

Day 1, Tuesday 30 August 2011**Introduction, plus overview of emerging user needs and science directions**

7:30 - 8:15	BREAKFAST and Sign-in	ESRL room GC-402
	Session Chair: Robin Webb	
8:15 - 8:30	Welcome, Introductions and Overview	Bert Davis
8:30 - 8:40	Strengthening NOAA Science	Sandy MacDonald
8:40 - 8:50	Purpose of this Workshop	Marty Ralph
8:50 - 9:20	Keynote address	Brad Udall
9:20 - 9:40	Interagency Coordination – IWRSS	Don Cline
9:40 - 10:00	Drought - NIDIS	Roger Pulwarty
10:00 - 10:20	Summary of past “requirements” surveys	Levi Brekke
10:20 - 10:45	BREAK	
	Session Chair: Pedro Restrepo	
10:45 - 11:00	Hydrologic modeling – Emerging needs	Harold Optiz
11:00 - 11:15	New features of the "Im3" land model with rationale and evaluation	Chris Milly
11:15 - 11:30	Structure, function and dynamics of watersheds	Larry Band
11:30 - 11:45	Predictions under Change (PUC): Water, Earth and Biota in the Anthropocene	M. Sivapalan
11:45 - 12:00	Hydrologic modeling – Discussion	
12:00 - 1:00	LUNCH	
	Session Chair: Christa Peters-Lidard	
1:00 - 1:15	Hydrometeorological forcings – Emerging needs	Tim Schneider
1:15 - 1:30	Quantitative Precipitation Estimation (QPE)	Rob Cifelli
1:30 - 1:45	Quantitative Precipitation Forecasting (QPF)	Dave Novak
1:45 - 2:00	Snow information	Jessica Lundquist

2:00 – 2:15	Hydrometeorological forcings – Discussion	
	Session Chair: Dave Jorgensen	
2:15 – 2:30	Moving to spatially-distributed modeling; snow as a surrogate for some key challenges.	Bert Davis
2:30 – 2:45	Precipitation and clouds - modeling	Dave Gochis
2:45 – 3:00	Precipitation processes - observations	Allen White
3:00 – 3:15	Land surface hydrology and watershed dynamics	Jim McNamara
3:15 – 3:30	Water Cycle Physical processes – Discussion	
3:00 – 3:30	BREAK	
	Session Chair: Mike Dettinger	
3:30 – 3:45	Climate dimensions – Emerging needs	Jeff Arnold
3:45 – 4:00	Climate - Emerging science topic 1	Judy Curry
4:00 – 4:15	Climate - Emerging science topic 2	Dennis Lettenmaier
4:15 – 4:30	Climate - Emerging science topic 3	Paul Dirmeyer
4:30 – 4:45	Climate dimensions – Discussion	
4:45 – 5:00	Wrap up discussion from Day 1	M. Ralph & B. Davis

Day 2, Wednesday 31 August 2011

Breakout sessions

4 participant groups rotate through 4 breakout topics for 80 minutes per session

2 leads plus a rapporteur for each breakout session

Breakout Session Leads and Rapporteurs	
Next Generation Hydrologic models: P. Restrepo and L. Brekke (leads), L. Johnson (Rapporteur)	
Hydrometeorological forcings: C. Lidard and A. White (Leads), D. Novak (Rapporteur)	
Physical processes: D. Jorgensen and J. McNamara (Leads), R. Cifelli (Rapporteur)	
Climate Dimensions: R. Webb and M. Dettinger (Leads), K. Mahoney (Rapporteur)	
Breakout Group Program Representatives (B. Davis, M. Ralph, D. Cline, B. Udall)	

Time	ACTIVITIES	
7:30 - 8:00	BREAKFAST	ESRL room GC-402
8:00 - 8:20	Description of process for breakout sessions	Marty Ralph
8:20 - 8:30	Transition to breakout session rooms	
8:30 - 9:50	Breakout sessions – 1 st rotation	breakout
9:50 - 10:20	BREAK and transition to new breakout rooms	
10:20 - 11:40	Breakout sessions – 2 nd rotation	Breakout
11:40 - 12:00	Group photo before lunch (meet in lobby)	
12:00 - 12:50	LUNCH	
12:50 - 2:10	Breakout sessions – 3 rd rotation	Breakout
2:10 - 2:20	Transition between breakout sessions	
2:20 - 3:40	Breakout sessions – 4 th rotation	Breakout
3:40	Adjourn for Day 2 (except for breakout leads and rapporteurs)	
3:40 - 4:00	Breakout session leaders and rapporteurs – break	Session leads and rapporteurs
4:00 - 5:45	Session leads and rapporteurs prepare reports	Writing

Day 3, Thursday 1 September 2011
Discussion and Synthesis into Future Science Directions

Time	ACTIVITIES	
7:30 - 8:00	BREAKFAST	ESRL room GC-402
	Session Chair: Jim McNamara	
8:30 – 8:45	Report from Hydrology Modeling breakout	TBD
8:45 – 9:00	Report from Hydrometeorology breakout	TBD
9:00 – 9:15	Report from Physical Processes breakout	Dave Jorgensen
9:15 – 9:30	Report from Climate Dimensions breakout	Robin Webb
9:30 – 10:00	Discussion including inputs from Breakout Group Program Representatives	
10:00 - 10:30	BREAK	
	Panel Moderators: Levi Brekke and Pedro Restrepo	
10:30 - 12:00	Panel 1: Science directions for hydrologic predictions	Panelists: W. Krajewski, V. Ivanov, L. Cucurull, S. Sorooshian, G. Smith
12:00 – 1:00	Lunch	
	Panel Moderator: Roger Pulwarty	
1:00 – 2:30	Panel 2: Science directions for climate applications	Panelists: A. Wood, M. Dettinger, P. Webster, K. Mo, M. Hoerling
2:30 – 3:00	Wrap up	M. Ralph & B. Davis
3:00	Workshop adjourns	
3:30 – 5:00	Program Committee meets	Prgm Cmte

Day 4 (Program Committee only), Friday 2 September 2011

Time	ACTIVITIES	
8:30	Meet in room 3B-504	
8:30 – 12:00	Writing	Prgm Cmte
12:00 – 1:00	Lunch	
1:00 – 2:30	Writing	Prgm Cmte
2:30 – 3:00	Wrap up and next steps	Prgm Cmte