

JohnFranco Saraceno

Sacramento, CA

jfsaraceno@gmail.com

<https://john-franco-saraceno.netlify.app>

EDUCATION

M.S. Geology, California State University, Sacramento, CA, 2011

B.S. Geology, University of California, Davis, CA, 2006

SOFTWARE SKILLS

- Productivity - Microsoft Office, MS Teams, Google Suite, Slack, Discord, Zoom, MS SharePoint
- Project Management - Microsoft Project, Trello, JIRA
- Cloud Services - Google Cloud Platform and Amazon Web Services
- Statistical data analysis and programming - R, python, JMP, Tableau, ArcGIS, Microsoft VS code, Docker
- Web development- Hugo, Jekyll, Netlify, Gatsby, node-js

CERTIFICATIONS and TRAINING

- DWR Diversity, Equity and Inclusion Champion
- ISO 9001:2015 Quality Management Systems Lead Auditor
- Wilderness First-Aid
- CPR
- Swift Water River Rescue
- Motorboat Operator
- Sierra Club Inspiring Connections Outdoors Volunteer
- Environmental and Multivariate statistics

PROFESSIONAL EXPERIENCE

Senior Environmental Scientist (Specialist), Department of Water Resources, Division of Environmental Services, Full-time, Feb 2019 – present

- Quality Assurance Officer for CA Department of Water Resources and the technical lead for all quality issues.
- Held leadership role in the Quality Assurance Committee which developed consistent practices for water-related data collection programs across the Department.
- Developed the Department's Quality Management System from the ground-up including a Document Control System and Training Program for the Division of Environmental Services.

- Developed and reviewed field and laboratory Standard Operating Procedures and Quality Assurance Project Plans.
- Led workshops to train Department Staff on the development of Quality Assurance Project plans and Data Quality Objectives
- Planned and carried out regular water quality monitoring program assessments based on the ISO9001 standard to continually improve data quality.
- Facilitated a multi-Division, 45-member, Real-time Water Quality Data subcommittee that spanned all field offices to ensure all Department staff are collecting and reporting data consistently and at known quality in line with USGS and IOOS QARTOD protocols.
- Coordinated with the Department's Office of the Chief Counsel to communicate water quality compliance data to regulators and stakeholders.
- Regularly briefed management on Department quality issues which included recommending and followed up on corrective actions.
- Briefed the Department's Executive Team on Department-wide Standard Operating Procedures.
- Mentored Environmental Scientists and Fish/Wildlife Scientific Aides on producing and leading committee meetings, performing research and data analysis and presenting findings at workshops and conferences.
- Produced the Quality Compass, a quarterly, light-hearted newsletter focused on spreading awareness of quality assurance topics and issues to Department Field office staff.
- Managed contracts for third-party water quality data reviews.

Environmental Scientist, Department of Water Resources, Division of Environmental Services, Quality Assurance Section, Full-time, Jan 2018 – Feb 2019

- Held leadership role in the Real-time Data subcommittee which improved QA/QC procedures for water quality monitoring operations across the Department.
- Technical and quality lead for a chlorophyll-a fluorescence sensor comparison study to assess comparability between Federal, State and NGO monitoring programs in the San Francisco Bay-Delta.
- Developed workflow for identifying and adopting new emerging technologies in the Division.
- Member of the Division's unmanned aerial system (UAV/UAS) program steering committee and developed its standard operating procedure.
- Identified the appropriate multi-spectral drone sensor for vegetation restoration projects and developed the GIS workflow for data collection, processing and analysis to produce high resolution vegetative health index maps.

Hydrologist, United States Geological Survey, GS-11, Full-time, 2011 – Jan 2018

- Designed an autonomous real-time, multi-well groundwater quality monitoring system in a contaminated aquifer. Multi-year data analysis and interpretation of

observed trends published in a Environmental Monitoring and Assessment and a US Geological Techniques and Methods report.

- Selected a suitable water quality sensor platform for long-term groundwater quality assessments by conducting paired laboratory and field experiments.
- Developed software to automatically filter and aggregate large water quality sonde data files for field technicians, increasing workflow efficiency by up to 25%.

Student Hydrologist, United States Geological Survey, GS-9, Full-time, 2009 – 2011

- Designed and constructed a custom real time, satellite linked, buoy-based water quality monitoring system for monitoring burn scar runoff in a remote drinking water reservoir and reporting data to the National Water Information System.
- Deployed a multi-station, real-time riverine nutrient monitoring network that improved nitrate flux estimates compared to traditional sampling approaches.
- Developed a fixed station and buoy real-time cellular based water quality monitoring system to collect and transmit water quality data to the National Water Information System, in real-time.
- Executed coupled field and laboratory experiments to evaluate the effectiveness of turbidity correction algorithms on optical fDOM sensors.

