

# **3rd Annual Pacific Northwest Climate Science Conference, 1-2 October 2012**

## **Boise Centre, Boise, Idaho**

### **Opening Plenary**

#### **Welcome and Introductions**

*Von P Walden, University of Idaho, Conference Chair*

*David H. Bieter, Mayor of Boise, Idaho*

*M. Duane Nellis, President, University of Idaho*

*Jack McIver, Vice President of Research, University of Idaho*

#### **Climate, Change and Adaptation: Are we learning?**

*Roger Pulwarty, NOAA*

### **Columbia Basin Impacts and Adaptation**

#### **The Columbia River Treaty**

*Barbara Cosens, Law School, University of Idaho*

#### **Projections of climate change extremes in the Canadian Columbia Basin**

*Trevor Murdock, Pacific Climate Impacts Consortium*

#### **Potential Climate Change Impacts and Vulnerabilities to Forest Ecosystems**

*Greg Utzig, Kutenai Nature Investigations Ltd.*

#### **Climate and Economic Impacts on 2030 Water Supply and Demand in the**

*Columbia River Basin, Michael Barber, Washington State University*

#### **Communities adapting to climate change: From dialogue to action in the**

*Canadian Columbia Basin, Ingrid Liepa and Jeff Zukiwsky, Columbia Basin Trust*

### **Climate Variability**

#### **Climate variability of the Pacific Northwest**

*Nick Bond, University of Washington, JISAO*

#### **Projected climate scenarios for the Pacific Northwest (CMIP5)**

*John Abatzoglou, University of Idaho*

### **Vulnerability Assessments**

#### **The Pacific Northwest Climate Change Vulnerability Assessment**

*Michael Case and Joshua Lawler, University of Washington*

#### **Climate change in grasslands, shrublands, and deserts of the interior American West: A review and needs assessment**

*Deborah Finch, U.S. Forest Service, Rocky Mountain Research Station*

## Hydrology

### An Overview of the Columbia Basin Climate Change Scenarios Project

*Alan Hamlet, Climate Impacts Group, University of Washington*

### Mapping hydrologic sensitivities in the Columbia River Basin

*Julie Vano, University of Washington*

### Validation of the VIC model for streamflow metrics on western U.S. streams

*Charles Luce, U.S. Forest Service R&D, Boise*

### Modeling hydrologic uncertainty and agricultural water security in the PNW

*Venkat Sridhar, Boise State University*

### The influence of mountain topography on meteorological and runoff characteristics

*Chris Tennant, Idaho State University*

### Groundwater Control of Summer Stream Temperature in the Pacific Northwest

*Tim Mayer, U.S. Fish and Wildlife Service*

### Inclusion of climate change projections into flood frequency analysis using Bayesian statistics: application to the American and Santiam Rivers

*Kara DiFrancesco, Oregon State University*

### Effects of Climate Change on Hydrology and Water Management in the Skagit River Basin

*Se-Yuen Lee, University of Washington*

### Effects of Projected Twenty-First Century Sea Level Rise, Storm Surge, and River Flooding on Water Levels in Puget Sound Floodplains and Estuaries

*Joseph Hamman, University of Washington*

### Spatio-temporal Modeling of Flood Events over the Columbia River Basin due to Climate Change

*Mohammad Reza Najafi, Portland State University*

## Conservation

### The Northwest Climate Science Center: science, services, and partnerships

*Gustavo Bisbal, Director, Northwest Climate Science Center*

### Prioritizing Landscape Conservation Cooperative Science Needs: Climate as a Critical Driver

*Sean Finn, Great Basin Landscape Conservation Cooperative*

### Assessing Aquatic Ecosystem Responses to Climate Change: Linking Science in Adaptive Management

*Clint Muhlfeld, USGS Northern Rocky Mountain Science Center, University of MT*

### Climate and Upland Ecosystems: Points of sensitivity and adaptation variability in sagebrush steppe viewed from a single species

*Lar Svenson and Matt Germino, USGS, Forest and Rangeland Eco. Science Center*

### Modeling climate change effects on the hydrology of Pacific Northwest wetland ecosystems

*Maureen Ryan, University of Washington*

### Ecological Minimums Required by Greater Sage-grouse: Understanding Fundamental Relationships for Tracking Future Habitat Distributions

*Steven Knick, U.S. Geological Survey*

## Terrestrial

### Indicators of climate change in Idaho: The intersection of biophysical change with social perceptions across a diverse landscape

*Zion Klos, University of Idaho*

### Cheatgrass and dieoff mapping in the Northern Great Basin

*Don Major, U.S. Dept of Interior, Bureau of Land Management - Idaho*

### Assessing climate change impacts on forest management and hydrology: new data, new results

*Guillaume Mauger, Climate Impacts Group, University of Washington*

### Cold Vulnerability in a Warming World: Changes in spring False Starts in the Northwestern US

*Alexander Peterson, University of Idaho*

### Charred Forests Increase Snowmelt: Effects of Soot and Burnt Woody Debris on Snow Albedo

*Anne Nolin, Oregon State University*

## Agriculture

### Overview of Climate Change and Agriculture

*Chad Kruger, Director, Center for Sustaining Agriculture and Natural Resources*

### Panel discussion on Large Agriculture-Climate Research

*Jennifer Adam, Elizabeth Whitefield, Washington State University  
Sanford Eigenbrode, University of Idaho*

## Climate Change Communication

### Review of Climate Change Communications

*David Patte, U.S. Fish and Wildlife Service*

### Climate Communications and Behavior Change - Trends and Opportunities

*Cara Pike, Director, Social Capital Project*

### Communicating Climate Science to Nonscientists and Politicians

*Gwen Griffith, DVM, MS; Cumberland River Compact; Curriculum Director for Climate Solutions University, a program of the Model Forest Policy Program*

### Place-based Climate Change Education

*Jessica Thompson, Northern Michigan University*

### Climate Change Youth Ambassadors

*Aneka Singlaub, North Cascades Institute*

## Aquatics

### Addressing Ecological Resource Impacts in a Changing Climate in the Bureau of Reclamation

*Toni Turner, U.S. Bureau of Reclamation*

### NorWeST: A Stream Temperature Database and Model for All Streams in the Northwestern US

*Dan Isaak, U.S. Forest Service, Boise*

### Observed coastal ocean chlorophyll variability during 1997-2010

*Todd Mitchell, Climate Impacts Group, University of Washington*

### Incorporating Climate Change Vulnerability into a Regional Aquatic Restoration Decision Support Tool

*Jocelyn Tutak, EcoTrust*

## Adaptation

### Influences Of Greenhouse Gas Emission Reduction Options On Water Use In Energy Production: Implications for the Columbia River Basin

*Craig Cooper, Idaho National Laboratory*

### Development of a National Adaptive-Integrated Water Resources Management (A-IWRM) Framework

*Gerald Sehlke, Idaho National Laboratory*

### The Impacts of Climatic and Water Supply Conditions on Agricultural Land Use Decisions in Idaho

*Scott Lowe, Boise State University*

### British Columbia Agriculture Climate Change Adaptation Risk & Opportunity Assessment

*Erica Crawford and Trevor Murdock, BC Ag & Food Climate Action Initiative, PCIC*

### Visualization and Costing of Adaptation to Sea Level Rise in Metro Vancouver

*Tina Neale, BC Ministry of Environment*

## Human Health

### The Health Impacts of Climate Change

*Andrea Hamberg, Oregon Health Authority*

### Extreme heat and health impacts in Oregon

*Mandy Green, Oregon Health Authority*

### Marine Pathogens as Indicators of Global Climate Change

*Richard Lillie, Washington Department of Health*