



## Peter D. Boddie Senior Hydrogeologist

### Education

- B.S., Watershed Science  
Colorado State University,  
1979

### Registrations/Affiliations

- American Water Resources Association
- Colorado Ground Water Association
- Colorado Agricultural Commission Groundwater Protection Advisory Committee (former appointee)

### Contact Information

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### Experience Overview

Mr. Boddie has more than 35 years of experience in hydrology through his involvement in water development, water rights, agricultural, mining, hazardous waste, and resource management projects. Since joining HRS Water Consultants in 1984, his primary responsibilities have been in the areas of water rights engineering, evaluation of agricultural water uses and historical consumptive uses, and general surface water and ground water hydrology.

Specific experience includes: water rights analyses, valuations and negotiations; expert witness testimony in a variety of water-related venues; development of water resource supplies and augmentation plans; analyses of historical irrigation practices and crop consumptive uses; water availability and water budget analyses for various basin areas; evaluation of ground water recharge for augmentation plans, water quality studies and ground water models; environmental and hydrologic impact studies; and hydrologic and geomorphic measurements and sampling.

Prior to his employment at HRS, Mr. Boddie worked for Law Engineering Testing Company, the Colorado Division of Water Resources, WATEC, Inc., the U.S. Forest Service, and as an independent consultant.

### Representative Experience

- Water rights, historical consumptive use and augmentation plan evaluations and negotiations involving numerous water right and well permit applications in the metropolitan Denver area, in the Colorado High Plains area, and in the South Platte, Arkansas, Republican, Colorado, Yampa, Rio Grande, and Gunnison River basins
- Expert witness testimony in Colorado Water Courts in Divisions 1, 2, and 3, Adams County District Court, El Paso County District Court, and before the Colorado Water Quality Control Commission and the Colorado Ground Water Commission. Qualified as an expert in surface water and ground water hydrology, ground water recharge, water rights analysis, water rights valuation, water quality, and aerial photograph/satellite image interpretation.
- Augmentation plan development and analysis of historical use for irrigation well pumping and for ditch and reservoir shares used under the Greeley Canal No. 2 system for the Lower Poudre Augmentation Company. The project includes over 100 wells and associated farm parcels, and the evaluation of multiple water sources, three main river reaches along the Cache la Poudre and South Platte rivers, complex hydrogeology and ground water accretion/depletion timing, recharge operations, augmentation plan operations and projection accounting, and preparation of a report and opinions for submission to the Division 1 Water Court, with final decree entered in January, 2014.
- Augmentation plan analysis, development, and accounting for the Denver Southeast Suburban Water and Sanitation District on Cherry Creek, near Franktown, Colorado. The project also includes evaluation of various hydrologic issues and ongoing representation of the District in water rights issues and negotiations.
- Project manager for water supply and water rights projects for the City of Brush, including: a decreed plan for augmentation involving ground water recharge; a study of natural precipitation recharge and the

associated available water supply for the city's municipal well field; a water management and water quality monitoring plan to maximize augmentation recharge, water quality protection, and wildlife habitat benefits; and development of a new augmentation plan for the city's wells used for irrigation of parks and agricultural properties.

- Analysis of all water rights, canal and recharge operations, irrigation practices and crop consumptive uses, and other hydrologic inflow and outflow components within the area of a proposed wildlife refuge along the South Platte River near Orchard for the US Fish & Wildlife Service.
- Feasibility study for a ground water recharge project in northeastern Colorado, including evaluation of the physical and legal availability of recharge water, determination of potential operating scenarios and costs, and an evaluation of the market for excess project water.
- Evaluation and testimony regarding ground water recharge due to both natural precipitation and irrigation on sandy soils, and associated nitrate leaching potential in eastern Colorado.
- Analysis, report preparation and deposition testimony regarding historical pumping, irrigation efficiency, consumptive use, and associated stream depletions for 2,500 irrigation wells within the North Platte Basin in portions of Wyoming and Nebraska in connection with interstate compact litigation.
- Analysis and water court testimony regarding surface water and ground water interactions and potential water rights and streamflow impacts to the Great Sand Dunes National Monument and the San Luis Lakes State Wildlife Area in the San Luis Valley, Colorado which were associated with a proposed American Water Development, Inc. pumping project and water rights application.
- Evaluation of potential conservation pool yield effects on recreational and agricultural water uses, and associated appraisal values for Continental and Rio Grande Reservoirs in the headwaters of the Rio Grande Basin, and DeWeese Reservoir in the Wet Mountain Valley, for the Colorado Division of Wildlife.
- Study of the hydrology, channel morphology changes, and recommended restoration options for a reach of the Slate River near Crested Butte, Colorado.
- Water rights, water use, snow melt yield and depletion analyses for the Aspen Highlands Ski Area EIS.
- Project manager for a change of water rights for the Keesee Ditch on the lower Arkansas River near Lamar, including the analysis of historical consumptive use, surface water and ground water return flows, and preparation of a plan for storage, transfer, and exchange.
- Analysis of San Luis Valley water budget components, including: precipitation recharge; mountain stream inflows; Rio Grande outflows; and natural wetland and irrigation consumptive uses for a Colorado Water & Power Resources Development Authority study.
- Special water commissioner for the Colorado Division of Water Resources to administer the City of Northglenn's compliance with a complex water use and augmentation plan.
- Determination of the physical and administrative availability of nontributary ground water for developments in Douglas County.
- Baseline hydrologic and mining impact studies for several coal mining, oil shale and synfuels projects in Colorado, Utah, Montana and Wyoming, including surface-water measurement station design and installation, monitoring well installation, data collection, interpretation, and permit or EIS report preparation.
- Review of hazardous waste site ground water monitoring plans and interpretation of contaminant transport modeling results for three hazardous waste sites in Missouri, Louisiana, and Washington.
- Sample plan design, data collection, and analysis, and report presentation for a surface water inventory in Summit and Eagle counties of Colorado for the U.S. Forest Service.

