

# FIRE SCIENCE WORKSHOP

## Understanding the Effects of Fire on Aquatic Eco-systems

brought to you by the  
Columbia Basin  
Federal Caucus  
& Ecotrust  
MAY 13, 2015 / PORTLAND, OREGON

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**8:30 am** / Introductions and Opening Remarks

Mary Lou Soscia, EPA (Federal Caucus Chair)  
Our Hosts, Ecotrust  
Linda Ulmer (USFS)

### MORNING SESSION – STATE OF THE SCIENCE:

**HOW FISHERIES ARE AFFECTED BY BURNS AND HOW THEY RECOVER; IMPLICATIONS TO AQUATIC ECO-SYSTEMS, GEOMORPHIC PROCESSES, AND FISH / ARE BURNS GOOD OR BAD FOR FISH AND AQUATIC HABITAT?**

How do anadromous and resident fish respond to fire?

Jason Dunham (USGS)

How do fires affect the way sediment and wood are conveyed to small and large order streams?

John Buffington (USFS)

How are aquatic food webs affected by fire and what are the implications to cold water fisheries?

Colden Baxter (Idaho State University)

**10:15 am** / Break

“State of Fire Science,” including existing knowledge gaps, research needs, and constraints on research

Panel Session  
Dunham / Buffington / Baxter

### MID-DAY SESSION –

**WHAT INSTREAM AND UPLAND MEASURES CAN BE TAKEN TO PROVIDE FORTIFICATION TO STREAM ECOSYSTEMS IN THE CONTEXT OF WILDFIRES?**

Setting priorities for restoration. Which fish are at risk? Where can restoration help fish populations? What kinds of restoration are most helpful?

Charlie Luce (USFS)

**11:45 am** / Lunch (please enjoy one of the nearby eateries / list provided)

In-stream restoration and fish passage: a wildfire perspective.

Helen Neville (Trout Unlimited)

Riparian and wetland restoration in the context of fires

Kate Dwire (USFS)

Uplands/landscape restoration in the context of fires

Paul Hessburg (USFS)

**2:30 pm** / Break

“Stream Ecosystem Fortification and Restoration,” including constraints on restoration and restoration research needs

Panel Session  
Luce / Neville / Dwire / Hessburg

### AFTERNOON SESSION –

**HOW IS USFS LAND BEING MANAGED FOR FIRE REGIMES? HOW MIGHT MANAGEMENT REGIMES CHANGE IN LIGHT OF FUTURE CLIMATE CONDITIONS?**

A Fire Management Perspective

David Summer (USFS)

Q & A

Summer / Luce / Dunham

Workshop nexus with Federal Caucus working group on Resilient Salmonid Habitat

John Barco (BPA)

Acknowledgements, reflections, and next steps

Greg Fuhrer (USFS)

**4:30 pm** / Adjourn

Thank you for your interest in our Fire Science Workshop. This topic is of importance to the Columbia River Federal Caucus (<https://www.salmonrecovery.gov/Home.aspx>) and to other entities with fire management responsibilities in our Region. Last November the Caucus had a successful workshop on the impacts to cold water fisheries by warmer stream temperatures and climate change. The Fire Science workshop will easily garner a similar degree of interest among the Caucus, its staff, and furthermore will have some common threads owing to the role of climate in both wildfires and stream temperature. Because fire knows no boundaries, the Caucus wishes to open the Fire Science workshop to include selected State and Tribal staff. In order to accommodate all who wish to attend, we have partnered with Ecotrust and Ecotrust Forest Management. These co-sponsors have made it possible to reserve a 150-seat venue in the Natural Capital Center (also known as the Ecotrust Building).

Over the past century, fire exclusion in the Pacific Northwest has resulted in large, contiguous forested landscapes with high fire hazard and risk. In these situations, landscapes are more homogenous compared to their historical analog (see attachment 1). Today's forest is made up of many small patches of dense young forests and a reduced number of old forest patches. These vegetation communities are now connected and are at the greatest risk for high severity fires. Climate change will only exacerbate this risk.

Our Federal Caucus is interested in understanding how these high risk upslope watersheds and the aquatic life they support will be affected by wild fires. Because many Caucus partners have fishery management responsibilities, which include management of aquatic habitats, an increased understanding of fire science will help inform future management decisions. A common question faced by Caucus managers is how to apply the current state of Fire Science to the selection and design of restoration actions in tributary streams to promote long-term resiliency. Presently, Federal and State agencies, in partnership with Columbia River Basin Tribes and the Northwest Power and Conservation Council, are implementing large tributary habitat restoration projects in the support of recovery of ESA-listed salmonids (salmon, steelhead, bull trout). Understanding the role of fire in determining the success of this restoration is critical to the long-term success of these investments and fisheries in general in the Pacific Northwest.

We hope this gives you some perspective as you consider registering for this unique event. Our planning team anticipates sharing a few read ahead materials with the Caucus and invited guests.

Kindly RSVP by May 4 to [nancy.schifferdecker@noaa.gov](mailto:nancy.schifferdecker@noaa.gov) / 503.201.0345  
Webinar services will be made available.

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