Challenge?--What You Need to Know – 1 CE Credit

Richard A. Cooper, MS
Cooper Pest Solutions

Abstract:
Bed bugs have recently re-emerged as a major pest in the United States. Unless you are over the age of 65 you probably have never experienced a bed bug infestation first hand. As a result professionals in the field of environmental health are beginning to deal with a very complex pest problem that they have never dealt with previously. This presentation provides environmental health professionals with all of the information that they need to understand the current status of bed bugs within the US as well challenges and obstacles that exist in managing bed bug infestations.
VCT0702: Rabies: Human and Animal Interaction and the Oral Rabies Vaccine – 1 CE Credit

Jane Huffman, MS, PhD
East Stroudsburg University

Abstract:
Rabies is an ancient disease. It is well described in writings by Egyptians dating back to 2300 B.C. Rabies disease is caused by a virus that is present predominately in the saliva of rabid animals. The virus is transmitted by the bite of an infected animal, and causes an inflammation of the brain. It is almost always fatal once symptoms develop. In wild and domestic animals, rabies virus may affect the part of the brain, which regulates aggression, causing the animal to attack without fear or provocation. Oral rabies vaccination (ORV) has been under field investigation in the United States since 1990, in Canada since 1985 and in Europe since 1980. There have been nearly 48 million doses of Raboral V-RG® distributed in the U.S. and Canada, and 63 million doses have been dispersed worldwide. Raboral V-RG® is currently the only effective oral vaccine licensed for use in free-ranging raccoons, gray foxes, and coyotes in the United States. V-RG is a recombinant vaccine made from a living pox virus vector, vaccinia (V). The vector carries the rabies antigen in the form of rabies glycoprotein (RG). The RG is the protective sheath that surrounds the rabies virus and elicits an immune response when swallowed by raccoons, gray foxes, or coyotes. The strategy of the oral vaccination of wildlife is directed towards preventing human exposure.

VCT0703: Mosquito Control Activities After Heavy Rainfall and Flooding – 1 CE Credit

William J. Wolff, MPH, MPA
El Paso City-County Health & Environmental District

Abstract:
Rabies is an ancient disease. It is well described in writings by Egyptians dating back to 2300 B.C. Rabies disease is caused by a virus that is present predominately in the saliva of rabid animals. The virus is transmitted by the bite of an infected animal, and causes an inflammation of the brain. It is almost always fatal once symptoms develop. In wild and domestic animals, rabies virus may affect the part of the brain, which regulates aggression, causing the animal to attack without fear or provocation. Oral rabies vaccination (ORV) has been under field investigation in the United States since 1990, in Canada since 1985 and in Europe since 1980. There have been nearly 48 million doses of Raboral V-RG® distributed in the U.S. and Canada, and 63 million doses have been dispersed worldwide. Raboral V-RG® is currently the only effective oral vaccine licensed for use in free-ranging raccoons, gray foxes, and coyotes in the United States. V-RG is a recombinant vaccine made from a living pox virus vector, vaccinia (V). The vector carries the rabies antigen in the form of rabies glycoprotein (RG). The RG is the protective sheath that surrounds the rabies virus and elicits an immune response when swallowed by raccoons, gray foxes, or coyotes. The strategy of the oral vaccination of wildlife is directed towards preventing human exposure.
Water Quality

DW0601: 2005 Hurricane Response for Public Water Systems in Louisiana by the Louisiana Department of Public Health and Hospitals – 1 CE Credit

Karen S. Irion, P.E.
Safe Drinking Water Program Administrator
Louisiana Department of Public Health and Hospitals

Abstract:
This presentation details the state DHH-OPH Drinking Water Program response to the devastation caused by Hurricanes Katrina and Rita in Fall 2005. The presentation will illustrate lessons learned and procedures developed by the state to deal with the widespread devastation and long-term flooding caused by the flooding.

Learning Objectives:
1. Understand the extent of damage to the state by the hurricanes.
2. Learn new procedures developed to deal with such major disasters
3. Learn some of the lessons taught to DHH-OPH staff on dealing with federal agencies after a major disaster.