## Publications

- Boddie, P.D., J.S. Foster, M.R. Palumbo, and R.D. Tafelski, 1998 (rev. 2000), Ground Water Depletions to the North Platte River, Whalen, Wyoming to Lewellen, Nebraska (1951-1995): prepared for the State of Wyoming Attorney General's Office in connection with U.S. Supreme Court Case No. 108, State of Nebraska v. State of Wyoming;; 138 pp. plus appendices.

- Harmon, E.J., P.D. Boddie and F. Weber, 1999, "Geophysical and Hydrologic Studies in Sand Creek, Great Sand Dunes National Monument, Colorado:" in Schenk, C.J., ed., 1999, Hydrologic, Geologic, and Biologic Research at Great Sand Dunes National Monument, Colorado: Proceedings of National Park Service Research Symposium No. 1, p. 52-73.
- Boddie, Peter D., 1989, "An Overview of a Water Budget for the San Luis Valley, Colorado", in Water in the Valley, Eric J. Harmon, ed., Colorado Ground-Water Association Guidebook, pp. 73-78.
- Boddie, Peter D., 1989, "The Great Sand Dunes and the Phenomenal Medano Creek", in Water in the Valley, Eric J. Harmon, ed., Colorado Ground-Water Association Guidebook, pp. 255-260.
- Boddie, Caryn and Peter, 1984 and 1999, Hiking Colorado, Volume I and Volume II, Falcon Press Publishing Co., Helena, Montana, 301 pp., and 282 pp., respectively.

## Water Court Experience

- Travelers Insurance Co. v. Smith Cattle Co. and Reid Cattle Co., Division 2, Case No. 86CW91, deposition and trial, testimony on behalf of Travelers regarding historical uses and abandonment of irrigation rights, 1990.
- American Water Development, Inc., Division 3, Case. No. 86CW46, testimony on behalf of objectors U.S. Dept. of Justice and Colorado Division of Wildlife, 1991.
- City of Brush, Division 1, Case Nos. W-9389-78, W-9401-78, W-9402-78, Ground Water Rights, Change of Use, and Augmentation Plan Application, testimony on behalf of the applicant 1991-1992.
- Jefferson Properties, Inc., Division 1, Case No. 95CW060, water rights application, testimony on behalf of objector Ken Caryl West Ranch Water District, 1995-1996.
- Midwest Farms, LLC, Colorado Ground Water Commission Hearing, Denver, Colorado, Case Nos. 95GW07 and 96GW01, Well Permit Change of Use Applications, testimony on behalf of objector Alliance Conserving Tomorrow, 1996.
- Ken Caryl West Ranch Water District, Division 1, Case No. 93CW031, Water Rights Application, testimony on behalf of the District, 1999.
- National Hog Farms, Colorado Water Quality Control Commission Hearing, Denver, Colorado, Swine Waste Permit Application Hearing, testimony on behalf of objector Equus Farms, 1999.
- State of Nebraska v. State of Wyoming, United States Supreme Court Appointed Referee, Denver, Colorado, COH Permit 012000, 1945 North Platte River Decree, testimony on behalf of Wyoming, 1999.
- City of Denver v. Ester Miller, District Court, Adams County, Colorado, Case No. 99CV928, Condemnation of Land with Water Rights, testimony on behalf of Denver, 2000.
- William Poleson, Colorado Ground Water Commission Hearing, Ellicott, Colorado, Case No. 99GW11, Well Permit Change of Use Application, testimony on behalf of applicant, 2000.
- Proposed Changes to the HCSFO Regulations Related to Nitrate Leaching and Recharge, Colorado Water Quality Control Commission Hearing, Denver, Colorado, Hearing on Changes to Rule 61, testimony on behalf of Equus Farms, 2003.
- Wayne & Francis Booker, Colorado Ground Water Commission Hearing, Denver, Colorado, Hearing on Rule Variance Request, Request for Variance to Commission Rules 7.3.2 & 7.10.1, testimony on behalf of Bookers, 2003.
- Wayne & Francis Booker, El Paso County District Court, Colorado Springs, Colorado, Case No. 04CV2800, Application for Relocation of Senior Wells in the Upper Black Squirrel Creek Designated Basin, trial testimony, 2006.
- Dwayne & Daphne Goodwin, Division 1, Case No. 08CW156, Application for Well and Plan for Augmentation near Berthoud, Colorado, deposition, 2012.