











JANUARY 25 & 26, 2017 SKAMANIA LODGE STEVENSON, WASHINGTON



EXTENSION

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Center for Sustaining Agriculture & Natural Resources WASHINGTON STATE UNIVERSITY



WEDNESDAY, JANUARY 25 CASCADE A & B

7:00a - 8:30a BREAKFAST & REGISTRATION

8:30a-8:40a WELCOME & INTRODUCTION

Joe Harrison, Washington State University

8:40a – 10:00a MANAGING THE UNCERTAINTIES OF WATER SUPPLY & QUALITY (STAKEHOLDER PANEL) MODERATOR: CHADKRUGER Scott Revell, Roza Irrigation District; Les Perkins, Farmers Conservation Alliance; Kevin Chambers, wine grower, Oregon Wine Association; Jay Gordon, Washington State Dairy Federation; Kat Brigham, Umatilla Tribal Member; Bill Dewey, Taylor Shellfish; Mary Lou Soscia, EPA Water Quality

10:00a - 10:15a **BREAK**

10:15a - 11:00a PARCHED AND DRENCHED: FUTURE CLIMATE AND WATER RESOURCES IN THE PACIFIC NORTHWEST

John Abatzoglou, Associate Professor, University of Idaho Department of Geography

11:00A - 12:00P ADAPTING TO LESS WATER: REGIONAL STORIES OF WATER CONSERVATION

MODERATOR: GABRIELLE ROESCH McNALLY

CASCADE R

Dry Farming Collaborative & Amy Garrett, Oregon State University Extension

Low Elevation Spray Application & Steve Shively, Shivley Custom Farming

The Time is Right to Optimize Your Irrigation System & Jac le Roux, Irrinet, LLC

12:00p - 1:10p LUNCH

1:10P-2:10P REVIEW OF CLIMATE IMPACTS ON WATER MANAGEMENT WITHIN WASHINGTON, OREGON & IDAHO IN RECENT YEARS

Washington & Jeff Marti, Drought Coordinator, Washington State Department of Ecology

Oregon Lanaya Blakely, Oregon Water Resources Department

Idaho & David Hoekema, Hydrologist, Idaho Department of Water Resources

2:10P-2:50P REMOTE SENSING, SATELLITE & SURFACE OBSERVATIONS TO SUPPORT IMPROVEMENTS IN AGRICULTURAL WATER MANAGEMENT

CASCADE A

Forrest Melton, Sr. Research Scientist, NASA Ames Research Center & California State University Monterey Bay

2:50p - 3:10p **BREAK**

3:10P - 4:50P

WATER QUALITY Moderator: Joe Harrison

- 3:10P
 3:30P
 Riparian Proper Functioning Condition and Washington Riparian Service Team Primer ⊥ Tip Hudson
 Use of Poplar for Storm Water Management ⊥ Bob Simmons
- 3:50P Geospatial Analysis and Pesticide Modeling in Oregon PSP Watersheds & Philip Janey
- 4:10P Salmon Populations Under Stress: How Various Stressors, Including Climate Change will Impact Salmon in the Future & John Stark
- 4:30P Invasive Species, Climate Change and Water Quality in the Pacific Northwest & Sharon Collman

 PROJECTED IMPACTS TO CLIMATE CHANGE

 MODERATOR: KIRTI RAJAGOPALAN

 Water in 2035: Water Supply and Demand Forecast for

 the Columbia River Basin ▲ Kirti Rajagopalan

 Timing is Everything: Implications of a Changing

 Hydroclimate for Water Availability, Growing Seasons

 and Irrigation Demand ▲ Margaret Matter

Hood River Water Conservation Strategy: Achieving Long-term Water Resource Reliability for Agriculture and Local Fish Populations & Cindy Thieman

The Double Whammy: Changing Rangeland Uses Interact with Climate to Affect Northwest Waters & Linda Hardesty

Revenue: Eleven Western U.S. States & Ballav Aryal

STEVENSON BALLROOM

6:30P-8:30P RECEPTION & POSTER PRESENTATIONS

See back page for a list of posters presented.

THURSDAY, JANUARY 26 CASCADE A & B

6:30a - 8:00a BREAKFAST & REGISTRATION

- 8:00a 8:45a THE HIRST CASE (WA): AN OPPORTUNITY TO INTEGRATE LAND USE LAW & WATER LAW TO PREPARE FOR CLIMATE CHANGE Jean Melious, J.D., Western Washington University
- 8:45a 9:15a **CLIMATE IMPLICATIONS TO GROUNDWATER SUPPLY IN THE PACIFIC NORTHWEST** Matt Bachmann, USGS Washington Water Science Center
- 9:15a 10:15a Susan Adams, Executive Director, Washington Water Trust; Tom Tebb, Director, Washington State Department of Ecology, Office of the Columbia River; Dan Haller, Aspect Consulting
- 10:15a 10:30a BREAK
- 10:30A 11:10A FOOD FOR THOUGHT: IMPACTS OF CLIMATE CHANGE FOR AGRICULTURE IN THE COLUMBIA RIVER BASIN Mike Brady, Washington State University School of Economics; Kirti Rajagopalan, Washington State University Center for Sustainable Agriculture and Natural Resources

