# William E. Leever, PG, CHG
## Associate Scientist II

**Assignment**
*Associate Scientist II*

**Education**
*B.S. Geology, California State University, Fullerton, June 1990*

**Registrations**
*Professional Geologist, California No. 6815*

**Certifications**
*Certified Hydrogeologist, California No. 827*

*Certified Environmental Manager, Nevada No. 1739*

### Summary

As an Associate Scientist at WEI, Mr. Leever is responsible for providing hydrogeologic expertise, managing projects and staff, developing project scopes of work and cost estimates, and participation on the firm's senior advisory board. Mr. Leever has 15 years of professional experience in water resources management, soil and groundwater investigations, hazardous waste remediation, project management and geologic sciences.

His technical expertise are in the areas of aquifer storage and recovery, recycled water recharge planning, design, permitting and implementation, contaminant fate and transport, and groundwater well design and construction. Mr. Leever's work has primarily focused on the arid and semi-arid regions of southern California and southern Nevada.

Mr. Leever is a Professional Geologist and Certified Hydrogeologist in the State of California, and a Certified Environmental manager in the State of Nevada. Mr. Leever is a member of the Groundwater Resources Association of California, Association of California Water Agencies, and National Groundwater Association.

### Selected Project Experience

**Wildermuth Environmental, Inc. – 2006 to Current**

Recycled Water Groundwater Recharge Feasibility Study, Palmdale Water District, California

***Project Manager/Lead Hydrogeologist:*** This study focuses on the initial siting of potential groundwater recharge areas, development of a recycled water recharge feasibility report, review of existing hydrogeologic conditions within the Palmdale Water District service area, development of storage volume changes across the study area as a result of groundwater production, determination of ambient groundwater quality and estimations of groundwater quality changes as a result of recycled water recharge, and development of groundwater recharge basin size requirements for various recycled water recharge volumes.

Mr. Leever's role in the study is project manager and lead hydrogeologist. As such, Mr. Leever represented WEI in all stakeholder meetings and presentations; lead

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the project team in the completion of the scope of work and served as primary liaison with the client.

Recycled Water Groundwater Recharge Feasibility Study, RMC/ City of Lancaster, California

***Project Manager/Lead Hydrogeologist:*** This study focuses on the initial siting of potential groundwater recharge areas, development of a recycled water recharge feasibility report, review of existing hydrogeologic conditions within the Palmdale Water District service area, development of storage volume changes across the study area as a result of groundwater production, determination of ambient groundwater quality and estimations of groundwater quality changes as a result of recycled water recharge, and development of groundwater recharge basin size requirements for various recycled water recharge volumes.

Mr. Leever's role in the study is project manager and lead hydrogeologist. As such, Mr. Leever represented WEI in all stakeholder meetings and presentations; led the project team in the completion of the scope of work and served as primary liaison between WEI and the City of Lancaster.

Title 22 Engineering Report, San Timoteo Watershed Management Authority: Beaumont Basin Recycled Water Groundwater Recharge Project

***Project Manager:*** **Mr. Leever was r**esponsible for the preparation of the Beaumont Basin Recycled Water Groundwater Recharge Project Title 22 Engineering Report. WEI is providing an analysis of material physical injury related to recharging recycled water into the groundwater through surface spreading within the groundwater recharge basins.

The groundwater recharge program will provide a framework to recharge up to approximately 19,000 acre-feet per year of supplemental water into the regional groundwater system. Upon regulatory review and approval STWMA will begin implementation of the project.

Lysimeter Studies Supporting Maximum Benefit for the Basin Plan, Chino Basin Watermaster/Inland Empire Utilities Agency

***Lead Hydrogeologist:*** **Mr. Leever was resp**onsible for construction management and the installation of the lysimeters and nested monitoring wells associated with this study. In addition, he also provided technical expertise for this study in which several sets of lysimeters were installed in the following recharge basins in Chino Basin: Ely, Hickory, Banana, and Turner.

Mr. Leever participated on the WEI team that worked extensively with the Inland Empire Utilities Agency (IEUA), the Regional Water Quality Control Board, and the Department of Health Services to obtain a permit for recharging recycled water in recharge basins in Chino Basin.

WEI proposed the used of lysimeters to measure compliance with permit requirements for nitrogen and total organic carbon reduction during soil-aquifer treatment. The use of lysimeters was approved by DHS and the Regional Board and the lysimeters are showing significant reduction in both nitrogen and TOC.

Title 22 Engineering Report, Chino Basin Watermaster/Inland Empire Utilities Agency: Phase II Chino Basin Recycled Water Groundwater Recharge Project

***Project Manager:*** Responsible for the preparation of the Phase II Chino Basin Recycled Water Groundwater Recharge Project Title 22 Engineering Report (Draft Final dated July 2005). WEI provided an analysis of material physical injury related to recharging recycled water into the groundwater through surface spreading within flood control basins. Phase II of the groundwater

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recharge program provides a framework to recharge up to 15,000 acre-feet per year of recycled water into the regional groundwater system. Upon regulatory review and approval IEUA will begin implementation of the project.

