

2012 NWRA Annual Conference Week:
“Desert Gold: Water in the West”
March 5-8, 2012

Monday, March 5, 2012

- 8:00 a.m. - 4:00 p.m. Water Rights in Nevada Seminar
- 9:00 a.m. – 4:00 p.m. Lake Mead Symposium Registration
- 9:00 a.m. – 12:00 p.m. Lake Mead Exhibitor and Poster Presentation Set up
- 1:00 p.m. – 5:30 p.m. Lake Mead Symposium Program
- 5:30 p.m. – 7:00 p.m. Lake Mead Symposium Poster Reception

Tuesday, March 6, 2012:

- 7:00 a.m.- 11:00 a.m. Lake Mead Symposium Registration
- 8:00 a.m. - 3:30 p.m. Advanced Water Rights in Nevada Seminar
- 8:00 a.m. – 5:00 p.m. Lake Mead Symposium
- 7:00 a.m. - 4:00 p.m. NWRA Annual Conference Tour
- 10:00 a.m. - 6:00 p.m. NWRA Annual Conference Registration
- 2:00 p.m. - 6:00 p.m. Basic Groundwater Workshop
- 4:00 p.m. - 6:00 p.m. NWRA Annual Conference Exhibitor & Poster Presentation Set up
- 6:30 p.m. - 8:30 p.m. “Speakeasy” & Social

Wednesday, March 7, 2012:

- 7:00 a.m. - 4:00 p.m. NWRA Annual Conference Registration
- 7:00 a.m. - 8:30 a.m. Continental Breakfast, Exhibit Area
- 8:00 a.m.- 8:05 a.m. Opening Remarks with **Jeffrey Johnson**, *NWRA 2012 Conference Chairman*

8:05 a.m. - 8:45 a.m. Opening Keynote Presentation with **Governor Brian Sandoval**

8:45 a.m. - 10:00 a.m. Panel: **Colorado River**

Two-thirds of Nevada's population relies on the Colorado River for their water. Extreme variability on the Colorado River during the last decade has instigated basin-wide policy initiatives addressing supply shortages, optimization of operations, and water resource management strategies to adapt to the changing conditions. These policy initiatives are key to Nevada's long-term viability. Exploration of additional initiatives is underway and include long-term sustainability evaluations, international coordination, and climate change. Panelists will explore these initiatives, and on-going environmental programs which ensure the majority of Nevada's population maintains a viable water supply.

Moderator: Jeffrey Johnson, Southern Nevada Water Authority

- Jennifer Pitt, Director, Colorado River Project, Environmental Defense Fund
- Robert Johnson, Retired U.S. Bureau of Reclamation Commissioner, Robert W. Johnson, LLC
- Jayne Harkins, P.E., Executive Director, Colorado River Commission of Nevada
- Terrance (Terry) Fulp, Ph.D., Lower Colorado Deputy Regional Director, U.S. Bureau of Reclamation

10:00 a.m. - 10:15 a.m. Break, Exhibit Area

10:15 a.m. - 11:30 a.m. Panel: **Reforms to the Endangered Species Act**

The Obama Administration has initiated an administrative reform program to simplify and streamline regulatory red tape. ESA reforms have been proposed as part of the process. ESA issues to be addressed will include critical habitat designation and exclusions, incidental take quantification and authorization, and regulatory incentives for landowners and regulated entities who participate in HCPS and other conservation agreements. The panel will discuss the general principles involved in the reform process and specific ways in which the ESA can be improved from the perspective of water resources development and use.

Moderator: John Entsminger, Southern Nevada Water Authority

- Donald Baur, Partner, Perkins Coie LLP.
- Gary Frazer, Assistant Director for Endangered Species, U.S. Fish and Wildlife Service, *"Improving ESA Implementation – Recent Developments and Future Direction"*
- Sean Skaggs, Partner, Ebbin Moser + Skaggs LLP, *"ESA Permitting of Water Resource Projects and the Prospect of Administrative Reform"*

11:45 a.m. - 1:15 p.m. Luncheon with Keynote Presentation with **Patricia Mulroy**, General Manager, Southern Nevada Water Authority

1:30 p.m. - 2:30 p.m. **Technical Session A: Water Wells**

Moderator: Michael Widmer, Hydro-Geo, LLC.

- Norman Carlson, Chief Geophysicist, Zonge International, Inc., *“Siting Groundwater Wells in Southeastern Nevada using CSAMT and NSAMT Geophysical Methods”*
- Jack Childress, PG, Senior Hydrogeologist, Interflow Hydrology, Inc., *“Arsenic Distribution in Groundwater of Ralston Valley, Nevada and Identification of Alternative Groundwater Sources for the Town of Tonopah”*
- Noah Heller, MS PG, President, BESST Inc., *“Application of Miniaturized In-Well Flow and Pressure Profiling to Facilitate Well Rehabilitation and Well Efficiency Strategies: Establishing More Robust Rehab Performance Metrics for Longer Well Life, Well Efficiency and Reduced Power Consumption”*

1:30 p.m. - 2:30 p.m. **Concurrent Technical Session B: Basin Budgets**

Moderator: Jay Dixon, Kinross-Round Mountain Gold Corp.

