

RESUME

Timothy K. Parker, PG, CEG, CHG

PARKER GROUNDWATER

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EXPERIENCE

2005 – 2009: Schlumberger Water Services, Principal Hydrogeologist. Sacramento, California. Provided hydrogeologic expertise and project management on groundwater monitoring, groundwater resources management, and groundwater contaminant projects for public and private sector clientele. Application of advanced oilfield tools and technologies to groundwater projects. Integration of groundwater quality monitoring and protection on CO2 sequestration projects; liaison to Schlumberger Carbon Services, including planning, scope development, technical implementation, facilitation, and oversight. **Business Development** activities included strategic planning, prospect assessments, sales presentations, targeted workshops, client development and exploitation. Mentored and provided direction to staff; developed, tracked and controlled projects; worked closely with clients and other public and private organizations to implement projects on schedule, on budget with high level of quality.

2001 – 2005: California Department of Water Resources, Division of Planning and Local Assistance, Conjunctive Water Management Branch, Senior Engineering Geologist. Provided local technical and economic assistance to Sacramento and San Joaquin Valley groundwater authorities and water districts planning, developing, and implementing conjunctive water projects, and local and regional groundwater monitoring programs. Elements include developing technical scope, implementing work, providing geologic and groundwater technical expertise, attending and speaking at public meetings. **Central District, Groundwater Planning Section,** Sacramento, California (early 2001 prior to joining CWMB). **Senior Engineering Geologist, Groundwater Planning Section.** Elements included: Integrated Storage Investigations Program conjunctive use project technical support, coordination, and project management; technical support on local groundwater monitoring programs; technical support on Bulletin 118; Proposition 13 groundwater grant applications screening and ranking process for Central District geographic area. Supervised and provided direction to staff; developed, tracked and controlled program budgets; worked closely with other DWR groups, agencies and outside organizations to develop additional local assistance opportunities for DWR.

2000-2001: California Department of Conservation, Division of Mines and Geology, Sacramento, California. **Associate Engineering Geologist**. Responsible for: multi-year aerial photograph review, identification of landslides and potentially unstable areas, field reconnaissance and confirmation, preparation of maps and images using MapInfo, Vertical Mapper, ArcView, Spatial Analyst, Model Builder, and ArcInfo working closely with GIS specialists; assisting in development of GIS methodologies and database for Northern California watersheds assessment/restoration project; review of timber harvest plans and pre-harvest inspections; assisting in review of regional CEQA documents as related to engineering geologic issues; watershed assessment; technical presentations at multi-agency meetings and landslide/mass wasting public workshops.

1997-2000: CalEPA Department of Toxic Substances Control, Stringfellow Branch, Sacramento, California. **Hazardous Substances Engineering Geologist**. Responsible for: groundwater monitoring and analysis; developing approach and preparing a work plan for a Stringfellow site revised hydrogeologic conceptual model; researching, providing, and maintaining a comprehensive environmental data management system; assembling and contracting with an expert panel for consultation on the site; evaluating an existing MODFLOW porous media groundwater flow model; providing direction on the strategy and approach for the development of a revised groundwater flow and fate & transport model for the Stringfellow site; providing input on an as needed basis in support of the litigation and community relations elements of the project.

1993 - 1997: Law Engineering & Environmental Services, Inc., Sacramento, California. **Manager Project Management**. Responsible for supervising and providing direction to senior project managers; maintaining appropriate tracking system and controls for assurance of successful execution of scope, schedule and budget of major projects; maintaining quality assurance and controls on projects. Responsibilities included development/implementation of group budget spending plan, establishing performance standards and evaluating program progress and quality, staff recruiting, mentoring, maintaining utilization, business development, proposal preparation, commercial and government project marketing, client maintenance. **Project Manager** and **Senior Hydrogeologist** on hydrogeologic evaluations, site and regional groundwater quality monitoring programs, hazardous substance site investigations and remediation. Responsibilities included technical direction of projects, project scoping,

schedule, budget, supervision of field activities, preparation of documents, developing cost-effective strategies for follow-on investigations and removal actions, and negotiating with state regulators on three Beale Air Force projects totaling more than \$15 million.

1988 - 1993: Dames & Moore, Sacramento and Los Angeles, California. **Senior Geologist**. Provided hydrogeologic technical support, project management, regulatory compliance, technical/regulatory strategy, and on a variety of commercial and industrial DTSC- and RWQCB-lead hazardous substance sites. Responsibilities included project technical direction, scope implementation, budgetary control, groundwater quality monitoring and analysis, supervision of field investigations, document preparation, client interface, negotiation with regulatory agencies on projects totaling approximately \$5 million.

