



Imad A. Hannoun, Ph.D.

President, Water Quality Solutions, Inc.
Years of Professional Experience: 36



Education

Ph.D., Civil Engineering - California Institute of Technology, Pasadena, CA, 1987
(minor in Environmental Engineering)
M.S., Civil Engineering - California Institute of Technology, Pasadena, CA, 1983
B.E., Civil Engineering - American University of Beirut, Lebanon, 1982

Professional Affiliations

Registered Professional Engineer in NV, VA, and AZ
Chair, North American Lake Management Society (NALMS) Publications Committee (2013 to present)
Associate Editor, Lake and Reservoir Management Journal
Past President, California Lake Management Society (CALMS)
Past Director, NALMS Region III (mid-Atlantic region); Region IX (western US),

Qualifications

Dr. Hannoun has provided technical analysis for numerous projects, working with engineering firms and government agencies. Over his career, he has acted as project manager for over 160 hydrodynamic and water quality investigations for clients including the City of San Diego, City of Seattle, Parsons, City of Los Angeles Department of Water & Power, Metropolitan Water District of Southern California, Southern Nevada Water Authority, and the U.S. Navy. He has authored reports and papers in the following areas: potable reuse in reservoirs, effects of discharges from power plants, harbor water quality, reservoir hydro-dynamics and water quality, computational fluid dynamics (CFD), eutrophication and nutrient dynamics, etc. Dr. Hannoun has extensive experience in the development and application of complex one-dimensional to three-dimensional water quality models, as well as the assessment of air diffuser and hypolimnetic oxygenation systems for management of harmful algal blooms (HABs) and other water quality concerns.

Dr. Hannoun is author or co-author of many technical publications in refereed journals and is an associate editor for NALMS' Lake & Reservoir Management journal. He has been an invited speaker at many conferences in the USA and abroad. He has served on several research and review committees. Dr. Hannoun was the primary author of one of the first articles on CFD modeling in the water industry. He was the Chair of the NALMS 2013 annual conference, a gathering of over 500 water quality professionals and stakeholders, held in San Diego, CA. He is currently the Chair of NALMS Publication Committee that oversees two publications: LakeLine and Lake and Reservoir Management journal.

Dr. Hannoun has been President of Water Quality Solutions Inc. since 2012. He has been the project manager of the modeling work for the City of San Diego for the proposed Indirect Potable Reuse (IPR) projects at Miramar, San Vicente, and Otay reservoirs. His experience also includes representing the City stakeholders in public presentations and private discussions. Dr. Hannoun presented to the California "State Expert Panel" to instruct them how the reservoir hydrodynamics and modeling results can be used in developing IPR regulations. He was the major speaker at many Independent Advisory Panel meetings for the IPR projects in San Diego. Over the years, Dr. Hannoun had many successful meetings with DDW and RWQCB staff to discuss the San Diego "one-off" projects that are proceeding before the regulations have been finalized. Through numerous discussions, he helped DDW personnel formulate the draft regulations. For the period 1992-2012, he was at Flow Science Inc. where he held various positions including President from 2005 to 2012. From 1986-1992, he was a Senior Scientist at JAYCOR in San Diego, California. His duties included the development of complex hydrodynamic simulation software that was used to compute the underwater trajectories of U.S. Navy TRIDENT missiles launched from submarines, underwater explosions near submarines, and pilot ejection from aircraft.