DW0602: State Drinking Water Program Responses to Water System Emergencies / Establishing Effective Public Health Partnerships with Water Utilities – 1 CE Credit

Anthony E. Bennett, RS
Sr. Technical Specialist
San Antonio Water System

Homer C. Emery, PhD, RS, DAAS
Senior Environmental Scientist
San Antonio Water System

Abstract:
State Drinking Water programs have been tasked with working with EPA and water systems to develop emergency preparedness and response programs for public water systems. As experience has shown in the last few years, these emergencies can come from both human actions as well as natural disasters. In order to be prepared for such events, The Public Drinking Water Program at the Texas Commission on Environmental Quality has taken a number of measures to improve its own capabilities as well as the capabilities of water systems.

Lessons being learned in today’s reality of the terrorist threat to public water supplies and the impact that natural disasters such as Hurricane Katrina can have on potable water systems underline the need for water utilities to establish and maintain effective partnerships with local health departments. In San Antonio, Texas, water utility operators were able to participate in a tabletop exercise with local sanitarians to learn basic epidemiological techniques used by public health officials in the investigation of illness outbreaks. Teams composed of water operators and local public health sanitarians used data from mock patient histories to construct an epidemiological curve to approximate the time of exposure and calculate specific food attack rates. Using basic epidemiological techniques, it was possible to identify the probable source of the illness outbreak. Water operators learned that public health partnerships are needed long before the decision to “don’t drink the water” must be made.
Water Quality

DW0603: Some Cross-Connections Present with Very Interesting Visual Clues – 1 CE Credit

Paula M. Tanner, REHS, MPH
Epidemiologist
Jack in the Box

Abstract:
Potable water can become contaminated or polluted by a variety of chemicals, microorganisms, liquids, and gasses. The cross-connections are often identified because of illnesses, injuries, inspection audits and the like. Visual clues may be a proactive approach to preventing some cross-connections, or even an investigative tool in a debriefing after a cross-connection event. Approximately 80 cross-connections were identified from an extensive data base that had clear visual clues. Each type of visual clue was catalogued and ranked, and each type of visual clue was evaluated in terms of illnesses/injuries and deaths, consequences, and remedial steps.

Some cross-connection events were humorous in that beer or wine spewed forth from the kitchen sink faucet. In another, the water turned blue from a hydroflourisilic acid overfeed at a water treatment plant. And in another category type, a facility complained of an extremely high water bill that investigation determined to be from a cross-connection.

Learning Objectives:
1. An understanding of the definition of a cross-connection.
2. Understand the difference between a polluting event and a contaminating event.
3. Learn how visual clues can be used as an important proactive approach in preventing/limiting cross-connections as well as a valuable tool in determining a cause of a specific cross-connection.

WP0601: EPA Sediment and Surface Water Sampling Results and Conclusions for New Orleans and Lake Pontchartrain after Hurricanes Katrina and Rita – 1 CE Credit

Donald Williams
Superfund Technical Support Team Leader
EPA Region 6, Dallas, TX

Abstract:
On August 29, 2005, Hurricane Katrina made landfall near Buras, Louisiana, with winds of 145 miles per hour. By 11:00am, the Lower Ninth Ward of New Orleans and sections of St. Bernard Parish had been flooded with up to 10 feet of water. Sections of Jefferson and Plaquemines Parishes were also flooded as a result of levee breaches. Under a mission assignment from the Federal Emergency Management Agency (FEMA), EPA began sampling floodwaters and sediments left behind as floodwaters receded. The initial sampling was conducted to assess the presence of hazardous substances for acute effects from short-term exposure of emergency workers and residents returning to their properties. Floodwater sampling was conducted from September 6, 2005, until “unwatering” of the impacted areas was completed in mid-October. The results of approximately 1,500 sediment samples, collected in four phases from September 10 to the present, indicate that, in general, the flooding from Hurricanes Katrina and Rita did not result in soil contamination in the flood-impacted areas. A major oil spill in St. Bernard Parish was the result of the hurricane, as was the presence of polynuclear aromatic hydrocarbons at the Agriculture Street Landfill Superfund site in New Orleans.