- Gary Karst, Groundwater Hydrologist, National Park Service, *“Use of an Historical Water Budget and Water Level Data to Confirm Recharge Estimates in Arid Groundwater Basins”*
- Dwight Smith, PE, PG, Principal Hydrogeologist, Interflow Hydrology, Inc., *“Observations of Elevated Chloride and Bromide Contents in Bulk Precipitation and Mountain Block Spring Samples in Dixie Valley, Churchill and Pershing Counties, Nevada, and Implications to Effective Use of the Chloride Mass Balance Method for Estimating Recharge”*
- David Donovan, Hydrologist II, Southern Nevada Water Authority, *“Wellhead Protection at Kyle Canyon, Clark County Nevada”*

2:30 p.m. - 2:45 p.m. Break, Exhibit Area

2:45 p.m. - 4:00 p.m. Panel: **Midterm Report on Mine-related Groundwater Pumping: pre-dewatering projections, observed effects, and updated groundwater modeling results**

The mines on the Carlin Trend were the first in Nevada to require large-scale dewatering to reach deeper ores in both open-pit and underground mining operations. The mines water pumpage exceeds 50,000 afy over the last 20 years, although not all this water is consumed. Prior to development, predicted impacts were highly uncertain. After 20 years of water use and extensive dewatering, the observed effects on both local and regional scales is compared with initial predictions. This panel will discuss the current state of knowledge regarding the effects of these large water withdrawals on a local and regional scale, comparing observed effects from over 20 years of pumping to initial predictions, and also looking forward with results from a recently-completed regional modeling study.

Moderator: Rick Felling, Nevada Division of Water Resources

- Paul Pettit, Senior Environmental Manager, Newmont Mining Corporation, *“Dewatering on the Carlin Trend, 20 Years of Perspective”*
- David Prudic, Geological Sciences Adjunct Professor, University of Nevada, Reno, *“Evaluating cumulative effects of groundwater withdrawals on flow of the Humboldt River”*
- Tom Myers, Ph.D., Hydrologic Consultant, Great Basin Hydrology, *“Cumulative Dewatering Deficits in the Humboldt River Basin: What to Expect in the Future”*

2:45 p.m. - 4:00 p.m. **Technical Session C: Open Water Evaporation**

Moderator: Daniel Bunk, U.S. Bureau of Reclamation

- Michael Moreo, Hydrologist, U.S. Geological Survey, *“Lake Mead Evaporation”*
- Todd Tietjen, SNWA Limnology Project Manager, Southern Nevada Water Authority, *“Potential Impacts of Climate Change on Lake Mead Water Quality”*
- Justin Huntington, Research Hydrologist, Desert Research Institute, *“Climatological Estimates of Open Water Evaporation from Selected Truckee and Carson River Basin Water Bodies, California and Nevada”*

4:00 p.m. - 4:15 p.m. Transition Break

4:15 p.m. - 5:30 p.m. Panel: **Emerging Augmentation Strategies Session**

This panel will discuss Desal, Water Reuse, Aquifer Storage Recharge, River recharge and Seeding. By doing this we can cover 4 basic areas: Desalination (National and International), Southern Nevada Strategies, Northern Nevada Strategies and Cloud Seeding.

Moderator: Steven Weber, Ph.D., MWH Americas, Inc.

- Nikolay Voutchkov, P.E., BCEE, Water Globe Consulting, LLC., *“Desalination – Overview of Current Status and Trends”*
- Bruce Moore, Colorado River Division Manager, Southern Nevada Water Authority
- Joe Maez, P.E., Technical, Compliance and Enforcement Branch Supervisor, Nevada Division of Environmental Protection, *“Current and Future Water Reuse in Nevada”*
- Arlen Huggins, Associate Research Scientist, Desert Research Institute, Division of Atmospheric Sciences, Reno, *“An Update on Cloud Seeding for Snowfall Augmentation”*

5:30 p.m. - 7:00 p.m. Artificial Recharge & Poster Reception, Exhibit Area

Thursday, March 8, 2012:

7:00 a.m. - 8:00 a.m. NWRA Annual 5K Run

7:30 a.m. - 12:00 p.m. NWRA Annual Conference Registration

7:30 a.m. - 8:30 a.m. Continental Breakfast, Exhibit Area

8:30 a.m. - 9:45 a.m. Panel: **How Does Renewable Energy Tie with Water in the State?**

Over the past years the Nevada Legislature has required the public utilities to meet a percentage of their energy production with renewable energy sources. The history of how this came about will be made and what is the future for public utilities in the area of renewable energy. The use of water has been an issue for energy production and how does the use of renewable energy fit with water consumption? Also what problems exist for the public utilities and the private companies in the exploration, production and transmission in getting this energy to customers?

