

## **Biographical Sketch of Ted Johnson - WRD**

Ted Johnson is the Chief Hydrogeologist at the Water Replenishment District of Southern California. He leads the Basin Management and Water Quality Department, providing technical analysis, review, and oversight for projects related to artificial recharge, seawater intrusion, groundwater quality, conjunctive use, computer modeling, recycled water, tracer tests, and groundwater production. Ted received his B.S. and M.S. degrees from the California State University at Fullerton and is a California Registered Geologist and Certified Hydrogeologist with over 20 years of experience in Southern California groundwater investigations.

## Theodore A. Johnson, P.G., C.HG.

### Curriculum Vitae

Chief Hydrogeologist  
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### Education

1991, M.S. in Environmental Studies with an emphasis in Hydrogeology. California State University Fullerton. Master's Thesis: Hydrogeology and Groundwater Model of Baldwin Lake, Big Bear Valley, California.

1987, B.S. in Geology with an emphasis in Hydrogeology and Geophysics, California State University Fullerton. Senior Research Project: Offshore Seismic Hazards, Point Arguello to the Santa Maria River, California.

### Professional Memberships / Affiliations

Association of Ground Water Scientists and Engineers (AGWSE)  
International Association of Hydrogeologists (AIH)  
California Groundwater Resources Association (GRA)  
Salt Water Intrusion in Coastal Aquifers (SWICA)

### Professional Certification / Registration

Professional Geologist (California #6142)  
Certified Hydrogeologist (California #240)

### Professional Experience

**1996 – Present:** Water Replenishment District of Southern California, Cerritos, California: Currently the Chief Hydrogeologist at the District, responsible for all levels of scientific investigations, research, management, and public presentations for the Hydrogeology Department. Manager of a team of four hydrogeologists, a senior water quality engineer, and a technical support specialist. Became the District's first hydrogeologist in 1996 and quickly rose from Staff level to Senior level to Chief level. Implemented the District's groundwater monitoring program, a Geographic Information System (GIS), brought out-sourced technical reporting in-house to reduce costs and develop internal expertise, developed a Modflow model of the District in cooperation with the U.S. Geological Survey, grew the Department from 1 staff to 7, and makes regular presentations to the Board of Directors, public tours, and groundwater pumper groups.

Primary duties are related to projects involving artificial groundwater replenishment, salt water intrusion, seawater barrier injection wells, flow and transport modeling, regional groundwater monitoring program, groundwater quality issues, tracking groundwater pumping in adjudicated basins, calculating annual overdraft and storage changes, reclaimed water reuse at spreading grounds and barrier wells, and conjunctive use evaluations. Project manager responsible for annual groundwater replenishment determinations and for purchasing \$25 million in replenishment water and multi-million dollar monitoring well drilling program and modeling programs.

Prepares the District's annual Engineering Survey and Report, and oversees preparation of annual Regional Groundwater Monitoring Report, and initiated a quarterly Technical Bulletin publication that he has authored or overseen all publications to date. Works with local water well owners to advise them on conditions prior to drilling new wells, such as aquifer depths, specific capacity, water quality, and performs spinner logging and zone sampling on existing wells to determine flow characteristics. Interacts with a multitude of agencies on matters related to groundwater in the Central and West Coast Basins, including EPA, RWQCB, DTSC, DHS, USGS, USBR, MWD and its member agencies, and representatives of 43 cities in the District. Part of the District's upper management team responsible for Department budgets, scheduling, and staffing. Reports directly to the District's General Manager and elected Board of Directors.

**1995 – 1996:** Camp Dresser & McKee, Ontario and Irvine, California: Senior Hydrogeologist focusing on groundwater resource investigations. Oversaw the completion of new production wells and conducted aquifer tests, determined locations for new wells, developed a flow model of the Rainbow Basin in San Diego County to assess groundwater availability, and determined the Safe Yield of the Pomona Groundwater Basin that was used in the adjudication of the basin.

**1991 – 1995:** Dames & Moore, Covina, Ontario, and Irvine California: Staff and Senior level Hydrogeologist working on both contaminant hydrogeology sites and clean water resource investigations. Geologically log the drilling and design the construction of monitoring wells and high capacity production wells. Performed flow and transport modeling of the Palos Verdes Landfill, a Class I hazardous waste disposal facility, and the Hewlett-Packard facility in Palo Alto. Testified as an expert witness on a soil contamination case. Performed Phase I, II, and III environmental site investigations.

**1985 – 1991:** Leighton & Associates, Riverside, California: Started career as a geophysics intern, performing seismic refraction surveys. Moved to the hydrogeology department to perform over 100 environmental site investigations including Phase I assessments, Phase II exploratory investigations, and Phase III remediation. Also completed clean water resource investigations and installed high capacity production wells in Yucca Valley and Cabazon.

### **Publications / Presentations**

Zhen, L., Reichard, E., Johnson, T., [Evaluating Conjunctive Use Strategies in Coastal Los Angeles: The role of Ground-water Simulation and Visualization in the Decision-making Process](#); American Geophysical Union, San Francisco, CA, December 2006.

