EXHIBIT 69

Christopher B. Garner

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RESEARCH INTERESTS

- Integrated modeling
- Water leasing, water banking, and water markets
- Watershed hydrology in arid and semi-arid environments
- Basin operations modeling
- Streamflow forecasting
- Automated multi-criteria optimization
- GIS and remote sensing
- Climate change
- Paleohydrology
- Stream temperature modeling
- Surfacewater-groundwater interaction

EDUCATION

M.S., Hydrology, University of Nevada, Reno, 2007
B.S., Geological Sciences, University of Memphis, 1994

EMPLOYMENT

Research

2011-Present	Project Manager, Hydrologic Research, University of Nevada, Reno
2008-2011	Assistant Research Hydrologist, Desert Research Institute, Reno, Nevada
2007-2008	Staff Hydrologist, Desert Research Institute, Reno, Nevada
2005-2007	Graduate Research Assistant, Desert Research Institute, Reno, Nevada
2001-2005	Research Assistant, Ground Water Institute, University of Memphis, TN

COMPUTER SKILLS AND SOFTWARE

- *MATLAB*
- *Microsoft Visual Studio (FORTRAN and Visual Basic.NET)*
- *Microsoft Office (Excel, Word, PowerPoint, Access, etc.)*
- *Powersim*
- *MODSIM*
- *RiverWare*
- *PRMS*
- *MODFLOW*

RESEARCH EXPERIENCE

Development of a Decision Support Tool in Support of Water Right Acquisitions in the Walker River Basin

- Project manager and lead developer of the UNR Walker Basin Decision Support Tool (DST). Developed, tested, and applied version 2.0 Walker River DST computer software. Interacted with many stakeholder groups, local, state, and federal agencies, to develop computer code, share modeling results and understand current and future needs of the program.

Sustainability of semi-Arid Hydrology and Riparian Areas (SAHRA) – NSF Science and Technology Center at the University of Arizona, DRI component

- Developed and tested a stylized MODSIM model to determine the potential for water markets in the Middle Rio Grande Basin.

Perform studies to understand and improve the quality of real time hydrologic data acquisition, storage, and usage to improve Reclamation DSS on the Truckee-Carson River system

- Performed routine bi-monthly forecasts with the Truckee and Carson MMS-PRMS models
- Submitted PRMS forecasts to NRCS and BOR
- Maintained and updated the DRI forecasting models including the Carson RiverWare model
- Met with USBR, NRCS, and TROA staff to demonstrate the PRMS forecasting models of the Carson and Truckee River Basins

Perform streamflow forecast study to provide operational guidance to Reclamation forecasters

- Compiled and quality checked historic NRCS streamflow forecast for the Truckee, Carson, and Walker Basins
- Developed methods to analyze and understand the uncertainty in NRCS forecasts
- Will be comparing the error between NRCS, BOR (RiverWare), and PRMS forecasts

Development of Tools and Solutions to Optimize the Operations of the Truckee River Based on the Requirements of the Truckee River Operating Agreement

- Investigated improvements to existing Bureau of Reclamation Decision Support (DSS) through the use of available NASA Remote Sensing estimates of hydrologic variables.
- Developed a procedure for MMS-PRMS model development and application in ArcGIS, where geospatial information (e.g., PRISM), are used to distribute precipitation and temperature data over space and time.
- Worked in tandem with students on the development of PRMS models to understand the accuracy of SNODAS Snow Water Equivalent (SWE) data and its utility in streamflow forecasting in multiple basins and at different hydrologic response scales.
- Investigated the impacts of spatial distribution of precipitation in high elevation areas on the parameterization of hydrologic models using a variety of single and multiple objective optimization and evaluation techniques including; Uniform Random Search (URS), Shuffle Complex Evolution (SCE-UA) optimization, and Multi-objective Complex global Optimization (MOCOM-UA) techniques in combination with existing and new objective criteria.

Environmental Protection Agency EPA-Predict the Possible Efficacy of Revegetation Strategies in Reducing Water Temperatures in the Carson River

- Developed a one-dimensional, physically-based, dynamic stream temperature model for a portion of the Carson River. The model was calibrated using the MOCOM-UA optimization algorithm using a custom MATLAB interface. Model evaluation included a Bayesian uncertainty analysis of the output and indicated that increased shading would not reduce river temperatures below the desired threshold of 20ºC.

PUBLICATIONS

MS Thesis

Garner, C. B., (2007). "Modeling the Effect of Riparian Shading on Water Temperature for Portions of the Carson River, Western Nevada, USA" Thesis: Hydrologic Sciences Program University of Nevada, Reno.

Refereed Journals and Books

Carroll, R.W.H., G. Pohll, D. McGraw, **C.B. Garner**, A. Knust, D.P. Boyle, T. Minor, S. Bassett, and K. Pohlmann, "Mason Valley Groundwater Model: Linking Surface Water and Groundwater in the

Walker River Basin, Nevada," Journal of the American Water Resources Association, 2010.

