



Client Services

As one of Southern California’s leading consulting firms in the management of water resources, WEI is unmatched in its ability to design and implement holistic, sustainable solutions that fuse the needs of clients, the environment, and surrounding communities.

The forward-thinking scientists and environmental engineers at WEI identify problems precisely, and solve them through a methodical process that weighs political, legal, and technical considerations while building consensus for ideas and solutions.

WEI is known for employing the best and the brightest for the company’s core science and engineering team. A staff of approximately 25 engineers, scientists, and support staff provide extensive technical expertise in water resources management, focusing on the following areas of specialty:



Well monitoring and sampling

Groundwater Basin and Watershed Management Program Design and Implementation

WEI partners with key watershed stakeholders to develop and deploy sustainable, environmentally-sound management plans for groundwater basins and watersheds. These management plans meet all regulatory requirements, enabling clients to deliver reliable, high quality water supplies with reasonable water and sewer rates. WEI often works with regulatory agencies to amend or change regulations to optimize basin management and protect beneficial uses. The firm employs a proven process to:

- *Identify the needs, issues, and concerns of all stakeholders,*
- *Produce a set of measurable goals to meet those needs,*
- *Identify the impediments to achieving the goals ,*
- *Provide scientific basis for management initiatives,*
- *Create management programs to remove impediments to the goals,*
- *Implement the groundwater basin management program, and*
- *Develop agreements to fund and implement the management program.*



Groundwater monitoring and sampling

Groundwater and Surface Water Monitoring Programs

At WEI, all water monitoring programs begin with a set of clearly articulated questions that need to be answered. The company then fashions monitoring programs that are designed to provide answers in specific, quantitative terms. WEI’s goal is to design monitoring programs that provide the requisite information at the lowest possible cost. The distinctive features of WEI’s monitoring programs include:

- *Monitoring programs are keyed to a relational database management systems that generate work orders and chain-of-custodies for field technicians,*
- *Quality control protocols ensure that regulatory monitoring is performed on schedule and that samples are accurately tested, and*



- *All data from monitoring programs are stored in one master database, which facilitates analyses and report generation.*

In addition to conventional monitoring tools, WEI uses advanced monitoring devices, including extensometers, low-flow purge and sampling devices, and lysimeters.

Recharge Master Plans and Basin Testing and Monitoring

WEI helped pioneer the recharge master plan concept, creating specialized monitoring and analytical tools to estimate recharge and recharge quality. The firm handles all aspects of design, testing, and operation of recharge basins, including concept development, exploratory drilling, preliminary design, operation plan design, operational monitoring, and forensic testing.



Monitoring and sampling at Trabuco Golf Course

Additionally, WEI specializes in the design of monitoring wells and lysimeters; typically supervising and assisting in the construction of these monitoring facilities.

Regulatory Compliance for the Recharge and Discharge of Recycled Water

From initial regulatory approval to compliance monitoring and reporting, WEI offers the expertise that moves recycled water recharge and discharge projects forward. The company’s key contributions in the field include the development of Water Quality Control Plan revisions that modify water quality objectives to promote water recycling, and the use of lysimeters for monitoring soil aquifer treatment processes. WEI assists treatment plant owners in complying with discharge permits by employing innovative approaches to permit negotiations, monitoring, compliance reporting, surface water and groundwater modeling, and, where appropriate, water quality objective revisions.

Preparation of Urban Water Management Plans and Support for Water and Recycled Water Master Plans

WEI stays abreast of current requirements of the Urban Water Management Planning Act and related legislation, enabling the firm to provide the most forward-

thinking strategies to its clients. The company’s expertise includes the hydrological, institutional, legal, and regulatory aspects of water supply planning.



Water level monitoring program in Chino Basin

Groundwater Treatment Systems Feasibility Support

Drawing on their extensive knowledge of hydrological principles, groundwater flow systems, and water quality, the professionals at WEI support process designers and key decision makers in developing new groundwater treatment systems.

The firm offers comprehensive experience in:

- *Interpreting groundwater datasets,*
- *Developing data acquisition programs,*



- *Applying groundwater models, and*
- *Characterizing and displaying data and modeling results.*

This depth of expertise allows WEI professionals to help clients understand the magnitude of a problem, make informed decisions about the treatment of contaminated groundwater, and select and evaluate treatment systems.

Litigation Support

EI's water rights and litigation support services are generally limited to existing clients; though the company will provide these services to new clients given that greater public interests are being served. Services in this arena include:

- *Scientific and engineering services for Watermaster processes,*
- *Scientific and engineering opinions regarding existing or potential water rights,*
- *Pollution liability, and*
- *Expert witness support,*

Technical Expertise

Regulatory Compliance

- *Expert knowledge of federal and state regulatory requirements for water and recycled water, and*

- *Development and implementation of innovative approaches to compliance with regulatory requirements at both local and watershed scales.*

Groundwater & Surface Water Modeling

- *Extensive experience with industry-standard models,*
- *Design and development of custom models and tools that efficiently estimate the natural and transactional hydrology at the land surface, and*
- *Design and implementation of custom models to assess waste-load allocations and develop recharge master plans.*

Database Management Systems

- *Development of relational database management systems for groundwater, surface water, and recycled water data.*

Geographic Information Systems

- *Integration of database and GIS for display and analysis of water resource data, and*
- *Expert map-making services for accurate display of model results that support decision-making process.*

Hydrology & Hydrogeology

- *Design and construction of groundwater and surface water monitoring networks*
- *Execution of data collection and data entry elements of monitoring programs by highly-trained field staff, and*
- *Expert analysis of water resource data and concise reporting to support decision makers.*



Expert map-making and GIS services