

Jeffrey G. Yeazell, P.E.

State Water Resources Control Board, Division of Water Rights
1001 I Street, 14th Floor, Sacramento, CA 95814
Phone: (916) 341-5322 Email: Jeffrey.Yeazell@waterboards.ca.gov

Education:

Humboldt State University, Arcata, California
Bachelor of Science, Environmental Resources Engineering, 1992

License/Certification:

Professional Civil Engineer – License C 76869; expires 12/31/2020

Professional Development:

Currently enrolled in the Data Scientist with R Career Track with DataCamp, a massive open online course (MOOC) platform, to improve skills in R and Data Science. Courses taken of note include R Programming; Getting and Cleaning Data; Exploratory Data Analysis; Reproducible Research; Statistical Inference; Regression Models; Data Visualization; and Developing Data Products

Work Experience:

State Water Resources Control Board, Division of Water Rights

Senior Water Resource Control Engineer (Specialist) – March 2017 to Present
Water Resource Control Engineer – August 2013 to March 2017

Provides data analysis support for annual reporting deficiency enforcement actions. Applies data analysis techniques to identify non-filers and track reporting compliance metrics, provide summary reports to management. Developed and maintains a tracking system that follows the status of each Administrative Civil Liability (ACL) complaint from complaint issuance to its final disposition, such as complaint withdrawal, completion of complaint requirements, issuance of a final ACL order, or hearing request.

Supervised development and implementation of the online form submittal tool that diverters will use to report their surface water measurement data as required in SB 88 and the measurement and reporting regulations. Involved working closely with members of the Office of Enforcement and Division of Information Technology, the Program Manager, and stakeholders to develop a user-friendly reporting platform that also meets the data collection requirements of the regulations.

Develops models that access the demand data set described above, in conjunction with additional water right information obtained from eWRIMS and geospatial data obtained from ArcGIS, to evaluate local/regional supply-demand scenarios for planning and enforcement purposes. The models, written in R, are designed to quickly evaluate the data to efficiently and effectively provide findings and recommendations to management for curtailment decisions and enforcement cases. The R environment provides for better data organization, more readable code, and advanced data visualization capabilities.

Developed and maintained a data set of almost 15,000 water rights and associated reported monthly diversion and use amounts in the San Joaquin, Sacramento, and Legal Delta watersheds. Ongoing maintenance includes validating and adjusting the reported diversion and use data using a combination of manual review and automated algorithms to provide a for a more reliable/realistic demand in the watersheds as better understandings of the complex issues arise. Migrated the data set, which was originally developed in Microsoft Excel, into an R development framework, providing for more powerful data manipulation capabilities, easier automation, reproducibility (desirable for peer reviews), and advanced statistical and graphical capabilities.

Provided witness testimony in an enforcement hearing about a large water availability model I developed for the Sacramento, San Joaquin, and Delta watersheds, which was used to evaluate conditions during the 2015 water year. Much consideration was given on how to graphically present the demand by priority in order to determine at which priorities in which watersheds to issue notices of water unavailability.

Additional responsibilities have predominantly included: developing and maintaining the surface water demand and water supply data sets for use in water availability analyses; developing time-series graphs showing the relationships between supply and demand for various watersheds; analyzing and summarizing supply/demand data to assist senior staff in making recommendations regarding water availability during the drought; and reviewing annual diversion reports from licensees and permittees to determine if they were operating within the quantity limits of water rights and in compliance with terms and conditions of the permits and licenses.

BSK Associates

Project Engineer – June 2008 to April 2013

Staff Engineer – January 1997 to June 2008

Managed NPDES groundwater monitoring and reporting programs for landfills, wastewater treatment plants, and vineyards. Validated and performed statistical analysis of data to describe the nature and extent of the releases. Created a MySQL database to manage the data, and wrote R scripts to query the database, perform statistical analyses, and create graphs for reports and presentations. Developed concentration limits for inorganic constituents of concern.

Validated and performed statistical analysis of data collected from a 25-well groundwater monitoring network to describe the nature and extent of the release from a landfill identified during detection monitoring, developed proposed concentration limits for inorganic constituents of concern, and proposed a monitoring plan. Developed Microsoft Excel and R scripts that would query the MySQL database for chemical and physical data for a specified monitoring point, conduct appropriate analyses, and then create presentation-ready time-series plots of the data.

Conducted site investigations of hazardous waste and fuel release sites in California. Investigation activities typically involved site conceptualization, workplan preparation, permit acquisition, drilling supervision (soil boring and/or monitoring well installation), soil/groundwater sample collection, data analysis, and report preparation. Managed and conducted the installation of soil and groundwater remediation systems. Responsibilities included designing and implementing pilot tests, designing remediation systems based on the results of the pilot tests, securing building, air, and sewer permits, supervising construction and installation activities, initial startup, operation and maintenance, and reporting to various oversight agencies.