

# Lecture Hall

## Session Abstracts

National Environmental Health Association (NEHA)  
72<sup>nd</sup> Annual Educational Conference & Exhibition

### Drinking Water Quality

Wednesday, June 25

8:00 – 8:50am

#### **CDC's Environmental Health Specialists Network (EHS-Net) Water Project**

*Vince Radke, MPH, REHS, CP-FS, DAAS, Sanitarian, CDC, GA*

EHS-Net is a collaborative forum of environmental health specialists whose mission is to improve environmental health. These specialists collaborate with epidemiologists and laboratorians to identify and prevent environmental factors contributing to foodborne and waterborne illness and disease outbreaks.

9:30 – 10:20am

#### **The Role of State Public Health in the Water Sector**

*Sarah Neiderer, Policy Analyst, Association of State and Territorial Health Officials, VA*

The Association of State and Territorial Health Officials (ASTHO) is working to develop a water program aimed to support sound public health policy and practice among state health agencies. During the initial phases of this process, ASTHO is seeking advice from key stakeholders as to how to better support and enhance the ability of state health agencies to prevent waterborne illnesses, and to improve water quality and security. ASTHO has identified stakeholders from the federal, state, and local levels to share experiences and unique roles in water issues and assist in guiding the development of ASTHO's water program. Through this process, ASTHO has been able to identify strengths and weaknesses within the water sector, as well as opportunities for forming partnerships among federal, state and local levels. Stakeholders indicated various areas in which ASTHO and state public health can provide a role, including the detection, identification and reporting of water borne disease outbreaks, recreational waters, source water protection, drinking water and water security. Stakeholders defined partnerships as an effective mechanism for ASTHO to share state-based best practices and challenges, as well as assist in aligning state priorities with those of the federal, state, and local levels. ASTHO seeks to support the practices and policies of state health agencies that can minimize disease, injury, and disability resulting from waterborne illnesses, and can enhance water quality and water security across the nation.

11:00 – 11:50am

#### **Straining the Lead Out of Water Devices**

*Clifton McLellan, Director of Toxicology Services, NSF International, MI*

A regulatory framework has been developed across the United States and Canada for controlling the leaching of contaminants from products used in municipal water distribution systems. This regulatory framework is based on NSF/ANSI Standard 61: Drinking water system components - health effects. Forty-four US States and three Canadian Provinces require municipal drinking

water system components to comply with the requirements of the standard. Most American and Canadian plumbing product standards also reference NSF 61.

Lead is one of the many contaminants addressed by the standard. It is also a contaminant closely watched by utilities as required by the Lead and Copper Rule, by schools as required by the Lead Contaminant Control Act, and by others looking to reduce the overall burden of lead placed on consumers through drinking water. Lead currently enters our drinking water through many sources including source water, lead service lines, pipe scales, old lead soldered joints, and existing lead containing plumbing fittings and devices.

Beginning July 2012, the pass/fail for products certified to NSF/ANSI standard 61 will be reduced by 66%. Based on current test results, 35% of all brass/bronze products will not meet the criteria. What are some of the dynamics of lead extraction from brass/bronze to water?

This five year phase in period will allow time to answer specific questions about the impact of this change. Can new materials or technologies be found and implemented in time to replace leaded brass/bronze components? What are the increased costs and who will pay for them? Why did the regulators agree to a five year implementation phase? Why did manufacturers agree to the criteria reduction when 35% of their current products would fail?

This presentation will explain the process and the hurdles in significantly lowering the lead component levels for drinking water devices. Relevant concerns of the regulatory community, consumers and manufacturing community will be discussed with the solutions that were found to reduce lead levels in drinking water.

1:30 – 2:20pm

**The Demise of Hauled Water and the “Honey Bucket” in Rural and Remote Alaskan Communities: A Statewide Drinking Water and Sanitation Initiative Rolled Out in the Last Frontier**

*R. Steven Konkol, PhD, AICP, FRIPH, HHS, Associate Professor, Eastern Kentucky University, KY  
CDR John Spriggs, MPH, REHS, Senior Consultant, USPHS, Alaska Native Tribal Health Consortium, AK*

For decades, practically every Governor and numerous Alaskan politicians have decried the lack of clean drinking water and sewage treatment systems in the smaller communities outside Anchorage. Some have touted their plans to eliminate the need for outhouses and honey buckets during their Administrations. Hundreds of millions of dollars were spent every legislative session to fund major capital facilities to address these needs.