Ehman, K., Ponti, D., Edwards, B., Reichard, E., Johnson, T., Defining Aquifer Architecture using Sequence Stratigraphy in the Los Angeles Basin, California; Association of Environmental & Engineering Geologists, Boston, MA, November 2006.

Reichard, E., Zhen, L., Land, M., Hermans, C., Johnson, T., Salinity Control as a Component of Regional Ground-Water Management; presented at the Geological Society of America, Philadelphia, PA, October 2006.

Johnson, T., Sim, Y., Injection Wells to Halt Salt Water Intrusion in Los Angeles County, California; presented at the First International Joint Meeting of the Salt Water Intrusion Meeting (SWIM) and Salt Water Intrusion in Coastal Aquifers (SWICA), Sardinia, Italy, September 2006.

Johnson, T., Tracer Test for Recycled Water Travel Times from Spreading Grounds to Production Wells, Los Angeles County, California; presented at the National Groundwater Association, San Antonio, TX, April 2006.

Johnson, T., Groundwater Tracer Test for Recycled Water Tracking, Los Angeles, California; presented at the American Water Works Association annual conference, Reno, NV, October 2005.

Reichard, E., Johnson, T., Assessment of Regional Management Strategies for Controlling Seawater Intrusion; published in ASCE Journal of Water Resources Planning and Management, pp. 280 – 291, July/August 2005. **This paper was awarded the “2006 Best Practice-Oriented Paper Award” by the Planning and Management Council of the World Water & Environmental Resources Congress, May 2006.**

Johnson, T., Recycled Water for Spreading Grounds and Seawater Barrier Injection Wells, Central and West Coast Basins, Los Angeles County, California; presented at the Groundwater Resources Association of California meeting, Sacramento, CA March 2005.

Ehman, K., Jackson, W., Edwards, B., Reichard, E., Hildenbrand, T., Johnson, T., Defining aquifer architecture using sequence stratigraphy in the Los Angeles Basin, California - The Future in Assessing and Protecting Groundwater Resources; presented at the Geological Society of America, Denver, CO, November 2004.

Johnson, T., Whitaker, R., Saltwater Intrusion in the Coastal Aquifers of Los Angeles County, California; Chapter 2 of the hard cover book “Coastal Aquifer Management – Monitoring, Modeling, and Case Studies”, edited by Cheng, A., and Ouazar, D., CRC Press, December 2003.

Johnson, T., and Ng, H., Challenges of Recycled Water Injection into the Los Angeles Groundwater Basins; presented at the Groundwater Resources Association of California meeting, San Jose, CA, April 2003.

Johnson, T., Njuguna, W., Available Aquifer Storage Determinations using Modflow and GIS, Central and West Coast Groundwater Basins, Los Angeles County, California; presented at the National Groundwater Association, Phoenix, AZ, February 2003.

Reichard, E., Land, M., Crawford, S., Johnson, Tyler, Everett, R., Kulshan, T., Ponti, D., Halford, K., Johnson, Theodore, Geohydrology, Geochemistry, and Ground-Water Simulation-Optimization of the Central and West Coast Basins, Los Angeles County, California; USGS Water-Resources Investigations Report #03-4065, 2003.

Johnson, T., Njuguna, W., Aquifer Storage Calculations using GIS and Modflow, Los Angeles County, California; presented at the ESRI annual conference, San Diego, California, July 2002.

Johnson, T., Whitaker, R., Jackson, W., Watt, D., Alternatives to Injection Wells for Seawater Intrusion Control, Central and West Coast Groundwater Basins, Los Angeles County, California; presented at the First International Conference on Saltwater Intrusion and Coastal Aquifers (SWICA), Essaouira, Morocco, April 2001.

Johnson, T., Reichard, E., Land, M., Crawford, S., Monitoring Modeling, and Managing Saltwater Intrusion, Central and West Coast Groundwater Basins, Los Angeles County, California; presented at the First International Conference on Saltwater Intrusion and Coastal Aquifers (SWICA), Essaouira, Morocco, April 2001.

Johnson, T., Sperry, M., Direct Potable Use of Intruded Seawater from West Coast Basin Aquifers, Los Angeles County, California; presented at the First International Conference on Saltwater Intrusion and Coastal Aquifers (SWICA), Essaouira, Morocco, April 2001.

Thomas, S., Liles, M., Johnson, T., Managing Seawater Intrusion in the Dominguez Gap Area of Los Angeles County, California, USA; presented at the First International Conference on Saltwater Intrusion and Coastal Aquifers (SWICA), Essaouira, Morocco, April 2001.

Odermatt, J., Johnson, T., Hummeldorf, R., Distribution of DDT Residues (DDT, DDD, and DDE) in California Soils; AEHS Journal of Soil Contamination, Volume 2, Number 4, pp. 315-329, June 1993.