

Water Research Webinar Series

DNA-Based Water Quality Monitoring Methods to Support Aquatic and Human Health

Wednesday, April 24 from 2:00 to 3:15 p.m. ET

Registration: https://us02web.zoom.us/webinar/register/9417110656139/WN_f1y1z2V1Tcmv1ji-85aJ2A



A certificate of
attendance will be
offered for
this webinar

1. Becoming Uncultured: Daily Recreational Water Quality Monitoring and Public Notification at Chicago Beaches Using qPCR

Abhilasha Shrestha, Ph.D.

This presentation focuses on how, following a two-year pilot program of rapid molecular testing of beach water samples, in 2017 Chicago became the first large U.S. city to issue same-day water-quality warnings for all its public recreational beaches and has successfully done so every year after that. The Chicago Park District and University of Illinois-Chicago School of Public Health partnership illustrates that true daily beach monitoring using same-day water quality results is an achievable goal.

2. Standard Control Material for Quantitative Real-Time PCR Recreational Water Quality Monitoring

Orin Shanks, Ph.D.

This presentation describes a collaboration between the U.S. Environmental Protection Agency and the National Institute of Standards and Technology to develop Standard Reference Material® 2917 (SRM 2917), SRM 2917 “fit for purpose” performance assessment, and implications for qPCR recreational water monitoring implementation.



Presenters



Abhilasha Shrestha, Ph.D.

Abhilasha is a Research Assistant Professor within the Environmental and Occupational Health Sciences Department at the University of Illinois-Chicago School of Public Health (Chicago, IL). Dr. Shrestha conducts research primarily focused on water quality and its implications for public health. Her research interests include investigating various indicator targets and genes to rapidly assess infectious agents in water. Her projects have included overseeing the management and operation of Chicago's Lake Michigan beach monitoring project, conducted in collaboration with the Chicago Park District; identifying and mitigating different bacterial sources of pollution at public Lake Michigan beaches in Chicago, utilizing microbial source tracking; and spearheading a wastewater surveillance project for SARS-CoV-2 in Kisumu, Kenya, from 2022 to 2023. She is engaged in ongoing global health water research projects in Kenya and Nepal, contributing significantly to the understanding and management of waterborne health risks on an international scale.



Orin Shanks, Ph.D.

Orin is a senior scientist with the EPA's Center for Environmental Measurement and Modeling. His current research activities focus on the development and implementation of quantitative nucleic acid-based fecal pollution diagnostic tools, advances in molecular method data analyses and visualization, as well as the persistence of genetic material in environmental scenarios. In addition to research activities, he also provides technical assistance to EPA program offices and regions, states, tribes, and other local groups with an interest in clean and safe waters.

