

## Background Summary

Dr. Marrin is an applied scientist in the fields of biogeochemistry, pollutant dynamics, water resources, and aquatic ecology. He developed analytical and interpretive techniques to assess the biodegradation and partitioning of contaminants in aquifers and surface waters, as well as to detect wastewater impacts on coastal marine ecosystems. His recent lectures focus on global water quality issues, water footprints, hydromimicry practices, the water-energy-food nexus, and perceptual challenges related to water and the environment. He also maintains a multifaceted water consultancy for clients that include R&D groups within corporations, public health agencies, educational institutions, and non-profit organizations.

### EDUCATION

*Ph.D.*, Water Resources (hydrochemistry/sustainability); The University of Arizona.  
*M.S.*, Environmental Science (fisheries/limnology); University of California, Berkeley.  
*B.S.*, Biological Sciences (marine ecology/biochemistry); University of California, Irvine.  
*Cert.*, Wastewater Treatment (CSUS); Nutrition/Wellness (AFPA).

### RECENT POSITIONS

*Consulting Scientist* (California and Hawaii based) 1999-present.  
Providing expertise on water chemistry, education and research/development.

*Scientific Associate*, EverBlue Ventures (Hawaii) 2022-present.  
Technically assessing early-stage firms in the water sector for capital investment.

*Principal Scientist*, Fundación Somos Agua (México) 2008-2015.  
Worked with designers, artists and community leaders to address local water issues.

*Research Scientist & Writer* (Hawaii) 1999-2008.  
Developed water quality metrics for coastal zones and authored several books.

*Adjunct Professor*, San Diego State University (California) 1988-1999.  
Taught graduate courses and served as a thesis advisor for hydrology students.

*President*, InterPhase Environmental (California) 1988-1996.  
Established a firm specialized in water pollutant detection and biodegradation.

### REPRESENTATIVE PROJECTS

- Projecting greenhouse gas emissions from biodegrading pollutants in waters.
- Evaluating seawater intrusion and groundwater discharge in coastal zones.
- Assessing the impacts of chemical and thermal pollution on various fishes.
- Evaluating the treatment and prevention of biofilms within water systems.
- Using footprint analyses to assess the food and energy demands on water.
- Estimating the water demands and impacts of geoengineering technologies.
- Evaluating potable waters generated by desalination and air condensation.
- Verifying the chemistry, microbiology and production of mountain springs.
- Applying systems and information science to describe watershed dynamics.
- Exploring pattern recognition techniques to perceive water quality impacts.
- Providing litigation support on cases involving water quality and allocation.