

## Final Draft Program

### 2008 WSC – Hood River, OR

14-17, April 2008

Best Western Hood River Inn  
1108 East Marina Way, Hood River, OR 97031

#### Monday April 14

- 9:00 – 2:00      **“Understanding\Using Mountain Soil Moisture Data”** Short Course – Columbia Room (lunch included)
- 3:00 – 5:00      Executive Committee Meeting – Columbia Room
- 5:30 – 7:00      Registration – Randall Osterhuber (call front desk for WSC hospitality suite #)

#### Tuesday April 15

- 7:00 – 8:00      Author’s Breakfast – Shoreline Room
- 7:30 – 8:30      Conference registration – Columbia Room  
Vendor Setup –  
Poster Paper Setup – Columbia Room

#### CONFERENCE OPENING SESSION

- 8:30 – 8:40      Opening Remarks: Scott Pattee, Conference Chair - Columbia Room
- 8:40 – 8:50      Welcome: Randy Julander, WSC General Chair
- 8:50 – 9:20      **“Working Across Boundaries”** – Gus Hughbanks, NRCS Washington State & Sara Schmidt, NRCS Washington DC
- 9:20 – 9 25      Vendor Introductions: Garry Schaefer

#### ORAL SESSION I - Climate Change

- Jon Lea - Session Chair, Columbia Room
- 9:30 – 10:00      **Assessing the Impacts of Global Warming on Pacific Northwest Snowpack**  
Joe Casola, Dept. of Atmospheric Sciences, University of Washington
- 10:00 – 10:30      **Glacial Change in the Wind River Range, Wyoming, USA**

K. Cheesbroug, J. Edmunds, G. Kerr, L. Pochop and G. Tootle ,  
University of Wyoming

10:30 – 11:00

Break

11:00 – 11:30

**A Century of Glacier Change in the American West**

A. Fountain, M. Hoffman, H. Basagic, Department of Geology, Portland State University

11:30 – 12:00

**Runoff Impacts of Climate Change on Northern California's Watersheds as Influenced by Geology and Elevation – a Mountain Hydroelectric System Perspective**

G. J. Freeman, Power Generation Department, PG&E

12:00 – 1:30

Lunch

**ORAL SESSION II – Misc. Snow Studies:**

Rob Allerman – Session Chair, Columbia Room

1:30 – 2:00

**Variability Among Snow Course and Snow Telemetry Measurements Across Colorado**

S.R. Fassnacht, M. Skordahl, and J.E. Derry, Watershed Science, Colorado State University

2:00 – 2:30

**Snow Sinking Studies**

Phillip Farnes, Snowcap Hydrology

2:30 – 2:45

Poster Introductions

2:45 – 4:00

Break: Poster and Vendor Exhibits

**Methods for Evaluating Changes in Snow Pack from Individual Snow Course Measurements in Northern Colorado**

M. E. Skordahl and S. R. Fassnacht, Colorado State University

**Rain-on-Snow Analysis, Coquitlam River Basin, British Columbia**

C. Solano, BC Hydro

**Using Stream Gage Data to Extend Snowmelt Records**

M. L. Kunkel, Boise State University

**A New Approach to Weather Forecasts at the Bonneville Power Administration Using the NWS Graphical Forecast Editor**

C. Ross, Meteorologist, Bonneville Power Administration

**Climate Change and Flood Control Operations in the Sacramento Basin**

A. Fissekis, Sacramento District, U.S. Army Corps of Engineers

**Untangling Climate and Wildfire Influences from Snow Measurements on the Deer Park, WA, Snow Course**

E. Drake, Chris DeSisto, Shea McDonald, Shaelee Evans, Dwight Barr, and Bill Baccus

**Bonneville Dam Outflow Forecast**

R. Allerman, Bonneville Power Administration (BPA)

**Site Selection and Installation of Soil Moisture Sensors at Oregon & Washington SNOTEL Sites**

S. Strachan & M. Webb, Oregon NRCS Snow Survey

**Glacier Melt Makes a Significant Contribution to Summertime Upper Hood River Streamflow**

A Nolan and J Phillippe, Oregon State University

**Soil Water Storage and Streamflow Generation from Snowmelt**

M. Seyfried, L. Grant, A. Winstral, D. Marks, and J. McNamara, ARS

4:00 - 4:30

**Embedded Sensor Network Design for Spatial Snowcover**

R. Rice, N. Molotch, and R. Bales - University of California Merced

4:30 – 5:00

**Spatially Distributed Temperatures at the Base of an Alpine Snowpack Measured with Fiber Optic Sensors- Trials and Tribulations**

