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# Lake Mead Science Symposium 2014

## Details at a Glance

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February 4, 2014 • 8:00 am - 6:00 pm  
Southern Nevada Water Authority Colorado River Room  
Molasky Corporate Center • Seventh Floor  
100 North City Parkway Las Vegas, NV 89106

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## Program

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8:00 - 8:15	Registration
8:15 - 8:20	<b>Welcome • Peggy Roefer, Lake Mead Science Symposium 2014 Chair</b> Southern Nevada Water Authority
8:20 - 8:35	<b>Symposium Address • William K. Dickinson, Superintendent</b> Lake Mead National Recreation Area
8:35 - 8:45	<b>Introductory Remarks</b> <ul style="list-style-type: none"><li>• <b>David Gaskin, PE, Deputy Administrator, Water and Mining Programs</b> Nevada Department of Environmental Protection</li><li>• <b>Southern Nevada Water Authority</b></li></ul>
<b>8:45 - 10:05</b>	<b>Morning Session • Chair: Michael Rosen</b>
8:45 - 9:05	<b>Climate Change: Explaining the problem and its solution to non-scientists</b> George Rhee (Physics and Astronomy Department, University of Nevada, Las Vegas)
9:05 - 9:25	<b>Lake Mead striped bass sonic telemetry study</b> Debora Y. Herndon (Nevada Department of Wildlife)
9:25 - 9:45	<b>Status update of the Lake Mohave fishery and Lake Mohave habitat enhancement project</b> Mitch A. Urban (Nevada Department of Wildlife)
9:45 - 10:05	<b>Lower portal road at spring habitat improvement project</b> Heidi A. McMaster <sup>1</sup> and Marc Maynard <sup>1</sup> <sup>1</sup> U.S. Bureau of Reclamation
10:05 - 10:20	15-minute Break

Program continued

<b>10:20 - 11:40</b>	<b>Mid-Morning Session • Chair: Kumud Acharya</b>
10:20 - 10:40	<b>Evidence of endocrine disruption of common carp at Willow Beach: Do we have an answer?</b> Michael R. Rosen <sup>1</sup> , Reynaldo Patiño <sup>2</sup> , David Alvarez <sup>3</sup> , Steven Goodbred <sup>4</sup> , and Kathy Echols <sup>3</sup> <sup>1</sup> Water Science Field Team, U.S. Geological Survey; <sup>2</sup> U.S. Geological Survey, Texas Cooperative Fish & Wildlife Research Unit, Texas Tech University; <sup>3</sup> Columbia Environmental Research Center, U.S. Geological Survey; <sup>4</sup> U.S. Geological Survey
10:40 - 11:00	<b>Changes in thermal structure and water quality of Lake Mead due to lower lake levels</b> Al Preston <sup>1</sup> , Todd Tietjen <sup>2</sup> , Peggy Roefer <sup>2</sup> , and John E. List <sup>1</sup> <sup>1</sup> Flow Science Incorporated; <sup>2</sup> Southern Nevada Water Authority
11:00 - 11:20	<b>Real-time water quality data and applications in the Las Vegas wash during storm events</b> Xiaoping Zhou (Southern Nevada Water Authority)
11:20 - 11:40	<b>Understanding selenium distribution in Lake Mead using a hydrodynamic based water quality model</b> Xiaolu Wei <sup>1</sup> , Kumud Acharya <sup>1</sup> , and Zhongbo Yu <sup>2</sup> <sup>1</sup> Division of Hydrologic Sciences, Desert Research Institute; <sup>2</sup> Department of Geoscience, University of Nevada, Las Vegas
11:40 - 12:40	Lunch Hour
<b>12:40 - 3:20</b>	<b>Early-Afternoon Session • Chair: Ashlie Watters</b>
12:40 - 1:00	<b>Assessing the impact of high flow experiments in Grand Canyon on the water quality of Lake Mead</b> Roslyn Ryan <sup>1</sup> and Todd E. Tietjen <sup>1</sup> <sup>1</sup> Southern Nevada Water Authority
1:00 - 1:20	<b>Initial Assessments of Lake Mohave water quality</b> Todd E. Tietjen <sup>1</sup> and Roslyn Ryan <sup>1</sup> <sup>1</sup> Southern Nevada Water Authority
1:20 - 1:40	<b>Lake Mead Water Quality Forum Algae Task Force update: What a difference 10 years makes</b> Douglas D. Drury (Clark County Water Reclamation District)
1:40 - 2:00	<b>Response of the algal community in Boulder Basin, Lake Mead to the introduction of quagga mussels and reduced water levels</b> Ann L. St. Amand <sup>1</sup> , Todd E. Tietjen <sup>2</sup> , Peggy Roefer <sup>2</sup> , Jim Labounty <sup>2</sup> , and Joel Gerweck <sup>1</sup> <sup>1</sup> PhycoTech; <sup>2</sup> Southern Nevada Water Authority
2:00 - 2:20	<b>Quagga mussels have limited impact on phytoplankton and zooplankton phenology and composition in Lake Mead, NV (2007-2013)</b> John R. Beaver <sup>1</sup> , Claudia E. Tausz <sup>1</sup> , Becky J. Blasius-Wert <sup>2</sup> , Janet E. Kirsch <sup>2</sup> , Thomas R. Renicker <sup>1</sup> , Derrick D. Cooper <sup>1</sup> , Erin E. Manis <sup>1</sup> , and Lauren M. Baldarelli <sup>1</sup> <sup>1</sup> BSA Environmental Services; <sup>2</sup> U.S. Bureau of Reclamation
2:20 - 2:40	<b>Decadal changes to zoobenthos in a subtropical reservoir: establishment of non-native invertebrates shift assemblage structure</b> Clinton J. Davis <sup>1</sup> , Timothy J. Caldwell <sup>1</sup> , Annie Caires <sup>1</sup> , and Sudeep Chandra <sup>1</sup> <sup>1</sup> University of Nevada, Reno
2:40 - 3:00	<b>Temporal and basin-specific population dynamics of quagga mussels in the soft sediment of a multi-basin reservoir</b> Timothy J. Caldwell <sup>1</sup> , Michael R. Rosen <sup>2</sup> , Sudeep Chandra <sup>1</sup> , Kumud Acharya <sup>3</sup> , Andrea M. Caires <sup>1</sup> , Clinton J. Davis <sup>1</sup> , Melissa Thaw <sup>3</sup> , Daniel Webster <sup>2</sup> <sup>1</sup> University of Nevada – Reno, Aquatic Ecosystems Analysis Laboratory; <sup>2</sup> U.S. Geological Survey; <sup>3</sup> Division of Hydrological Sciences, Desert Research Institute, Las Vegas