11:10A - 12:15P KEEPING UP WITH RESEARCH AND EXTENSION EFFORTS IN THE PACIFIC NORTHWEST

MODERATOR: JOE HARRISON

National Water and Climate Center & Mike Strobel, Director

Northwest Climate Hub & Bea Van Horne, Director

NIDIS Drought Early Warning System & John Stevenson, PNW Climate Impacts Research Consortium (CIRC)

Center for Sustainable Agriculture & Natural Resources/NW WA Research & Extension Center & Chad Kruger, Director

University of Idaho Extension & Jim Ekins, Area Water Educator

Northwest Climate Toolbox & John Abatzoglou, Associate Professor, University of Idaho Department of Geology

12:15p - 1:20p LUNCH

1:20P-2:00P DROUGHT IMPACTS: TURNING EXPERIENCE INTO DATA

Kelly Smith, Communication Coordinator, National Drought Mitigation Center

2:00P-2:30P 2015 POST DROUGHT ASSESSMENT

Gary Bahr, Natural Resources Assessment Manager, Washington State Department of Agriculture

2:30p - 2:50p	BREAK			
		CASCADE A	CASCADE B	WASHINGTON RIPARIAN TEAM
2:50p — 4:30p	WATER EFFICIENCY & O Moderator: Troy Peters	CONSERVATION	REGIONAL WATER MANAGEMENT Moderator: Amy garrett	INTEREST WORKSHOP Moderator: TIP Hudson
2:50p	On Farm Opportunities for Water & Energy Conservation & Fred Vosper Low Elevation Precision Application (LEPA) and Low Elevation Spray Application (LESA) in the PNW & Dick Stroh Water Conservation Opportunities through Low Elevation Spray Application & Troy Peters Opportunities for Funding Water & Energy Conservation & Robert Wallace Applicability of Low Altitude Multispectral Sensing Toward Crop- and Site-Specific Application of LESA & Abid Sarwar Advancing Drought Monitoring Using a Small Unmanned Aerial System for Irrigated Agriculture & Jae Ryu		Can Biochar Conserve Water in Pacific Northwest Soils? & Claire Phillips	 this transition of the mathematic potential future washington Riparian Team members with the objectives of the team, opportunities to receive training, and fundamentals of the nationally recognized PFC assessment process. State service teams, operating under the Creeks and Communities Network, use Riparian Proper Functioning Condition (PFC) as a communication tool to organize diverse groups around a common goal for a stream system by focusing on physical function of streams. Members of the Washington Riparian Team will serve as a pool of trained individuals from a variety of natural resourced isciplinary teams to conduct formal PFC assessments and communicate with local problem-solving groups and agencies.
3:10p			Upper Snake River Tribes Foundation	
3:30p			Agriculture Resilience Planning Cindy Dittbrenner	
3:50p			Evaluating Landscape Ornamentals for Un-irrigated Landscapes in Western Oregon & Neil Bell	
4:10p			Community Learning & Water Resources Improvements & Jim Ekins	
4:30p			Performance of Porous Pavements Under Controlled Conditions in Western WA & Ani Jayakaran	

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POSTER PRESENTATIONS STEVENSON BALLROOM

DAN BERNE

EMPOWERING PRECISION IRRIGATION WITH DATA

LAUREN BURNS

MANAGING STREET TREE Canopy and composition As a means to reduce URBAN Air and Runoff temperatures In Portland, oregon

NANNETTE HUBER

ASSESSMENT OF NON-POINT SOURCE PHOSPHORUS POLLUTION POTENTIAL IN THE INCREASINGLY URBANIZED PUGET SOUND REGION

CHRISSY LUCAS

REDUCING EXPOSURE TO ENVIRONMENTAL HAZARDS BY PROMOTING DOMESTIC WELL WATER SAFETY

CHAD KRUGER

FARMER TO FARMER: Multimedia case studies to increase resilience among Farmers in the pacific northwest

MARGARET MATTER

TIMING IS EVERYTHING: Implications of changing Hydroclimate for water Availability, growing seasons And irrigation demand

SHANNON NEIBURGS

CLIMATE CHANGE EFFECTS ON GRAZING MANAGEMENT AND BEEF CATTLE PRODUCTION IN THE PACIFIC NORTHWEST DON MCMORAN WSU WISE

BROOKE SAARI

AGCLIMATE.NET – A NEW MODEL FOR CLIMATE Change extension

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