

The California Water Quality Monitoring Collaboration Network Announces

Swimmable California Webinar Series

Join the California Water Quality Monitoring Collaboration Network along with Brandon Steets from Geosyntec Consultants for the presentation “***Water Quality Improvement Projects and BMPs to Achieve a Swimmable California***”. Please join us on Wednesday January 24, 2018 from 11:30 AM -12:30 PM (PST).

Sponsored by the California Water Quality Monitoring Collaboration Network the goal of this webinar series is to focus on elements that support California’s water monitoring and management programs that provide for a ***Swimmable California***. Safe to Swim water quality programs are an important part of ensuring public health while people recreate at the State’s many beaches and swimming holes or using these same waters for cultural or subsistence uses. As California’s population continues to grow, more people are recreating in surface waters, especially freshwater. Water quality monitoring and management continue to be challenging for many agencies and the webinar series should be of assistance to many groups as they face these challenges. Organizers of this webinar series encourage participants to engage with the California Water Quality Monitoring Council’s [California Safe-to-Swim Workgroups](#). Through networking, sharing and building capacity we can work together supporting a swimmable California.

Webinar Topic and Agenda Pages can be found [here](#).

Watch all webinars video recordings in the “Swimmable California Webinar Series” Playlist [here](#).

Topic: Water Quality Improvement Projects and BMPs to Achieve a Swimmable California

Surface waters in urban areas are frequently contaminated with elevated concentrations of fecal indicator bacteria, signaling a potential health risk, and nutrients, leading to algal growth and depleted oxygen levels that result in risk to aquatic habitat. Bacteria and nutrients are the most common pollutants on many 303(d) lists of impaired waterbodies, and many TMDLs have been established to control the contribution of bacteria and nutrients. However, surface water concentrations may be elevated due to a variety of sources, and effective control planning begins with source identification. Bacteria may come from human sources (e.g., leaking sanitary sewers, improperly functioning septic systems, open defecation), domestic animals (dogs, cattle, horses), wild animals, and non-fecal sources. Traditional MS4 illicit discharge detection and elimination (IDDE) programs are intended to address illicit discharges but are typically limited to outfall screening or sampling using traditional sewage indicators, which are unreliable (i.e., prone to false positive and false negative results) and can lead to inconclusive results. In contrast, state of the science forensic tools such as DNA-based markers are able to accurately detect human waste and are thus redefining how infrastructure investigations should be performed. These advanced analytes may come at a higher per sample cost compared to traditional analytes but result in long term cost savings by conclusively achieving source identification and abatement outcomes.

This presentation will highlight approaches currently using to track human waste sources, citing recent Geosyntec project examples from the Charles River and Boston Harbor, nitrate in the Ventura River in CA, and bacteria and pathogens at beaches in Santa Barbara, CA. The study examples and guidance presented will provide important information for municipal stormwater agencies and other permitted dischargers that may need to identify sources of bacteria and nutrients to impaired waters. The

presentation will also highlight BMP selection and effectiveness for bacteria, with discussion of both structural and non-structural options, although an emphasis will be placed on prioritizing the control of human waste sources.

Presenter: Brandon Steets

Brandon Steets is licensed chemical engineer and Senior Principal with Geosyntec Consultants. He is based in California and brings over 17 years' consulting experience addressing complex water quality issues. He is a member of the State Water Resources Control Board's (SWRCB's) Clean Beaches Task Force, stormwater focus group member for the SWRCB's Numeric Nutrients Criteria and Bacteria Objectives updates, co-editor of the 2014 ASCE report, [Pathogens in Urban Stormwater Systems](#), co-author of bacteria control guidance for Colorado, and expert peer reviewer for the journal Water Research. He has published in Water Research and Stormwater magazine on bacteria modeling and control planning. He is currently leading cutting-edge microbial source investigations in Santa Barbara, Boston, and Atlanta, and a septic nutrient source tracking study on the Ventura River, and he continues to collaborate with university researchers on a variety of applied research projects. He has led or served as senior reviewer for over 15 MS4 implementation plans (including Reasonable Assurance Analysis, which is an alternative, modeling-based pathway for demonstrating water quality standard compliance), resulting in the planning of over \$6B in new green infrastructure, mostly driven by bacteria. Most recently, he led the development of a human waste control strategy as a novel means to address bacteria in the [South Orange County Water Quality Improvement Plan](#).

CWQMCN Communication:

- CWQMCN webinar listserv:
www.waterboards.ca.gov/resources/email_subscriptions/swrcb_subscribe.shtml After opening the above web-site, enter your email address and name, click on State Water Resources Control Board - Covering statewide issues, next click General Interests, and then place a check mark next to "Water Quality Monitoring Collaboration Network - Webinar Sessions", then click the "subscribe" button.
- We have set up a webpage for the California Water Quality Monitoring Collaboration Network www.mywaterquality.ca.gov/monitoring_council/collaboration_network/index.html
- We also have a LinkedIn Group, California Water Quality Monitoring Professional Network. This group was formed to facilitate water quality monitoring communication and discussions. www.linkedin.com.
- Watch CWQMCN videos and find video playlists organized by topic at www.youtube.com/cwqmcn.

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