

Journal of the Nevada Water Resources Association

Fall 2004

**A publication of the Nevada Water Resources Association, providing hydrologic
information to the people of Nevada**



Volume 1, Number 1

Nevada Water Resources Association

Executive Director

Donna Bloom

President

Mark Forest

Editor-in-Chief

Michael Strobel

Assistant Editors

Chris Benedict, Washoe County Department of Water Resources

David Berger, USGS-WRD-NV

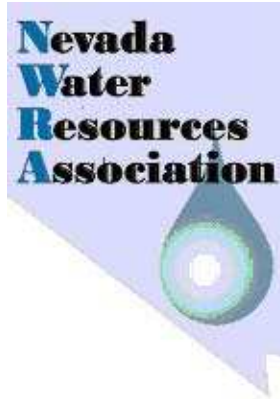
Terry Katzer, Cordilleran Hydrology, Inc

Mike Widmer, Washoe County Department of Water Resources

Correspondence: Manuscripts should be submitted to Dr. Michael Strobel, USGS, Room 203, 333 W. Nye Lane, Carson City, NV 89706. Inquires: (775) 887-7604, mstrobel@usgs.gov

Responsibility: The Nevada Water Resources Association and the organizations of any of the editors or Board of Directors are not responsible for statements and opinions advanced in this publication.

Copyright @2004 NWRA



Editorial

Building Bridges in Nevada

By Michael Strobel, PhD, Chief Editor, Journal of the Nevada Water Resources Association and Associate District Chief, Nevada District, U.S. Geological Survey

To begin, I would like to welcome you to the first edition of the Journal of the Nevada Water Resources Association (JNWRA). Our goals are to produce a quality web-based science journal that addresses water issues important to Nevadans, provide an outlet for research reports that are of local or regional interest, present student papers in a peer-reviewed publication, and keep readers abreast of recent developments in scientific, political, and public-opinion directions that potentially affect present and future water management in the State. We will try to accomplish this by publishing the JNWRA twice yearly. The success of the journal depends on the scientific contributions from a broad range of researchers in Nevada. I encourage each of you to consider using the JNWRA to share your research with your colleagues in Nevada.

A journal would not be possible without huge efforts from many people. I would like to thank the NWRA Board of Directors for agreeing to pursue this endeavor, and especially the Executive Director, Donna Bloom, for all her support, efforts, and perseverance to seeing this develop from an idea into a true publication. The Assistant Editors, Chris Benedict, Dave Berger, Terry Katzer, and Mike Widmer, reviewed the manuscripts, provided valuable technical comments, and spent much time and effort to make sure this first edition of the JNWRA is both interesting and technically sound. Anne Jeton, USGS, provided technical review of one of the manuscripts. These contributions are greatly appreciated. Future editions will rely more heavily on the peer reviews of our Associate Editors. If you are interested in serving as an Associate Editor, please provide a letter of intent and a brief resume and bibliography.

As the title of this editorial suggests, I would like to discuss the concept of building bridges. Nevada, being the driest State in the United States, often isn't the focus of discussion when one thinks about bridges. Why build bridges when you don't even have streams to cross? But it's because we are so dry that we need to consider how to build bridges.

The bridges I refer to are those between the various water groups representing the needs and interests of various parts of our population in Nevada. We have some critical issues to address in Nevada when we talk about water. Rapid growth in population in some of our urban areas is putting stresses on the water resources readily available to these areas, and results in expanding the search for additional water resources into the rural parts of Nevada. Water rights, water importation, and potential changes in the way-of-life in many parts of Nevada are possibly the most discussed and potentially controversial issues we face at this time. The enduring drought in the western United States only adds to the stress of our water resources and contributes even more urgency for the need to explore and utilize other options for water supply. Water quantity isn't the only concern we face. Potential water-quality degradation from contamination in Lake Mead, declines in water clarity in Lake Tahoe, effects of mining on stream and ground-water quality, and meeting the new Federal standards for arsenic levels in drinking water are just some of the difficult issues that need to be resolved. Water managers and political decision-makers, and society in general, are expecting scientists to provide some answers and some guidance for addressing these issues. The reality is that the burden falls on us as water scientists to look at the data, understand the natural environment and the potential impacts from various stresses, and provide conclusions on how to proceed with the benefit of Nevada in mind. This certainly is a huge responsibility for all of us.

The problem is that every scientist has their own opinion on how to proceed. We are, after all, human, and although we would like to believe that science is pure and unbiased, there is a large degree of what we refer to as "scientific judgment" with each conclusion we make. Every scientific study has some degree of uncertainty, which we often qualify with error bars around the data points. How we draw conclusions while considering the uncertainty often depends on our perspective on things. A scientist looking for water resources to increase water supplies for a growing city might focus on positive aspects of the data and conclude higher values of available water for a basin. A scientist looking at limiting human impacts on water resources to a minimum might focus on the lower range of data values and make different conclusions. Because with any earth science, there are always large numbers of unknowns, which make it a necessity to make scientific judgments. This is why every science paper and presentation comes with its share of disagreement and counter-arguments. This also is why the State Engineer can hold week-long hearings to discuss water appropriations and hear two different views from prominent scientists concerning the same topic. I always find humor when hearing news reports that because one group of scientists disagree with the findings of another group of scientists, for example the discussions over global warming, the media headlines the story with "scientists disagree on subject." Well, no kidding. And this makes headlines because society believes science should be exact, unquestionable, and all scientists should see the data and be in complete agreement. We all know this is never the case.

This brings me to the title of this article. If we can build bridges of interaction and communication between the various science groups in Nevada, it will benefit everyone involved. Instead of separating into different camps of differing opinions, we need to consider how to work together to find common solutions for the people of Nevada. It is imperative that scientists share data, observations, and conclusions with each other and offer their findings for discussion, scrutiny, and possibly either general acceptance or refutation. I truly believe that each of us want to do what is best for Nevada. I also believe that each of us have our own opinions on what that might be, whether concerning water supply, urban growth, water quality, Yucca Mountain, or any other issue. It is important for the science and for the people of Nevada that the science community interact, share ideas, share data, discuss and debate (even argue), and find common conclusions. Building bridges between the many science groups can only improve the quality of our science, reduce costs by sharing data, expertise, and technology, and result in viable recommendations for managers and politicians in deciding the future for Nevada. It is my hope that this journal will serve as one mechanism for helping to build those bridges.