

**Robert F. Harrington**  
**Curriculum Vitae**

**Contact:**

Inyo County Water Department  
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**Employment**

County of Inyo Water Department, 2007-present  
Water Director – Responsible for directing the Inyo County Water Department, which is charged with implementation of Inyo County water policies. These policies stem primarily from the County’s interactions with the City of Los Angeles’s water export activities in Inyo County, and from the County’s regulation of groundwater transfers. The Water Department’s activities include monitoring hydrologic conditions, monitoring vegetation conditions potentially affected by water management activities, assessing potential effects of proposed groundwater pumping, developing and implementing mitigation measures for adverse impacts due to groundwater pumping, monitoring mitigation activities, integrated regional water management planning, invasive species control, and informing and educating the public regarding county water issues.

County of Inyo Water Department, 1997-2007  
Hydrologist – Responsible for collecting, analyzing, and reporting on hydrologic conditions as related to Inyo County water policies. Tasks include data collection and interpretation, groundwater modeling, monitoring network design, development of monitoring and mitigation plans aimed at mitigating impacts of groundwater pumping, and multidisciplinary teamwork to assess effects of hydrologic changes on biological resources.

University of Arizona, 1991-1997  
Department of Hydrology and Water Resources, Research Assistant.

Desert Research Institute, 1989-1991  
Water Resources Center, Research Assistant.

**Education**

University of Arizona  
PhD in hydrology with minor in remote sensing, 1997. Dissertation title: The release of meltwater and ionic solute from melting snow.

University of Nevada-Reno  
MSc in hydrology/hydrogeology, 1991. Thesis title: The amount and fate of acid deposition in the Sierra Nevada, California.

University of Nevada-Reno  
BS in geophysics with minor in mathematics, 1988.

### **Professional Registrations**

California Registered Geologist #8285

### **Professional Affiliations**

American Geophysical Union  
American Water Resources Association  
Geological Society of America  
Groundwater Resources Association of California  
National Ground Water Association

### **Peer-reviewed Publications**

Steinwand, A.L., R.F. Harrington, and D. Or, Water balance for Great Basin phreatophytes derived from eddy covariance, soil water and water table measurements, *Journal of Hydrology*, 329(3-4), 595-605, 2006.

Steinwand, A.L., R.F. Harrington, and D. Or, Comment on “The inappropriate use of crop transpiration coefficients ( $K_c$ ) to estimate evapotranspiration in arid ecosystems: A review” by Mata-González et al. Vol. 19: 285–295. (2005),” *Arid Land Research and Management*, 20(2), 177-179, 2006.

Steinwand A.L., R.F. Harrington, and D.P. Groeneveld, Transpiration coefficients for three Great Basin shrubs, *Journal of Arid Environments*, 49(3), 555-567, 2001.

Harrington, R.F., R. C. Bales, Modeling ionic solute transport in melting snow, *Water Resources Research*, 34(7), 1727-1736, 1998.

Harrington, R., R. C. Bales, Interannual, seasonal, and spatial patterns of meltwater and solute fluxes in a seasonal snowpack, *Water Resources Research*, 34(4), 823-832, 1998.

Harrington, R.F., R.C. Bales, and P. Wagon, Variability of melt-water and solute fluxes from homogeneous melting snow at the laboratory scale, *Hydrological Processes*, 10, 945-953, 1996.

Bales, R.C., and R.F. Harrington, Recent progress in snow hydrology, *Reviews of Geophysics, Supplement*, U.S. National Report to the IUGG, 1011-1020, 1995.

Harrington, R.F., K. Elder, and R.C. Bales, Distributed snow melt modeling using a clustering algorithm, *in IAHS Pub. 228, Biogeochemistry of Seasonally Snow Covered Catchments*, 1995.

Harrington, R.F., A.W. Gertler, D. Grosjean, and P. Amar, Formic acid and acetic acid in the Western Sierra Nevada, California, *Atmospheric Environment*, 27A(12), 1843-1849, 1993.