S. Burak, M. Hausner, S. W. Tyler, University of Nevada, Reno, Nevada

5:00 – 5:30

**Characteristics of SWE to Precipitation Ratios in Utah**

R. P. Julander, Natural Resources Conservation Service

**Wednesday April 16**

8:00 – 1:00

Spouse/Visitor breakfast and train tour

8:00 – 8:30

Poster Paper Setup – Columbia Room

8:30 – 9:00

Announcements – Scott Pattee

**ORAL SESSION III – Working Across Boundaries:**

Garry Schaefer – Session Chair, Columbia Room

9:00 – 9:30

**Forty years of International Cooperation: Columbia River Treaty Hydro meteorological Committee 1968 -2008.**

S. Smith, P. Brooks and N. Stephan, presented by R. Allerman

9:30 – 10:00

**Too Much or Too Little: Sustaining Watersheds and the People who need Them.**

S Lisa Toch, Ph.D., M.P.H. M.A. A Natural Resource: Ecosystem Hydrology, Community Health, Education and Training

10:00 – 10:15

Poster Introductions

10:15 – 11:45

Break: Poster and Vendor Exhibits

**Snow Depth Sensor Performance**

J. Anderson, J. Wirt – NRCS Boise, ID

**Annual Variation of the Snowpack within an Alpine Watershed**

D. M. Hultstrand and S. R. Fassnacht Colorado State University

**The North Olympic Peninsula Solutions Network: Extending NASA Tools beyond the Research Community to Resource Management User Groups**

D. Barry, M. Doherty, J. Ward, M. Wigmosta, J. Sehlke, and C. Rome

**Improving Streamflow Forecasting in a Snow-Dominated Watershed for a NASA Solutions Network and a Resource Management User Group**

M. Wigmosta, J. Ward, K. Gill, A. Coleman, J. Sehlke, R. Hruska, D. Barry, M. Doherty, and C. DeSisto

**Snow Measurement Using Ground-based Tripod LiDAR**

R. Osterhuber, J. Howle, and G. Bawden

**Changing Climate of Idaho: Future Prediction Maps**

B. C. Moore, K.S. Humes, and V.P. Walden, University of Idaho

**The Effects of Deforestation on SWE at Saddle Mountain SNOTEL Site**

W. Davidson, Whitman College

**AgriMet: Automated Weather Observations for Evapotranspiration Modeling**

P. L. Palmer, U.S. Bureau of Reclamation, Pacific Northwest Region

**Taking Measure: Assessing the Representativeness of the NRCS SNOTEL System in the Willamette River Basin**

A Nolan and A. Brown, Oregon State University

**Snowpack Changes in the Central Sierra Affecting Water Supply Forecasts in the Truckee – Carson River Basins.**

J. Lea, Hydrologist, USDA NRCS Portland, OR

11:45 – 1:00 Lunch

**ORAL SESSION IV – Streamflow Forecasting/Modeling:**

Mat Brunengo – Session Chair, Columbia Room

1:00 – 1:30 **Enhancing Stream Forecast Modeling in California Mountain Watersheds**

J. Shupe, NASA Ames Research Center

1:30 – 2:00 **Near-Term Warming Effect on Hetch Hetchy Inflow**

B. McGurk, Hetch Hetchy Water and Power

2:00 – 2:30 **Modeling the Effects of Topographic Shading on Snow-fed Runoff with Warmer Temperatures**

F. Lott, University of Washington

2:30 – 3:00 Break: Exhibits and Vendors

3:00 – 3:30 **NWS Western Water Supply Services Abstract**

K. Werner, National Weather Service

3:30 – 4:00 **Using Diurnal Cycles in Streamflow to Interpret Surface and Subsurface Flow Paths in Mountain Environments**

J. Lundquist, Civil and Environmental Engineering

4:00 – 4:15 Technical Tour Announcements and Special Events at Dinner

4:14 – 5:00 Annual Business Meeting – Randy Julander, Columbia Room

**CONFERENCE BANQUET & AWARDS – Wednesday, April 16, 5:30 pm, Riverview Room**

GUEST SPEAKER – Carol Craig, Public Relations Specialist, Yakama Tribe

The Columbia River and Celilo Falls has been a part of the tribal world since the beginning of time. Although now gone, tribal people gathered last year to commemorate the falls after its inundation 50 years ago. Today tribal people still practice traditional methods of fishing. Come and listen about the river and its people it has sustained over the generations.

**FIELD TOUR – Thursday April 17, 8:00 am – 5:00 pm**

Join us for a bus tour of the Columbia River Gorge, including geologic and historic narration along with an individualized tour of Bonneville Dam.

Learn about the Gorge from geologic creation to pre- white man through discovery, settlement and modern development. Multiple stops will provide scenic and historic opportunities along with a chance to purchase souvenirs and enjoy a complimentary deluxe box lunch with spectacular views of the infamous Multnomah Falls.