

A sincere thank you to the United State Fish and Wildlife Service, in particular the Yreka Staff, and the Bella Vista Foundation. Without your continued support and dedication to the work in the Scott River Watershed, this event, along with countless other important endeavors, would not be possible.

Sincerely,

*Scott River Watershed Council  
Board of Directors and Staff*



**Bella Vista  
FOUNDATION**



# Scott Watershed Informational Forum (SWIF) 2019



514 North Hwy. 3, Etna, CA  
[www.ScottRiverWatershedCouncil.com](http://www.ScottRiverWatershedCouncil.com)

Scott River Watershed Council is pleased to host the annual Scott River Watershed Forum (SWIF), our community's opportunity to hear a wide variety of local, regional and national experts address topics affecting our local ecosystem and economy. Scott Valley can feel isolated and protected from the larger world, but the complex and challenging times we live in do not leave us unaffected. There are opportunities and challenges ahead, and the SWIF is designed to bring information and opinions from many professions and points of view to inform the decisions that must be made. We welcome our neighbors from the Klamath Basin, and the wider region, to join the event and discussion, as a river and ecosystem connects us all into one larger community. As we will learn in this year's Forum, mega-fires anywhere, and polar ice melting, have direct impacts on Scott River Watershed. We will also hear how local efforts can provide climate change resiliency not only for our local landscape, species, and people, but also for species that move across many regions.

We would like to give a special thanks to Lorrie Bundy for her service today as moderator, and Ruth D'Amico for her assistance and support for this year's event. Additionally, thank you for joining us, we appreciate your participation. Any feedback you offer us is more than welcome.

9:15am



### *Preserving Water Quality through Working Landscapes*

Lindsay Magranet, Siskiyou Resource Conservation District

The Siskiyou RCD has spent multiple decades working with the community to protect water quality of the Scott River and its tributaries by restoring the riparian corridor and facilitating sound agricultural practices. This presentation will cover riparian revegetation plans, methods, maintenance and monitoring. The Siskiyou RCD is pleased to share the successes and challenges associated with this work as well as offer opportunities for involvement.

Lindsay has been working for the Siskiyou RCD since 2013, beginning with field duties and advancing into project development and administration. As a field technician, she completed stream habitat inventories, direct observation fisheries surveys, water quality assessments, and is experienced in the management of flow gaging stations. As the Acting District Manager, Lindsay performs grant management and environmental compliance processes, and is responsible for special district administrative operations. She is pleased to be able to assist landowners with voluntary property improvements and appreciates the opportunity to work within such productive stream ecosystems. Lindsay received a Bachelors of Science in Environmental Chemistry from the University of California, Santa Cruz, and in her free time can be found exploring the Klamath Mountains with her shepherd, Shadow.



9:45am

### ***Forest Health/Fuels Reduction Implementation***

Larry Alexander; Director Northern California Resource Center

Forest resiliency needs, obstacles to effective project implementation, status of current Forest Health/Fuels Reduction Implementation activities and processes.

Larry Alexander is a Biologist/Hydrologist with over 30 years of experience in Watershed Restoration and Wildland Fire.



10:45am



### ***Quartz Valley Indian Reservation Environmental Program Overview*** Crystal Robinson- Environmental Director, Quartz Valley Indian Reservation

This presentation will focus on the work at the Quartz Valley Indian Reservation Environmental Program. An overview of the Tribe's various programs, partners and outcomes will be provided.

Crystal Robinson is a biologist who has been working in the Klamath Basin since 2001. Her work focuses on water quality, with respect to salmonids and public health. She sits as an appointed Northern California Tribal representative for the US EPA Region 9, the Tribal Advisory Committee of the Cal EPA and as the tribal representative on the Scott Groundwater Advisory Committee. She is also the funding administrator for the Klamath Basin Tribal Water Quality Consortium, which is made up of the five Tribes below the Klamath dams. She is most passionate about the wilderness which is what brought her to Scott Valley.