Moderator: Hugh Ricci, P.E., Ricci Engineering, Ltd.

- Jack McGinley, NV Energy
- Tom Clark, Director of Legislative and Regulatory Affairs, Holland and Hart, *"Renewable Energy, Boom or Bust"*
- Max Walenciak, P. Eng., Nevada Geothermal Power

8:30 a.m.- 9:45 a.m. **Technical Session D: Modeling: A Water Resources Tool**

Moderator: Lari Knochenmus, U.S. Geological Survey

- Brent Meyer, M.S., Hydrogeologic Modeler, GeoHydros LLC., *"Simulating Groundwater Flow Patterns in Quarry Vicinities Using Numerical Groundwater Flow Model"*
- Kyle Richards, Hydrologist, U.S. Geological Survey, *"A Demonstration of the Local Grid Refinement (LGR2) Package in MODFLOW 2005 using the Southern Amargosa Embedded Model (SAMM)"*
- Stephen Maples, Desert Research Institute, *"Tritium Movement in the Shallow Unsaturated Zone Adjacent to a Radioactive Waste Disposal Facility in an Arid Environment"*
- Justin Huntington, Research Hydrologist, Desert Research Institute, *"Recent Applications Mapping Consumptive Use via Remote Sensing in Nevada"*

9:45 a.m. - 10:15 a.m. Networking Break, Exhibit Area

10:15 a.m. - 11:30 a.m. **Technical Session E: Resource Development and Water Use**

Moderator: Mike Hardy, Lumos & Associates, Inc.

- Jeff Johnson, SNWA Division Manager, Southern Nevada Water Authority, *“Observations from Year-One of Carbonate Aquifer Testing conducted in Compliance with State Engineer Order 1169, Coyote Springs Valley and Muddy River Springs Area, Clark and Lincoln Counties, Nevada”*
- Dr. Robert Johnson, Warm Springs Natural Area Land Manager, Southern Nevada Water Authority, *“Population Status of the Endangered Moapa Dace of Warm Springs”*
- Alden Robinson, P.E., President/CEO, Sunrise Engineering, Inc., *“Building Hydroelectric Generation on Your System”*

10:15 a.m. - 11:30 a.m. **Technical Session F: Water Quality**

Moderator: Jena Huntington, U.S. Geological Survey, Nevada Water Science Center

- Xiaoping Zhou, Ph.D., Senior Hydrologist, Southern Nevada Water Authority, *“Shallow Groundwater Quality along the Las Vegas Wash”*
- Timothy Rowe, Hydrologist, U.S. Geological Survey, *“Monitoring gasoline and gasoline-derived compounds in Lake Tahoe, California and Nevada”*
- Jason Kuchnicki, MS, Nevada Division of Environmental Protection, *“Lake Clarity Crediting Program for Lake Tahoe: Crediting & Trading for Urban Stormwater”*
- Kathryn Hoffman, Planner, Clark County Water Reclamation District, *“Changing Regulatory Standards for Water Quality Planning in Southern Nevada”*

11:45 a.m. - 1:30 p.m. Awards Luncheon & Elections, **Mike Widmer**, NWRA President

1:45 p.m. - 3:15 p.m. Panel: **Water: an Extraordinary Good**

Do you want a drink of cold water, some fresh veggies, hit the lake on a sunny day, use a smart phone or turn down the thermostat? It all takes water and the needs for this often scarce and life sustaining resources are on the rise. Finding ways to share water among stakeholders is becoming more difficult and more controversial, especially when there are competing uses for the available water, varying values depending on the region of use and varying degrees of priority. This panel will confront (or bring the fight to you) some of those challenges from the perspective of mining, agriculture, municipal and industrial use, and environmental objectives.

Moderator: Thomas Maher, Southern Nevada Water Authority

- Allen Biaggi, Nevada Mining Association, *“The Yin and Yang of Water and Mining”*
- Dan Keppen, Executive Director, Family Farm Alliance, *“Farming the Backbone of the America”*

- *Robert Lang, Ph.D., UNLV Director of Brookings Mountain West, "Metropolitan Water Policy in the Wet and Dry Sunbelt"*
- Ted Koch, Nevada State Supervisor, United States Fish and Wildlife Service, "*Conserving Our Future*"

3:15 p.m. - 3:30 p.m. Closing Remarks and Adjourn, **Jeffrey Johnson, NWRA 2012 Conference Chairman**

4:30 p.m. - 6:30 p.m. NWRA Board of Director's Meeting