### Hydraulic Control Monitoring Program, Chino Basin Watermaster

***Project Geologist:*** Mr. Leever is responsible for conducting on-going investigations to determine the state of groundwater outflow from the Chino Basin as surface water in the Santa Ana River. Crucial groundwater management practices, such as recharge of recycled water, is dependent upon basin producers demonstrating that they are controlling this groundwater outflow as surface water.

In addition, Mr. Leever was responsible for the construction management of nine (9) nested, multiple-depth monitoring wells. The data derived from this monitoring program will characterize (1) the three-dimensional piezometric gradients in this part of the basin over time and in response to specific management practices, and (2) the hydraulic relationships between the groundwater basin and the river.

### Feasibility Study of Percolation of Stormwater at Royer-Nesbit Water Treatment Plant, Cucamonga Valley Water District

***Project Manager:*** **Mr. Leever was the** Project manager on this project to determine the feasibility and potential down-gradient impacts of percolation of stormwater in a small recharge basin. Residential development adjacent to the recharge basin may be negatively impacted by recharged water coming to the ground surface down gradient of the site.

The sonic drilling method was used to drill and sample a test hole to accurately assess the subsurface conditions. The test hole was converted to a piezometer to measure the presence of recharged water within the vadose zone. A percolation test within the proposed basin will provide data to determine impacts, if any, on the down gradient properties.

**Black & Veatch, Irvine, California**

Mr. Leever was a project manager and project hydrogeologist for Black & Veatch. In his career at Black & Veatch, Mr. Leever developed a comprehensive project management skill set in addition to his technical expertise. A few representative projects are listed below:

### Remedial Investigation & Remedial Action, Multiple Sites, U.S. Army Corps of Engineers, Omaha District, Nellis Air Force Base, Nevada

***Project Manager:*** Responsible for overall project management at several jet fuel and chlorinated hydrocarbon release sites on Nellis Air Force Base, involving both the Environmental Compliance and Environmental Restoration Programs. The Project activities include client relations, project development, regulatory interface, cost estimating, project plan preparation, project QA/AC, field work, reporting, and budget/workforce management. Investigation activities include soil boring and groundwater monitoring well installation, soil and groundwater sampling, and aquifer testing. Remedial actions included excavation and disposal, free-product recovery, bio-venting, soil vapor extraction, air sparging, oxygen enhanced aerobic biodegradation, and monitored natural attenuation.

### Site Investigation/Risk Assessment, Former NIKE Missile Battery Site 29, U.S. Army Corps of Engineers, Los Angeles District: Brea, California

***Project Manager/Project Hydrogeologist:*** Title: Mr. Leever prepared the project work plan, including sampling and analysis plan, field sampling plan, quality assurance project plan, and health and safety program for

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assessment of soils contaminated with petroleum hydrocarbons and lead. He provided oversight of an extensive field investigation of the former missile battery.

He managed the preparation of a preliminary endangerment assessment, and subsequent human health and ecological risk assessment. A recommendation for no further action was accepted by regulatory agencies based upon risk data.

Site Investigation/Risk Assessment, Camarillo Airport, Camarillo, California, U.S. Army Corps of Engineers, Los Angeles District

***Project Manager/ Project Hydrogeologist:*** Mr. Leever directed and performed multiple site investigations at an abandoned landfill and suspected ordnance demolition area. The investigations included installation of soil borings and groundwater monitoring wells, and collection of soil and groundwater samples to assess soil and groundwater conditions. He directed preliminary geophysical and unexploded ordnance surveys to detect potential drilling hazards within a landfill and ordinance burn area. Mr. Leever also reviewed aerial photographs and reports to determine historical use of investigation areas and prepared work plans, sampling and analysis plans, a field sampling plan, a quality assurance project plan, and health and safety plans. Mr. Leever prepared summary reports of field investigations.

Remedial Investigation/Remedial Action, Various Commercial Sites, Southern California, Multiple Private Clients

***Project Manager/Project Hydrogeologist:*** Mr. Leever designed, implemented, and managed numerous soil, soil vapor, ground water, and surface water assessments and remedial actions throughout southern California. Assessment techniques included: soil borings, cone penetrometer testing, soil vapor surveys, discrete ground water sampling tools, ground water monitoring wells, and geophysical methods to implement complete, timely, and cost effective assessments. Remediation tools included: soil vapor extraction, air sparging, biosparging, bioventing, ex-situ and in-situ bioremediation, free product recovery, and pump and treat. The range of chemicals assessed includes: crude oil, refined petroleum products, metals, pesticides, herbicides, chlorinated solvents, and other industrial chemicals released from aboveground and underground storage tanks, pipelines, surface impoundment's, landfills, and manufacturing operations.

U.S. Army Corps of Engineers, Omaha District: Preliminary Assessments, Nellis AFB, Nellis Range Complex, Nevada

***Project Manager/Project Hydrogeologist:*** Mr. Leever was a member of the B&V team that provided Preliminary Assessments for sixty areas of concern on the Nellis Range Complex. Areas of concern included former target complexes; burial pits; munitions, target and construction debris collection areas; open burn/open detonation areas; aircraft crash sites; and other unspecified areas.

This Project included extensive background research, interviews, site visits, limited magnetic and radiation surveys, photo documentation, and reporting.

### Affiliations / Organizations

National Ground Water Association
Groundwater Resources Association of California
Association of California Water Agencies