**Workshop**

**Hydroclimate Monitoring Systems & Measurement Needs**

Sponsored by the

**Western States Water Council and California Department of Water Resources**

**June 23-25, 2014**

**Doubletree San Diego Downtown**

**1646 Front Street, San Diego, CA**

**Monday, June 23**

11:00 am **Registration**

1:00 pm **Welcome and Opening Remarks, Introductions, Workshop Purpose**

Tony Willardson, Western States Water Council (WSWC), Executive Director

Jeanine Jones, California Department of Water Resources (CDWR), Interstate Resources Manager

1:30 pm **USGS Surface and Groundwater Monitoring Networks**

Jerad Bales, USGS Chief Scientist for Water

2:00 pm **External Perspectives on USGS Budget & Fiscal Constraints**

Sue Lowry, Wyoming State Engineer’s Office, Interstate Streams Administrator

2:30pm **State Surface and Groundwater Monitoring Networks**

Brian Dunnigan, Nebraska Department of Natural Resources, Director

Ken Stahr, Oregon Water Resources Department, Hydrographics Manager

3:15 pm Break

3:30 pm **USDA NRCS Snotel Network**

Mike Strobel, National Water & Climate Center, Director

4:00 pm **CDWR Perspective on Use of Remote Sensing for Snow Measurement**

Frank Gehrke, CDWR, Chief, Cooperative Snow Surveys

4:30 pm **Unmet Monitoring Needs in the Upper Midwest/Missouri River Basin**

Dennis Todey, South Dakota State Climatologist (remote presentation)

5:00 pm **Adjourn**

5:30 pm **Reception – Cash Bar**

**Tuesday, June 24**

8:00 am **Overview of NOAA Observing Systems and Budgets**

Hilawe Semunegus, NOAA National Environmental Satellite, Data, and Information Service (NESDIS)

The following will be via remote presentations:

John Murphy, National Weather Service (NWS) Observing Systems Portfolio

Howard Diamond, NESDIS Climate Reference Network

Matthew Menne, NESDIS Global Historical Climatology Network-Daily

Chris Sabine, Oceanic and Atmospheric Research (OAR)

9:30 am **Break**

9:45 am **Perspectives on Precipitation Observations**

Mike Anderson, California State Climatologist

Nolan Doesken, Colorado State Climatologist

Roger Pierce, San Diego National Weather Service, Meteorologist

11:45 am **Lunch (on your own)**

1:15 pm **Synthesizing Observations: A Western Observing Systems Vision**

Marty Ralph, Scripps Institution of Oceanography, Director, Center for Western Weather and Water Extremes (*CW3E*)

Mike Anderson, CDWR, State Climatologist

Scott Sellars, University of California, Irvine, Center for Hydrometeorology and Remote Sensing, Ph.D. Candidate

2:45 pm **Break**

3:00 pm **Landsat & Follow-On Missions: Water Use Applications and Their Value**

Tony Freeman, NASA Jet Propulsion Laboratory, Manager, Innovation Foundry

Tim Newman, USGS Land Remote Sensing Program Coordinator (remote presentation)

Lee Johnson, CSUMB/NASA Ames Research Center, Senior Research Scientist

Tony Morse, Retired, Idaho Department of Water Resources

Sue Lowry, Wyoming State Engineer’s Office, Interstate Streams Administrator

State perspectives on needs from Landsat program (group discussion)

5:00 pm **Adjourn**

**Wednesday, June 25**

8:00 am **Strategic Planning for Maintaining Long-Term Observing Records**

Tony Willardson, WSWC

Jonathan Kennen, USGS, National Water Census

Dwane Young, EPA Senior Data Advisor/WestFAST Water Data Work Group Lead (remote presentation)

Chris Lowry, Hach Hydromet, Director of Sales & Service

10:30 am **Break**

10:45 am **Where do we go from here? (group discussion)**

11:30 am **Action items and closing remarks**

12:00 am **Adjourn**