Conference Presentations

Carroll, Rosemary W.H.; Pohll, Greg; Pohlmann, Karl; Boyle, Doug; **Garner, Chris**; Knust, Anna; 2008. Preliminary Model of a Coupled Groundwater-Surface Water System, Mason Valley, Nevada MODFLOW and More: Ground Water and Public Policy. International Ground Water Modeling Center - Colorado School of Mines, Golden, CO USA.

Boyle, Douglas P.; **Garner, Chris**; Brookshire, David S.; Coursey, Don; Tidwell, Vince; Broadbent,Craig; Bassett, Scott; Gupta, Hoshin; Markstrom, Steve; 2009 (submitted). Modeling Local Third Party Effects in a Water Leasing Market 2009 Annual Meeting. SAHRA. Tucson, AZ.

Brookshire, D.; Broadbent, C.; Coursey, D.; Tidwell, V; Boyle, D.; **Garner, C**.; 2009 (submitted). Water Markets and the SAHRA 9th Annual SAHRA meeting. SAHRA. Tucson, AZ.

Garner, C.B.; Boyle, D; Lamorey, G; Bassett, S; Markstrom, S; Brookshire, D; Broadbent, C; Coursey, D; Tidwell, V; Gupta, H; 2008. "Development of a MODSIM Model to Assess the Feasibility of Water Leasing in the Middle Rio Grande Basin" 8th Annual Meeting SAHRA, Tucson, AZ

Carroll, Rosemary W.H.; Pohll, Greg; Pohlmann, Karl; Boyle, Doug; **Garner, C.B.**; Knust, Anna; 2008. "Preliminary Model of a Coupled Groundwater-Surface Water System, Mason Valley, Nevada MODFLOW and More: Ground Water and Public Policy" International Ground Water Modeling Center, Colorado School of Mines, Golden, CO USA.

Boyle, D; **Garner, C.B.**; Bassett, S; Markstrom, S; Brookshire, D; Broadbent, C; Coursey, D; Tidwell, V; Gupta, H; 2008. Water Leasing Model in the Middle Rio Grande Basin: Stage IV - Third Party Effects 8th Annual Meeting. SAHRA, Tucson, AZ

Boyle, D; **Garner, C.B.**; 2008, Water management and irrigation modeling applications Climate Workshop, USGS, Sioux Falls, SD

Garner, C.B., Boyle D., Lamorey G., Bassett, S. "Development of a Hydrologic Model to Assess the Feasibility of Water Leasing in the Middle Rio Grande Basin" presented at the 2007 SAHRA 7th annual meeting(*Supporting Regional and International Water Management*), 10-12 October 2007, Tucson, AZ.

Garner, C.B., Boyle D., Lamorey G., Bassett, S. "Development of a Hydrologic Model to Assess the Feasibility of Water Leasing in the Middle Rio Grande Basin" presented at the 2007 Fall AGU meeting, 10-14 December 2007, San Francisco, CA.

Boyle D., **Garner, C.B.**, Lamorey G., Bassett, S. "Medium Resolution Physical Model of the Middle Rio Grande Basin for Water Leasing and Market Studies" presented at the 2007 SAHRA 7th annual meeting(*Supporting Regional and International Water Management*), 10-12 October 2007, Tucson, AZ.

Garner, C.B., McGwire, K.C., "Modeling the Effect of Riparian Shading on Water temperature for Portions of the Carson River, Western Nevada, USA" presented at the American society of Limnology and Oceanography Aquatic Sciences Meeting, 4-9 February 2007, Sante Fe, NM.

Garner, C.B., McGwire, K.C., "Modeling the Effect of Riparian Shading on Water temperature for Portions of the Carson River, Western Nevada, USA" presented at the Carson River Coalition workshop hosted by Carson River Subconservancy with multiple agency and tribal participation. April, 5th 2007, Carson City, NV.

Garner, C.B., Larsen, D., "Hydrostratigraphy of a Window through the Upper Claiborne Confining Unit, Memphis, Tennessee" presented at the Geological Society of America Joint annual Meeting, 12-14 March 2003, Memphis, TN.

Research Reports

Boyle D; Pohll G; Bassett SM; Minor T; **Garner C**; Carroll R; McGraw D; Knust A; Barth C; 2009 (accepted). Development of a Decision Support Tool in Support of Water Right Acquisitions in the Walker River Basin

Garner, C.B., McGwire K., Brock, J., McKay, A., "Modeling the Effect of Riparian Shading on Water temperature for portions of the Carson River, Western Nevada, and USA" a report prepared for Contract EPA CR-83160001-0.

McGwire K., **Garner, C.B.,** "Comparing Effective Shade and Water Temperature on the Carson River" a report prepared for Contract NDEP CR-83160001-0.