1986 - 1988: California Department of Health Services, Toxic Substances Control Division, Southern California Region, Assessment and Mitigation Unit, Los Angeles, California. **Project Manager** in the Assessment and Mitigation Unit. Responsibilities included development and implementation of work plans and reports for, and regulatory oversight of, State Superfund preliminary site assessments, groundwater quality monitoring and analysis, remedial investigations, feasibility studies, remedial action, and interim remedial measures. **Engineering Geologist**. Provided technical support to Permitting, Enforcement, and Site Mitigation Unit staff, including evaluation of hydrogeologic assessments, groundwater quality monitoring programs, work plans, and reports on federal and state Superfund sites and active facilities; assistance in budget preparation; assistance in zone drilling contract review.

1982: Gasch & Associates, Sacramento, California. Geologic assistant conducting shallow seismic reflection surveys in the Sierra Nevada for buried gold-bearing stream deposits.

1981 - 1982: Geologic Assistant, Coast Ranges, Avawatz Mountains, White Mountains, and Kinston Peak Range. Geologic Assistant on various geological field studies, including gravity surveys, magnetic surveys, landslide and geologic mapping projects.

PROFESSIONAL REGISTRATION

California Professional Geologist No. 5594

California Certified Engineering Geologist No. 1926

California Certified Hydrogeologist No. 0012

PROFESSIONAL AFFILIATIONS

Department of Interior, Advisory Committee on Water Information, Subcommittee on Ground Water

2007-Present: Co-Chair - Work Group on Implementation for development of the Framework for a Nationwide Ground Water Monitoring Network

2007-Present: Member - Work Group on Network Design for development of the Framework for a Nationwide Ground Water Monitoring Network

National Ground Water Association

2007- Present: Director - Association of Ground Water Scientists and Engineers Division

2007 - Present: Member - Government Affairs Committee

2007 - Present: Chair - Groundwater Protection and Management Subcommittee

2005 – Present: Chair - Regional Groundwater Management Task Force, Government Affairs Committee

2004 – 2005, 2007: Chair – Theis Conference Committee

2002 – Present: Member – Theis Conference Committee

2002 – Present: Member - Regional Groundwater Management Task Force, Government Affairs Committee

2003 – Present: Member – Groundwater Protection and Management Subcommittee

American Ground Water Trust

2009 – Present: Chair

2005 - Present: Director

California Ground Water Coalition

2008-2009: Director

Groundwater Resources Association of California

2000 – Present: Director

2000 – 2001: President State Organization

2001 – Present: Legislative Committee Chair

1998-1999 Vice President
1996-1997 Secretary
1995-1996 President Sacramento Branch
1993-1994 Member-at-Large Sacramento Branch

ACADEMIC BACKGROUND

BS 1983, Geology, University of California, Davis
Graduate studies in engineering geology, hydrogeology, hydrology, waste management engineering

ADDITIONAL TRAINING

EPA, USAF, DTSC, NGWA and other organization sponsored courses, seminars, and conferences including: Carbon sequestration tools and technologies, PMI project management courses; artificial groundwater recharge workshops; conjunctive use conferences; focused symposiums on arsenic, chromium, perchlorate, MtBE, and nitrates; ACWA meetings; maintaining forest & ranch roads in the Sierra; CEQA; sexual harassment; front line leadership; risk communication; cultural diversity; community relations; geographic information systems analysis; spatial modeling techniques; digital image generation and analysis; data visualization techniques; ATV riders course; DNAPLs in fractured rock media; remediation by natural attenuation; project management; groundwater geochemistry; vadose zone and groundwater monitoring; fate and transport of contaminants in the subsurface; aquifer analysis; surface and subsurface geophysical methods; aquifer restoration, groundwater monitoring; geophysical methods; air instrumentation; toxicology and risk assessment; EPA/OSHA-approved health and safety training meeting Section 126 of SARA and 29 CFR 1910.120.

PRESENTATIONS/COURSES/PUBLICATIONS

Technical and non-technical presentations at numerous public forums and meetings, state Superfund site public meetings, monthly regulatory meetings, and professional organization meetings and symposiums in public/private sector.

Books

California Groundwater Management, Second Edition, Groundwater Resources Association of California, co-author and project manager, 2005.

Water Contamination by Low Level Organic Waste Compounds in the Hydrologic System, in *Water Encyclopedia*, Wiley, 2004.