Public and environmental health professionals recognize that clean water and proper sanitation have significant public health benefits, including reducing the provision of expensive health care, often at regional facilities remote from where Alaskans live. The dilemma has been how to provide sustainable utilities for Alaskans.

In 2000, key public health officials in Alaska decided tackle this challenge by demonstrating truly sustainable utilities in rural Alaska. Cmdr. Spriggs and his colleagues had a novel idea: sustainability would require on-going operation and maintenance and a partnership among those entities charged with solving these problems. The Yukon-Kuskokwim Delta pilot effort was designed to demonstrate how a rural utility cooperative could achieve economies of scale and deliver the benefits. In San Antonio at the NEHA AEC, we reported on the development of key performance indicators (KPIs) developed for an Interim Evaluation of the project.

In 2008, we propose to present conclusions from the Final Evaluation completed in October 2007 and assess prospects for a new statewide initiative that creates an Alaska Rural Utility Cooperative (ARUC).

Provision of clean drinking water continues to be a huge challenge throughout the Globe, from Alaska to Ireland and places in between, to far flung regions of Africa. Global climate change has only heightened our concern that high mortality and morbidity are likely outcomes for those who cannot have their most basic needs met in a sustainable fashion. Providing clean public water supplies and protecting water quality continues to challenge EH professionals across the United States. Environmental health practitioners can lead development of innovative and sustainable solutions.

3:00 – 3:50pm

**Making a Public Health Difference in Africa—Finding a New Environmental Health Perspective in the United States**

*Bob Custard, REHS, Environmental Health Manager, Alexandria Health Department, VA*

In Africa, AIDS, malaria and waterborne diseases cause about 6 million deaths every year. In fact, infectious diseases account for 62% of all deaths in Africa. In Zambia, located in south central Africa, life expectancy has fallen from 50+ years to just 33.7 years since 1980. More than 20% of the adult population (40% in some areas) is HIV positive. Malaria and enteric diseases also contribute heavily to mortality. More than half the population is under the age of 18. One child in four is an orphan.

Working on rural water supply projects in Africa is hard, but rewarding work. Although there are many differences between public health programs in Africa and those in the United States, we can learn important lessons from what is going on in countries like Zambia. These lessons give us new perspectives on the importance of environmental health.

This presentation will explore how an EH professional from the U.S. was able to make some significant improvements in water quality and water supplies during a series of two-week trips to rural Zambia. Using “quick and dirty” water sampling methods, surveys of wellhead areas, and records of waterborne illnesses treated at a small rural health clinic, polluted water supplies were identified and projects were designed to improve or replace them. Areas without reliable water supplies were also identified and new water supplies were constructed in these areas.

As a result of these efforts, the importance of using epidemiological data to help set priorities for the allocation of scarce public health resources became more apparent. A new appreciation was also gained for the enormous public health accomplishments made in the U.S. in the 20th Century and for what happens when public health systems fail. These projects also demonstrated how important it is for communities to take ownership of projects so that improvements are sustainable and public health infrastructure is maintained.

4:00 – 4:50pm

**EPA's Total Coliform Rule for Drinking Water: A Report on Proposed Revisions and Effective Compliance Implementation Tools Utilized by the Minnesota Department of Health**

*Robert G. Vincent, RS, MPA, Appointee, EPA TCR Federal Advisory Committee and Environmental Administrator, Florida Dept. of Health, FL*

*Christine C. Oliver, RS, Compliance Officer – Public Health Sanitarian II, Minnesota Dept. of Health, MN*

The USEPA regulates all Public Water Systems in the US under the Safe Drinking Water Act. The Act has numerous components to improve public health and one is the Total Coliform Rule. Indicator bacteria testing of drinking water has been a public health standard for over 100 years and now, nearly 20 years after the major revisions to the Coliform Rule in 1989, the federal agency is taking another look at the requirements. Are the regulations as protective as they can be, are they current with the science and methods, are they as effective and efficient for PWSs and the regulatory agents as they can be? To answer these questions and to compile recommendations from stakeholders for a rule revision and needed Distribution System research, the USEPA's Office of Water has convened a federal advisory committee of 16 organizations with interests and expertise in drinking water. NEHA was asked to participate on this committee again after their work on the Disinfection By-Products advisory committee several years ago. Similar to that committee, an agreement in principle is being drafted and if concurrence of the members is achieved, the EPA will agree to honor that agreement in the rule making process. Rule making will take several years, and the states and others impacted by the rule will still have opportunity to provide comments and information to EPA.