

Lecture Hall

Session Abstracts

National Environmental Health Association (NEHA)
72nd Annual Educational Conference & Exhibition

Water Pollution

Tuesday, June 24

1:30 – 2:20pm

The Impact of Global Climate Change on Recreational Water Quality

Charles P. Gerba, PhD, Professor, University of Arizona, AZ

Water-based pathogens are those that occur naturally in water. The occurrence and concentration of several water-based pathogens in recreational surface waters are influenced by temperature. The expected increase in surface water temperatures due to global warming may have a significant impact on risks from water-based (i.e. pathogens which naturally grow in water) pathogens. Many water-based pathogens prefer warmer temperatures and can be expected to increase in numbers in surface waters as global temperatures increase. Among these are *Naegleria fowleri*, *Aeromonas* spp., *Pseudomonas* spp., *Legionella* spp. and *Vibrio* spp. In addition, warmer temperatures may provide for longer survival and potential regrowth of fecal coliform enterococci and *E. coli*, which have been used as indicators to assess recreational water quality. This would result in limiting their use to indicate fecal contamination.

3:00 – 3:50pm

Epidemiological Studies at Southern California Beaches Affected by Non-Point Sources of Contamination

John F. Griffith, PhD, Supervising Microbiologist, Southern California Coastal Water Research Project, CA

Abstract not available.

4:30 – 5:20pm

Bacterial Source Tracking and Land Use: Determining *E. coli* Sources in Watersheds in Canada

Cindy Meays, PhD, Water Quality Science Specialist, Ministry of Environment, Canada

Non-point source fecal contamination is a concern for drinking water supplies worldwide. In this study, 2200 water samples were collected from which 4812 isolates were classified using ribotyping. Results of this experiment show that the counts of fecal coliforms varied by year, month, and site, for each of the streams sampled. The sources of *E. coli* varied significantly with stream, although the dominant sources tended to be similar between watersheds. Overall, wildlife was the largest contributor of *E. coli* to the watersheds in both 2003 (> 84 %) and 2004 (> 73 %).