## Conference Presentations and Published Abstracts

Harrington, R.F., Challenges of monitoring and mitigating adverse impacts of groundwater pumping, Great Basin Water Forum, Sparks Nevada, October 2010. (*Invited oral presentation*)

Harrington, R.F., Groundwater management in the Owens Valley under the Inyo/Los Angeles Long-Term Water Agreement, Sierra Nevada Alliance 15<sup>th</sup> Annual Conference, September 2008. (*Invited oral presentation*)

Harrington, R.F., A.L. Steinwand, and D. Or, Vadose zone water balance for Great Basin phreatophytes, Fall 2005 Meeting of the American Geophysical Union, San Francisco, California, December 2005. (*Invited oral presentation*)

Harrington and Steinwand, Evapotranspiration from groundwater dependent plant communities, Owens Valley, California, 2004 Evapotranspiration Symposium, Nevada Water Resources Association, November 15, 2004, Las Vegas, Nevada. (*Invited oral presentation*)

Harrington, R.F., Hydrology and water extraction from Owens Valley, in Impacts of Climate Change on Landscapes of the Eastern Sierra Nevada and Western Great Basin, USGS Open File Report 01-202, 2001. (*Invited oral presentation, published abstract*)

Harrington, R.F. and A. Steinwand, Regional groundwater discharge estimated using micrometeorological measurements, plot-scale measurements of vegetation cover, and remotely-sensed vegetation cover, Fall 2002 Meeting of the American Geophysical Union, San Francisco, California, December 2002. (*Poster presentation*)

Harrington, R.F., Regression modeling of water table fluctuations for management of groundwater pumping in phreatophytic vegetation, Fall 1999 Meeting of the American Geophysical Union, San Francisco, California, December 1999. (*Poster presentation*)

Manning, S. and R.F. Harrington, Effects of water table fluctuations on phreatophytic plant communities in the Owens Valley, California, Fall 1999 Meeting of the American Geophysical Union, San Francisco, California, Fall 1999. (*Oral presentation*)

Colee, M., R. Harrington, T. Painter, and J. Dozier, A high-resolution distributed snowmelt model in an alpine catchment, *in* International Conference on Snow Hydrology: The Integration of Physical, Chemical, and Biological Systems, J. Hardy, M. Albert, and P. Marsh, eds., p. 93 USACE Cold Regions Research and Engineering Laboratory Special Report 98-10, 1998. (*Published abstract*)

Harrington, R.F., R. Jordan, and D. Tarboton, A comparison between two physically based snow models, Fall Meeting of the American Geophysical Union, San Francisco, California, 1995. (*Oral presentation*)

Kattelman, R., and R.F. Harrington, Daily melt waves through an alpine

snowpack, Fall Meeting of the American Geophysical Union, San Francisco, 1995. (*Poster presentation*)

Harrington, R.F., and R.C. Bales, Spatial variability of snowmelt and ion release from a seasonal snowpack, Mammoth Lakes, California, Fall Meeting of the American Geophysical Union, 1993. (*Poster presentation*)

Harrington, R.F., R. Galarraga-Sanchez, and R.C. Bales, Predicting the release of ionic solute from alpine snowpacks using coupled snowmelt and digital elevation models, 23<sup>rd</sup> Annual Meeting of the American Water Resources Assoc., Reno, Nevada, 1992. (*Oral presentation*)

Harrington, R.F., and R.C. Bales, Laboratory experiments as a model for field-scale variability in water and solute release from melting snow, Fall Meeting of the American Geophysical Union, 1992. (*Poster presentation*)

Harrington, R.F., A.W. Gertler, and P. Amar, Network operations and preliminary monitoring results for the receptor modeling of acidic air pollutants to forested regions of the Sierra Nevada study, 84<sup>th</sup> Annual Meeting and Exhibition of the Air and Waste Management Assoc., Vancouver, British Columbia, Canada, 1991. (*Oral presentation*)

Harrington, R.F., and A.W. Gertler, Modeling the fate of atmospheric dry deposition in Sierra Nevada soils, 84<sup>th</sup> Annual Meeting and Exhibition of the Air and Waste Management Assoc., Vancouver, British Columbia, Canada, 1991. (*Oral presentation*)