

National Water Conference

Symposium

Detecting Microbial Contamination in Water and Soil

Chair: Dr. Ron Turco, Purdue University

There are growing concerns about our nation's water, since many water bodies do not meet biocriteria for water quality standards. Over the last few years identification of biological contamination sources has become a major area of investigation. Pathogens can be transmitted in all types of environments including water, soil, air and food. While the direct detection of pathogens in the environment will provide evidence of their presence, this is a difficult task. Unfortunately pathogens are usually dilute and mixed with high number of non-pathogens which makes direct detection difficult. Many known protocols for sample collection, concentration, and identification are not sensitive enough to detect dilute agents against the large non-pathogenic population. Because of the challenges with direct detection, traditionally scientists have focused on the use of "indicators" that help predict the presence of pathogens in the environment. Many new molecular methods have been developed, but none have been approved at this time for regulatory work. The purpose of this workshop is to provide a fundamental understanding of the principles and applications of modern approach to Microbial Source Tracking as well as to evaluate how current methodologies are applied to watersheds applications.

1:00	Introduction to EPI-Net Introduction to Pathogens in the Environment	Ron Turco
1:25	MST: What is it and how it aids with pathogen detection	Jorge Santodomingo
2:15	MST: Library dependent Methods	Valerie J. Harwood
3:05	Break	
3:20	MST: Library independent Methods	Von Sigler
4:10	MST: Conclusions and Recommendations (A case study)	Nancy White