Learning Objectives:
1. Develop a systematic approach for identifying environmental conditions and prioritizing potential risks from natural disasters
2. Recognize the level of communication and coordination necessary among various federal, state, and local agencies and the general public
WP0602: State of the Science in Microbial Source Tracking: What Environmental Managers and Public Health Practitioners Should Know – 1 CE Credit

Valerie J. Harwood, PhD
Professor, Department of Biology
University of South Florida, Tampa, FL

Abstract:
The determination of source(s) of fecal pollution to surface and ground waters is essential for effective protection of public health, for remediation of contaminated waters, and for regulatory tasks such as total maximum daily load (TMDL) assessment. Regulatory standards for microbial water quality are based on indicator bacteria concentrations, yet these organisms are shed in the feces of a wide variety of animals, including humans, therefore they offer no information about contamination source. Various methodologies, collectively termed microbial source tracking (MST), have been applied to the problem of fecal source determination. These methods can be broadly divided into library-based or library-independent methods. Each method has advantages and disadvantages, and managers should be aware of the necessity for method validation on fecal samples and on water samples. Case studies conducted in various geographic areas of the U.S. will be presented. Future directions for MST, including microarray technology, will be discussed.

Learning Objectives:
1. Understand purpose of MST and its importance to water quality management and public health
2. Understand the advantages and disadvantages of various MST methods, and know the minimum validation steps necessary for gauging the usefulness of a methods
3. Know some of the future possibilities for MST studies and applications
Workforce Development

GEH0602: Working with the Media to Promote Your Organization – 1 CE Credit

Jerry M Bowman
Director, Corporate Communications, NSF International

Abstract:
In today's news media climate, informed and articulate spokespersons are not only in demand, but effective spokespersons can shape what's covered in the press. In recent years, health and safety issues, in particular, have dominated the media. With the proliferation of online media organizations, the media is eager to offer consumers news-they-can-use on subjects that impact their daily lives.

This overview on working with the media is designed to help you do better interviews and develop a good relationship with the press and to ultimately position your organization with your community. As a “source,” you can serve the media by providing accurate information about current issues in the field of public health. You also can bring to the media's attention topics that are important to you and your colleagues.

Learning Objectives:
1. Understanding the newsgathering process.
2. Knowing the best time to “pitch” a reporter on a story idea.
3. Tips on obtaining media lists of key reporters at the local level.
4. Wearing the right clothes for TV interviews.
5. Dealing with ambush interviews during crisis events.
6. Positioning your message to gain coverage of your issues.

CDC0703: National Environmental Public Health Performance Standards Workshop – 4 CE Credits

Sponsored by:
Environmental Health Services Branch of CDC’s National Center for Environmental Health

Abstract:
The National Environmental Public Health Performance Standards (NEPHPS), built upon the 10 essential environmental health services are viewed as the primary tool for strengthening the nation’s environmental public health infrastructure. Endorsed by several national agencies and professional associations, they are being used to build capacity, consistency, and accountability within and across the nation’s environmental public health system. Through this hands-on workshop, participants have the opportunity to pursue national excellence by implementing these standards at their own agencies. You will learn about the standards and their application to day-to-day activities, complete the agency self-assessment instrument, identify your own agency capacity gaps, and learn about and share best practices aimed at improving program capacity.
WFD0702: Dealing with Difficult People: How to Survive the CAVE (Citizens Against Virtually Everything)! – 1 CE Credit

LuAnn Watson
Morton County LEP/NPS

Abstract:
Most of us are professionals and have years of experience or are at least proficient in our fields of work. However, the people we work with as customers (this includes contractors and homeowners) may be dealing with an issue for the very first time. Communication skills often overlooked in any industry include:

- Speaking – our best skill…words, body language, actions, making ourselves ‘understood.’
- Listening – not our best skill – do we ‘hear’ what’s being asked? Do we formulate an answer before the customer finishes asking the question?
- Writing – do we explain ourselves effectively and in a comprehensive manner?
- Reading – what type of material do we present to the public? Can they read it? Do they understand???
- A ‘difficult’ customer is a misunderstood customer.
- Learn the skills and personality profiling to improve your business or office performance.

WFD0701: Negotiation Skills for Environmental Public Health Professionals – 1 CE Credit

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Abstract:
Negotiation is a problem-solving process in which people voluntarily discuss differences in an attempt to reach an agreed-upon decision regarding common issues. This session will examine myths surrounding negotiation skills, the types of negotiation, conditions conducive to negotiation and the eight major elements of negotiation. Finally, characteristics of a great negotiator will be discussed.