Presentations

"Geologic Carbon Sequestration Characterization and Monitoring Tools and Technologies," Groundwater Resources Association of California Groundwater Monitoring Conference, March 2009.

"Issues Surrounding Implementation of the Technology (ASR)", and moderator for ASR session, Ground Water Protection UIC Conference, San Antonio TX, January 2009.

"AWWA Research Foundation Study on The Potential Impacts of Geologic Carbon Sequestration on the Quality of Groundwater: A Summary of the Approach and Open Discussion of State Agency Stakeholders" (co-author), Ground Water Protection Council Annual Meeting, New Orleans, September 2008.

"Adapting to Increasing Demands in a Changing Climate with Managed Aquifer Recharge and Groundwater Storage: Do We Have the Right Tools?", Ground Water Protection Council Annual Meeting, New Orleans, September 2008.

"Implementation: Structure for Operation, Management and Oversight of the Nationwide Groundwater Monitoring Network," Ground Water Meeting, Department of the Interior, Advisory Committee on Water Information, Subcommittee on Ground Water, Sixth National Water Monitoring Conference, Atlantic City, New Jersey, May 2008.

"Implementation Structure Evolution, Framework for a Nationwide Ground Water Monitoring Network," Ground Water Monitoring Meeting, Department of the Interior, Advisory Committee on Water Information, Subcommittee on Ground Water, Reston, Virginia, March 2008.

"Citizen-Based Groundwater Resources Planning in California," Ground Water Summit, National Ground Water Association, Memphis, Tennessee, March 2008.

"Citizen-Based Groundwater Resources Planning on a Basin Scale, Sonoma Valley, California," co-author, Ground Water Summit, National Ground Water Association, Memphis, Tennessee, March 2008.

"Water Management Options Analysis Using a MODFLOW Ground Water Flow Model for the Sonoma Valley Groundwater Basin," co-author, Ground Water Summit, National Ground Water Association, Memphis, Tennessee, March 2008.

"Florida - Land Abundant in Water Resources, Drought and Regulation," National Ground Water Association EXPO, Orlando, Florida, December 2007.

"California's Quandary: Managed Aquifer Recharge under a Very Complex Regulatory Environment – Will it Work?" International Symposium on Managed Aquifer Recharge, Phoenix, Arizona, October 2007.

"So Many Tools, So Little time - Overview of Oilfield Tools and Technologies Applicable to Water Resources in Fractured Rock," Workshop, National Ground Water Association/EPA Fractured Rock Conference, Portland, Maine, September 2007.

"Technical and Policy Aspects of Managed Aquifer Recharge in California," National Ground Water Association Theis Conference, Park City, Utah, September 2007.

"California Ground Water Management - A Continuing Challenge in a Changing Environment," Keynote Presentation, Ground Water Protection Council Annual Forum, San Diego, California, September 2007.

"Integrated Regional Water Management and Sustainability in California - Can We Have It All?" 2007 Southwest Regional Water Symposium, Tucson, Arizona, August 2007.

"Integrated Regional Water Management California Style: How is it Working?" Pima Association of Governments, Tucson, Arizona, June 2007.

"Increasing Groundwater Storage to Meet California's Future Demand - Introduction to the Challenges and Solutions," Long Beach, California, June 2007.

"California Groundwater Monitoring Programs", Ground Water Meeting, Department of the Interior, Advisory Committee on Water Information, Subcommittee on Ground Water, Reston, Virginia, May 2007.

"Oilfield Tools and Technologies: Applications to Contaminant Sites," Department of Energy, Research and Development, Washington DC, March 2007.

"High Resolution Characterization, Simulation, and Monitoring of Water Resources Projects", Groundwater Resources Association of California High Resolution Characterization and Monitoring Symposium, Long Beach, California, November 2006.

"Future Expertise and Resource Needs for a Developing Technology Environment," National Ground Water Association 21st Century Water Systems, Irvine, California, October 2006.

"California Groundwater Monitoring Programs," Ground Water Monitoring Meeting, Department of Interior, Advisory Committee on Water Information, Subcommittee on Groundwater, Washington DC, May 2006.

"Groundwater Tools and Technologies - From the Archaic to the Sublime," Texas Ground Water Management Workshop, National Ground Water Association Groundwater Summit, San Antonio, Texas, April 2006.

"Groundwater Management Goals, Objectives, and Actions - How Do You Get There?" Texas Ground Water Management Workshop, National Ground Water Association Groundwater Summit, San Antonio, Texas, April 2006.

"Introduction to California Groundwater Policy Development", Groundwater Institute for Teachers, Sponsor American Groundwater Trust, Fresno, California, June 2005.

