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Engineering & Scientific Consulting

Sarahann Rackl, Ph.D., P.E.

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Professional Profile

Dr. Rackl is a scientist and environmental engineer with a broad interdisciplinary technical and academic background in engineering, microbiology, chemistry, and ecology.

Dr. Rackl excels at gathering and interpreting interdisciplinary technical data and communicating its relevance to regulators, boards of directors, investors, legal counsel, and policy makers. Her research and work experience have focused on evaluating technologies and practices related to water quality, water treatment, wastewater, and constituents in soils and sediment. Through numerous projects with the CalFed Water Quality Program, she developed an expertise in water supply and quality and treatment challenges in California. Dr. Rackl also specializes in federal and state regulatory matters, including the Clean Water Act and California's Proposition 65. She has applied her expertise to the development of new products and business case analyses, and she has extensive expertise in the research, development, manufacturing scale-up, and registration of biopesticides.

Dr. Rackl specializes in evaluating water quality from source to tap and optimizing water quality through advanced treatment technologies. Dr. Rackl has assisted numerous clients in her core academic research areas of disinfection optimization and the minimization of disinfection by-products. She has evaluated disinfection and microbial control strategies for opportunistic pathogens, including Mycobacterium avium complex and Legionella, in drinking water and for large facilities such as hotels and hospitals. Dr. Rackl has investigated drinking water distribution systems and storage facilities to understand potential sources and causes of microbial contamination.

Dr. Rackl's Proposition 65 and product stewardship work has focused on supporting clients in understanding and addressing current and anticipated future regulations for per- and polyfluoroalkyl substances (PFAS), 1,4-dioxane, and other chemicals. Dr. Rackl works with her clients to identify the presence of PFAS in their products and develop strategies to identify and eliminate the sources. Dr. Rackl has developed numerous Proposition 65 compliance and product stewardship programs for companies with extensive product lines, including both common consumer household and office products and specialty industrial products. Dr. Rackl supports companies in developing supply chain strategies and works with companies to develop tools to maintain sustainable product stewardship programs.

Using the knowledge and skills Dr. Rackl developed while working as product manager and group director of a biopesticide company, she has assisted other biopesticide and antimicrobial companies in product development strategies, regulatory package submissions, communications with the EPA and California Department of Pesticide Regulation (DPR), and numerous registration and regulatory compliance challenges.

Academic Credentials & Professional Honors

Ph.D., Civil and Environmental Engineering, University of Colorado, Boulder, 2004

M.S., Civil and Environmental Engineering, University of Colorado, Boulder, 2002

B.S., Biology, College of William and Mary, 1997

National Water Resources Institute, Fellowship 2002 and 2003

Licenses and Certifications

Professional Engineer Civil, California, #79732

Professional Engineer, North Carolina, #050886

Professional Engineer Civil, Texas, #138126

Prior Experience

Senior Regulatory Scientist, TSG Consulting, 2017-2018

Principal Consultant, Sarahann Rackl Consulting, 2015 - 2017

Director Water Technologies/Product Management, Marrone Bio Innovations (MBI), 2009 - 2014

Water Quality and Technology Specialist, Damon S. Williams Associates, LLC, 2008 - 2009

Principle Scientist, Brown and Caldwell Consultants and Engineers, 2004 - 2008

Professional Affiliations

American Water Works Association 2000-present

Patents

US #9,414,590 – Rackl SM, "Chemical and biological agents for the control of molluscs" August 16, 2016.

Publications

Book Chapters

Rackl, Sarahann and Link, Carolyn. (2015). Biology and Management of Invasive Quagga and Zebra Mussels in the Western United States: Zequanox®: Bio-Based Control of Invasive Dreissena Mussels. 515-535.

Select Peer-Reviewed Publications

Hofius, Jessica, Mandella, Catherine and Rackl, Sarahann. (2015). Evaluation of watercraft quagga mussel decontamination in saltwater. Management of Biological Invasions. 6. 277-286.

Whitledge, Gregory, Weber, Megan, Demartini, Jessi, Oldenburg, John, Roberts, Dave, Link, Carolyn, Rackl, Sarahann, Rude, Neil, Yung, Andrew, Bock, Lindsey and Oliver, Devon. (2014). An evaluation Zequanox ® efficacy and application strategies for targeted control of zebra mussels in shallow-water habitats in lakes. Management of Biological Invasions. 6.

Meehan, Sara, Shannon, Adam, Gruber, Bridget, Rackl, Sarahann and Lucy, Frances. (2014). Ecotoxicological impact of Zequanox (R), a novel biocide, on selected non-target Irish aquatic species. Ecotoxicology and environmental safety. 107C. 148-153

Meehan, Sara, Lucy, Frances, Gruber, Bridget and Rackl, Sarahann. (2013). Comparing a microbial biocide and chlorine as zebra mussel control strategies in an Irish drinking water treatment plant. Management of Biological Invasions. 4. 113-122.

Dow, Sarahann, Amy, Gary and Hernandez, Mark. (2007). Flocculation and Re-growth of Mycobacterium avium after ozone exposure. Proceedings of the Water Environment Federation. 2007. 74-84.

Dow S.M., von Gunten U., Lively, G., Chandrakanth, M, Amy, G., and Hernandez, M. (2006) The Impact of Selected Water Quality Parameters on the Inactivation of Bacillus subtilis Spores Using Monochloramine and Ozone, Water Research, 40:373. DOI: 10.1016/j.watres.2005.10.018.

Gruden, C. L., Dow S. M., and Hernandez, M. (2001) Fate and Toxicity of Aircraft Deicing Fluid Additives through Anaerobic Digestion. Water Environment Research. 73(1):72. DOI:10.2175/106143001X138714.

Presentations

Dow, Sarahann M. Using Conceptual Models for a Systematic Investigation of Drinking Water Quality -- from Source to Tap. CONFERENCE PROCEEDING by American Water Works Association, 11/01/2008

Cruz, Charles J.; Dow, Sarahann M.; Fryer, Wilton B. 2007. Pilot Scale Evaluation of Membrane Filtration for Turlock Irrigation District's New Surface Water Treatment Facility. CONFERENCE PROCEEDING by American Water Works Association.

Chen, Jennifer J.; Dow, Sarahann; Cruz, Charles J.; Fryer, Wilton. Pre-Ozonation Prior to Microfiltration Membranes - A Pilot Scale Evaluation. CONFERENCE PROCEEDING by American Water Works Association, 11/01/2007

Wilson, Daniel; Dow, Sarahann; Chen, Jennifer; Fryer, Wilton B. Evaluation of High-Rate Clarification Processes as a Pretreatment to Microfiltration of a Surface Water. CONFERENCE PROCEEDING by American Water Works Association, 11/01/2007