

Reclamation Climate and Hydrology Research - 2nd Annual Progress Meeting

Information & Agenda for January 29-30, 2014

Purpose: Exchange information about Reclamation collaborative research addressing climate change and variability impacts, flood hydrology and hydrologic prediction.

Background:

- (1) Research Roadmapping with Climate Change and Water Working Group (www.ccaawwg.us)
- (2) Reclamation Science and Technology Program current activities (R&D Office - Knowledge Stream quarterly, October 2013: <http://www.usbr.gov/research/docs/ks-2014-01.pdf>)

Day 1: Short-term Climate Variability and Hydrologic Prediction

8:30-8:45	Introductions	<i>Levi Brekke</i>	Reclamation-R&D
8:45-10:15	Assessing streamflow predictability across the contiguous United States and opportunities to reduce uncertainties (<i>collaborators: U.S. Army Corps of Engineers (USACE), NCAR, Reclamation</i>)	<i>Andy Wood</i> <i>Andy Newman</i>	NCAR NCAR
10:15-10:45	BREAK		
10:45-12:00	Diagnosing the moisture sources for extreme precipitation events in the intermountain west: Part 1 – NOAA/CIRES completed efforts (<i>collaborators: University of Colorado CIRES (CIRES), NOAA-ESRL, Reclamation</i>)	<i>Mike Alexander</i> <i>Mimi Hughes</i>	NOAA-ESRL CIRES
12:00-1:15	LUNCH		
1:15-2:15	Diagnosing the moisture sources for extreme precipitation events in the intermountain west: Part 2 – NOAA/CIRES future efforts, Reclamation complementary efforts	<i>Jason Caldwell</i>	Reclamation-TSC
2:15-2:45	Airborne Snow Observatory (ASO) technology for snowmelt forecasting and water resources management: ASO background and 2013 demonstration (<i>NASA Jet Propulsion Laboratory (JPL)</i>)	<i>Thomas Painter</i>	NASA JPL
2:45-3:15	BREAK		
3:15-3:50	Assessing the Value of Information from advanced hydrologic modeling and ASO technology for snowmelt forecasting and water resources management: (<i>collaborators: NASA Jet Propulsion Laboratory (JPL), NOAA-NWS CBRFC, Reclamation</i>)	<i>Todd Vandegrift</i> <i>Kostas Andreadis</i>	Reclamation-TSC NASA JPL
3:50-4:30	Other Efforts		
	(1) Enhancing Predictions of Climate Change Impacts on Snow Distribution and Melt Patterns in the Mountain West	<i>Adam Winstral</i>	USDA ARS
	(2) Flood Frequency Variability on Seasonal to Multidecadal Time Scales in the Western US and Implications for Infrastructure Planning	<i>Cameron Bracken</i>	Reclamation-TSC

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Day 2: Long-term Climate Change and Hydrometeorological Impacts

8:30-8:35	Recap Day 1, Preview of Day 2	<i>Levi Brekke</i>	Reclamation-R&D
8:35-10:15	Strengths/weaknesses of current climate projection downscaling and hydrologic impacts assessment techniques (<i>collaborators: USACE, NCAR, University of Colorado, Reclamation</i>)	<i>Martyn Clark Ethan Gutmann Naoki Mizukami Pablo Mendoza</i>	NCAR
10:15-10:45	BREAK		
10:45-11:45	Thinking ahead to SECURE 2016; Developing and demonstrating improved techniques for climate projection downscaling and hydrologic impacts assessment (<i>collaborators: USACE, NCAR, Reclamation</i>)	<i>Seshu Vaddey Martyn Clark Andy Wood</i>	Reclamation-Policy NCAR NCAR
11:45-12:45	LUNCH		
12:45-1:45	Improving extreme precipitation estimation using regional, high-resolution model-based methods: Part 1 – NOAA/CIRES completed efforts (<i>collaborators: CIRES, NOAA-ESRL, Reclamation</i>)	<i>Kelly Mahoney</i>	CIRES
1:45-2:30	Improving extreme precipitation estimation using regional, high-resolution model-based methods: Part 2 – NOAA/CIRES future efforts, Reclamation complementary efforts	<i>Victoria Sankovich Kelly Mahoney</i>	Reclamation-TSC CIRES
2:30-3:00	Evaluating the Relevance, Reliability, and Applicability of CMIP5 Climate Projections for Water Resources and Environmental Planning (<i>collaborators: USACE, CIRES, NOAA-ESRL, Reclamation</i>)	<i>Ian Ferguson Jamie Scott</i>	Reclamation-TSC CIRES
3:00-3:30	BREAK		
3:30-4:30	Other Efforts		
	(1) Design and Development of a Prototype Tool for Integrated Climate Downscaling and Streamflow Prediction using Open Source GIS Software	<i>Greg Gault</i>	Reclamation-PN
	(2) Evaluating Climate-Induced Runoff and Water Temperature Change	<i>Victor Huong</i>	Reclamation-TSC
	(3) Effects of Climate Change and Reservoir Operations on Riparian Vegetation	<i>Blair Greimann</i>	Reclamation-TSC
	(4) Colorado Basin Eco-hydrology Impacts: Dynamic Vegetation Responses in a Changing Climate	<i>Jon Quebbeman</i>	Colorado State Univ.
	(5) Other Colorado Basin Efforts	<i>Jim Prairie</i>	Reclamation-UC
4:30-4:35	Closing Comments	<i>Levi Brekke</i>	Reclamation-R&D