"Importance of Groundwater to the American River System," American River Science Conference, Public Session, April 2005.

"Some Groundwater Challenges for Conjunctive Use: ASR, Underground Storage Regulation, Arsenic, Viagra, and Yes There is More," California Department of Water Resources Workshop, Kern, November 2004.

"Groundwater 101" – Rohnert Park Public Session, Sponsored by Groundwater Resources Association of California, September 2004.

"California, Water and Sustainability in the 21st Century", Workshop on Water Sustainability in Silicon Valley: Vision for the Future, San Jose, California, April 2004.

"How Do We Balance Competing Needs on the Lower American River – Groundwater and Conjunctive Use", Lower American River Conference, Sacramento, California, June 2003.

"Levee Cutoff Walls and Groundwater Recharge", NGWA Southwest Focus Conference, Phoenix, Arizona, February 2003.

"Low Concentrations of Organic Compounds in the Hydrologic System," Groundwater Resources Association of California Annual Meeting, Newport Beach, California, September 2002.

"Comparing Two GIS Applications to Develop Relative Landslide Potential", ESRI Users Conference, San Diego, California, July 2002.

"Conjunctive Management of Groundwater and Surface Water", Central Sacramento County Groundwater Forum, Elk Grove, May 2002.

"Groundwater Wells Surveying or Mapping: Why We Need Flexibility in Well Location Data", California Land Surveyors Association, Lake Tahoe, March 2002.

"Overview of Groundwater Management Issues in California", Groundwater Resources Association, Fresno, California, January 2002.

"Where are we in West and Central Coast Basins?", Groundwater Law and Policy in California: Update on Recent Developments, Anaheim, California, October 2001.

"Groundwater Quality & Well Maintenance", Water Well Workshop, Sacramento, California, September 2001.

"Now That You Have Your Data What Do You Want to Do with it?", Association of California Water Agencies Workshop, Sacramento, California, August 2001.

"GIS in Developing a Relative Landslide Potential Framework, North Coast Ranges, California", ESRI Users Conference, San Diego, California, July 2001.

"Engineering Geologic Aspects of Timber Harvest in the Sierra Nevada", Association of Engineering Geologists/Groundwater Resources Association Annual Meeting, San Jose, California, September 2000.

"Industry Trends for Groundwater Cleanups: Where Have We Come From and Where Are We Going", Groundwater Resources Association Fifth Annual Meeting, Costa Mesa, California, October 1996.

"Selection, Design, Installation And Evaluation of Dedicated Groundwater Sampling Systems: a Case Study", Proceedings of the National Groundwater Sampling Symposium, Washington, DC, November 1992.

"Energy Dispersive X-Ray Fluorescence Analysis of Lead In Soil, Dust, and Paint Using Secondary Target Excitation and Scattered X-Ray Ratio Normalization", Workshop Proceedings, XRF Workshop, Denver X-ray Conference, 1994.

Workshops, Symposia and Courses

"Groundwater Monitoring: Methods, Needs, and Answers," Session Moderator, Sixth National Monitoring Conference, National Water Quality Monitoring Council, Atlantic City, New Jersey, May 2008.

"Geophysics for Fractured Rock Groundwater Systems," Session Moderator, Ground Water Summit, National Ground Water Association, Memphis, Tennessee, March 2008.

"The Changing Landscape of Regulatory Authority," Session Moderator, Long Range Policy and Water Planning in California, American Ground Water Trust, Ontario, California, February 2008.

"Groundwater Policy and Regional Management in Florida: a Changing World," Session Moderator, NGWA EXPO, Orlando, Florida, December 2007.

"Conjunctive Management of Ground Water and Surface Water: Application of Science to Policy," Co-Convener, National Ground Water Association Theis Conference, Park City, Utah, September 2007.

"Investing in Infrastructure - Pay Now or Pay Later," Session Moderator, Groundwater Biennial, Sacramento, California, September 2007.

"Increasing Groundwater Storage to Meet California's Future Demand - Challenges and Solutions," Chair Groundwater Resources Association of California Workshop, Long Beach, California, June 2007."

"Groundwater Management in New Mexico in the Year of Water - A Challenge of Increasing Demand, Limited Supply, and Statewide Implementation," Workshop, Chair, National Ground Water Association Groundwater Summit, Albuquerque, New Mexico, May 2007.

"Geophysics in the Groundwater Industry: Basic Theory, Current and Future Application of Tools and Technology," Session Moderator, National Ground Water Association EXPO, Las Vegas, Nevada, December 2006.