Program continued

3:00 - 3:20	<p><b>Adult quagga mussel survival, growth, and reproduction potential in a large oligotrophic lake (Lake Tahoe, USA)</b>            Clinton J. Davis<sup>1</sup>, Sudeep Chandra<sup>1</sup>, Emma K. Ruhmann<sup>2</sup>, and Kumud Acharya<sup>2</sup>  <sup>1</sup>University of Nevada, Reno; <sup>2</sup>Desert Research Institute, Las Vegas</p>
3:20 - 3:40	20-minute Break
<b>3:40 - 6:00</b>	<b>Late Afternoon Session • Chair: Kent Turner</b>
3:40 - 4:00	<p><b>Can <i>Dreissena rostriformis bugensis</i> veligers survive in Lake Tahoe water? A comparison of growth, survival, and settlement in Lake Mead and Lake Tahoe</b>            Emma K. Ruhmann<sup>1</sup>, Kumud Acharya<sup>2</sup>, Clinton J. Davis<sup>3</sup>, and Sudeep Chandra<sup>3</sup>  <sup>1</sup>Desert Research Institute/University of Nevada, Las Vegas; <sup>2</sup>Desert Research Institute; <sup>3</sup>University of Nevada, Reno</p>
4:00 - 4:20	<p><b>Lake Havasu quagga mussel monitoring program update</b>            Heidi A. McMaster<sup>1</sup>, Dana Anat<sup>1</sup>, Janet E. Kirsch<sup>1</sup>, Jessica Stegmeier<sup>1</sup>, and Marc Maynard<sup>1</sup>  <sup>1</sup>U.S. Bureau of Reclamation</p>
4:20 - 4:40	<p><b>Susceptibility of <i>Dreissena bugensis</i> (quagga mussel) to UVB radiation throughout the lifecycle</b>            Melissa Thaw<sup>1</sup>, Kumud Acharya<sup>1</sup>, and Michael J. Nicholl<sup>2</sup>  <sup>1</sup>Division of Hydrologic Science, Desert Research Institute; <sup>2</sup>Department of Geoscience, University of Nevada, Las Vegas</p>
4:40 - 5:00	<p><b>Evaluating the efficacy of quaternary ammonium compounds for wildland firefighting equipment exposed to Dreissenid adults and veligers</b>            Ashlie Watters<sup>1</sup>, Shawn Gerstenberger<sup>1</sup>, and Wai Hing Wong<sup>1</sup>  <sup>1</sup>University of Nevada, Las Vegas</p>
5:00 - 5:20	<p><b>Results of boater survey answers versus actual observations of boaters pulling their plugs</b>            Kami Silverwood<sup>1</sup> and Tom McMahon<sup>1</sup>  <sup>1</sup>Arizona Game and Fish Department</p>
5:20 - 5:40	<p><b>Watercraft inspection and decontamination training updates</b>            “Quagga D” Davis (Pacific States Marine Fisheries Commission)</p>
<b>5:40 - 6:00</b>	<b>Conclusion and Adjournment • Symposium Chair: Peggy Roefer</b>