PUBLICATIONS

Mathany, T.M., **Saraceno**, J.F., and Kulongoski, J.T., 2019, Guidelines and standard procedures for high-frequency groundwater-quality monitoring stations—Design, operation, and record computation: U.S. Geological Survey Techniques and Methods 1–D7, 54 p., <https://doi.org/10.3133/tm1D7>.

Saraceno, J., Kulongoski, J.T., Mathany, T.M., 2018. A novel high-frequency groundwater quality monitoring system. *Environ. Monit. Assess.* 190, 477. <https://doi.org/10.1007/s10661-018-6853-6>.

Gannon, R.S., **Saraceno**, J.F., Kulongoski, J.T., Teunis, J.A., Barry, P.H., Tyne, R.L., Kraus, T.E.C., Hansen, A.M., and Qi, S.L., 2018, Produced water chemistry data for the Lost Hills, Fruitvale, and North and South Belridge study areas, Southern San Joaquin Valley, California: U.S. Geological Survey data release, <https://doi.org/10.5066/F7X929H9>.

Saraceno, J. F., Shanley, J. B., Downing, B. D., & Pellerin, B. A. (2017). Clearing the waters: Evaluating the need for site-specific field fluorescence corrections based on turbidity measurements. *Limnology and Oceanography-Methods*, 15(4), 408-416. doi:10.1002/lom3.10175 <https://aslopubs.onlinelibrary.wiley.com/doi/abs/10.1002/lom3.10175>.

Carpenter, Kurt D.; Kraus, Tamara E.C.; Goldman, Jami H.; **Saraceno**, John Franco; Downing, Bryan D.; Bergamaschi, Brian A.; McGhee, Gordon; Triplett, Tracy, 2013. Sources and characteristics of organic matter in the Clackamas River, Oregon, related to the formation of disinfection by-products in treated drinking water. U.S. Geological Survey Scientific Investigations Report 2013-5001, Report: x, 78 p.

BA Pellerin, BA Bergamaschi, RJ Gilliom, CG Crawford, J **Saraceno**, CP Frederick, BD Downing and JC Murphy. 2014. Mississippi River Nitrate Loads from High Frequency Sensor Measurements and Regression-Based Load Estimation. Environmental Science and Technology, <https://pubs.acs.org/doi/10.1021/es504029c>.

Pellerin, Brian A.; Bergamaschi, Brian A.; Downing, Bryan D.; **Saraceno**, John Franco; Garrett, Jessica D.; Olsen, Lisa D., 2013. Optical techniques for the determination of nitrate in environmental waters: Guidelines for instrument selection, operation, deployment, maintenance, quality assurance, and data reporting. U.S. Geological Survey Techniques and Methods 1-D5, vi, 37 p, <https://pubs.usgs.gov/tm/01/d5/>.

Pellerin, Brian A.; Bergamaschi, Brian A.; Murdoch, Peter S.; Downing, Bryan D.; **Saraceno**, John Franco ; Aiken, George R.; Striegl, Robert G., 2011. The aquatic real-time monitoring network; in-situ optical sensors for monitoring the nation's water quality. U.S. Geological Survey Fact Sheet 2011-3061, 2 p.

Bergamaschi BA, BD Downing, BA Pellerin and J **Saraceno**. 2010. In Situ Sensors for Dissolved Organic Matter Fluorescence: Bringing the Lab to the Field. USGS Water Resources Discipline Instrument News, 125: 1-2.

Pellerin, B. A., B. D. Downing, C. Kendall, R. A. Dahlgren, T. E. C. Kraus, J. **Saraceno**, R. G. M. Spencer, and B. A. Bergamaschi. 2009. Assessing the sources and magnitude of diurnal nitrate variability in the San Joaquin River (California) with an in situ optical nitrate sensor and dual nitrate isotopes. Freshwater Biology 54:376-387, <https://doi.org/10.1111/j.1365-2427.2008.02111.x>.

Saraceno, J. F., B. A. Pellerin, B. D. Downing, E. Boss, P. a. M. Bachand, and B. A. Bergamaschi. 2009. High-frequency in situ optical measurements during a storm event: Assessing relationships between dissolved organic matter, sediment concentrations, and hydrologic processes. Journal of Geophysical Research-Biogeosciences 114: G00F09, <https://doi.org/10.1029/2009JG000989>.

Saraceno, J.F., 2011. Optical observations of suspended particle dynamics in a tidal wetland. Master's thesis. California State University, Sacramento. [Sacramento Masters Theses](http://hdl.handle.net/10211.9/1360) [2107]. <http://hdl.handle.net/10211.9/1360>.