"Groundwater Policy and Management in the Southwest – Focus on Nevada" Session Moderator, National Ground Water Association EXPO, Las Vegas, Nevada, December 2006.

"High Resolution Site Characterization and Monitoring," Co-Chair, Groundwater Resources Association of California Symposium, Long Beach, California, November 2006.

"Groundwater Management in Texas - A Continuing Challenge in a Changing Environment," Workshop Chair, National Ground Water Association Groundwater Summit, San Antonio, Texas, April 2006.

"Salinity Issues: Past Practices and Future Strategies," Session Moderator, 2005 Groundwater Biennial, Sacramento, California, October 2005.

"Basin Yield and Overdraft: Technical and Legal Perspectives," Chair Groundwater Resources Association of California Workshop, Pasadena, California, September 2005.

"Groundwater Policy, Law and Science: What Can be Done About the Disconnect?" Moderator, Water Education Foundation Water Law and Policy Briefing, San Diego, California, July 2005.

"California Groundwater Management Course", Instructor, Groundwater Resources Association of California Course, Glendale, California, May 2005.

"California Groundwater Management Course", Instructor, Association of California Water Agencies Pre-conference, San Jose, California, May 2005.

"Groundwater Law, Policy and the Tragedy of the Commons: Obstacles and Some Possible Solutions to Sustainable Groundwater Management in the Southwest," Session Chair, National Ground Water Association Groundwater Summit, San Antonio, Texas, April 2005.

"Artificial Recharge Workshop," Workshop Chair, Groundwater Resources Association of California, Sacramento, California, March 2005.

"Basic Groundwater Hydrology", California Department of Water Resources Basic Groundwater Course Sacramento, California, May 2004.

"Artificial Recharge Workshop," California Department of Water Resources – US Geological Survey Joint Sponsorship, Workshop Chair, Sacramento, April 2003.

WATER POLICY ANALYSIS, PRESENTATIONS, LEGISLATIVE TESTIMONY and BRIEFINGS

Reviews Federal and California State water and groundwater policy and legislation and provides comment and information dissemination to the groundwater industry through activities associated with the National Ground Water Association, American Ground Water Trust, and Ground Water Resources Association of California, and California Ground Water Coalition.

Annual National Groundwater Legislative Symposium - Presentations by Members of Congress and Staff, and Federal Administration - Visits to Congressional Offices at Capitol Hill - Groundwater Resources Association of California – attended years 2003-2009.

Annual State Groundwater Legislative Symposium - Presentations by State Legislators and Staff, and State Administration - Visits to Legislator Offices

at the Capitol - Groundwater Resources Association of California – attended years 2002-2009.

"California Water Management Issues and Managed Underground Storage: Water Use and Water Rights Session," National Research Council Forum on Managed Underground Storage, Washington D.C., March 2008.

"Groundwater Storage in California," National Research Council Forum on Managed Underground Storage, Washington D.C., March 2008.

"Geologic Carbon Sequestration," 11th Annual Ground Water Industry Legislative Conference, National Ground Water Association, Washington D.C. - 2008.

California State Legislative Staff Briefing - California, Water, Sustainability, and Groundwater Basics - 2005.

California State Senate Select Committee on Air and Quality - Hearing on Status of Groundwater Management in California - 2005.

"California, Water, and Sustainability", Legislative Staff Briefing, State Capitol, Sacramento, California - 2004.

California State Senate Select Committee on Water Management, Storage, Conservation and Supply - Hearing on Perchlorate - 2004.

"California's Hidden Resource: Groundwater," Hearing on Perchlorate, Assembly Select Committee on Water Management, Storage, Conservation and Supply, State Capitol, August 2003.

"Now What! The Conundrum of the Contaminant Du Jour and Emerging Contaminants in Groundwater", Assembly Committee Hearing on AB599, State Capitol, California - 2003.

California State Senate Select Committee on Water Management, Storage, Conservation and Supply - Hearing on Groundwater Basics, Regulatory, and Drinking Water Issues and Challenges - 2003.

California State Assembly Select Committee on Water Quality and Availability - Hearing on California Groundwater Management Challenges and Issues - 2003.

"California's Hidden Resource: Groundwater", Legislative Staff Briefing, Sacramento, California - 2003.

California State Assembly Select Committee on Water Quality and Availability - Hearing on Life Cycle of a Contaminant - 2003.

California State Assembly Select Committee on Water Quality and Availability - Hearing on Groundwater Basics, Groundwater Demand, Management and Monitoring - 2002.