11:15am

UC DAVIS



***The effects of Beaver Dam Analogues on physical habitat and food webs in the French Creek watershed.***

Robert Lusardi and Erich Yokel

Beaver dam analogues (BDAs) may be a valuable tool to improve juvenile fish rearing habitat, particularly in aquatic ecosystems exhibiting disconnections between surface flow and groundwater or from floodplains. Yet, we know little about how BDAs affect stream ecosystem structure and function. We collected physical and biological data prior to and after several BDAs were installed on French Creek side channels during 2017 and 2018.

Specifically, we quantified the effects of BDAs on wetted habitat area, temperature, water surface elevation, and food webs, including benthic and pelagic invertebrates, and compared to a control reach. Results suggest strong shifts in both physical and biological habitat with implications for rearing fishes.

Dr. Lusardi is an aquatic research ecologist and applied conservation biologist at the Center for Watershed Sciences at University of California, Davis and is the California Trout-UC Davis Wild and Coldwater Fish Scientist. Rob is broadly interested in stream ecology and food web dynamics of rivers throughout California and their role in shaping salmonid response.

Erich has over twenty years experience in the natural resource profession in Western Siskiyou County with an emphasis on the Scott River, water quality, stream condition and coho salmon. Erich strives to utilize the principles of conservation to protect, enhance, restore and study the natural resources of the Scott River Watershed.

12:30pm



***Beavers, Landowners, and Watershed Restoration in the Scott River Basin, California***

Susan Charnley, Research Social Scientist, US Forest Service, Pacific Northwest Research Station, Portland, OR.

The Scott River basin is the first place in California where watershed restoration using beaver dam analogues (BDAs) has occurred. The project takes place in streams running through private lands where threatened coho salmon spawn and rear. Most private landowners involved are ranchers who grow hay. They have largely positive views of beavers and beaver dams, so long as they don't interfere with irrigation infrastructure. Research results indicate that BDAs are benefitting both landowners and fish. Lessons learned in the Scott Valley about the regulatory process for implementing BDAs and working with private landowners can be applied elsewhere in California.

Susan Charnley is an environmental anthropologist whose research investigates how best to achieve the dual goals of environmental conservation and rural community well-being in the western USA and in Africa. She works with both forest and ranching communities.

1:00pm



### ***Dam Removal Update and what it means to the Scott and Shasta Rivers***

Dave Meurer, Community Liaison for the Klamath River Renewal Corporation

The Klamath River Renewal Corporation (KRRC) is a private, independent nonprofit 501(c)(3) organization formed by signatories of the amended Klamath Hydroelectric Settlement Agreement (KHSA). Twenty three signatories, including the States of California and Oregon, local governments, Tribal nations, dam owner PacifiCorp, and several conservation and fishing groups, appointed KRRC to take ownership and oversee the removal of four hydroelectric dams on the river. KRRC's work is funded by PacifiCorp customer surcharges and California Proposition 1 water bond funds. Key project goals: return the river to a free flowing condition, remove fish passage barriers, improve water quality and bolster healthy fisheries.

Dave Meurer brings extensive experience working with Siskiyou County residents on a variety of complex natural resource issues. He has worked for decades with local governments, tribal and farm interests, rural communities and state and federal agencies. Prior to joining KRRC, Dave was the District Representative for Senator Ted Gaines (R-El Dorado Hills), and served as Deputy District Director for former Congressman Wally Herger (R-CA2). In these roles, he has spent years listening, engaging, seeking to understand various perspectives, and forging relationships in the Klamath Basin. Dave holds a Bachelor of Arts Degree from California State University, Chico in Political Science and Information & Communication Studies. This is a fancy way of saying he was bad at math.

1:45pm



### ***Restoring Ecological Function to Montane Meadows***

Karen Pope – Research Aquatic Ecologist,  
US Forest Service Pacific Southwest Research Station.

The pace and scale of meadow restoration is increasing in the mountains of California. And for good reason: intensive land uses have transformed many meadows from complex, biodiversity hotspots into simple, incised channels that store less water and have reduced habitat quality. I will summarize the state of California's mountain meadows, discuss restoration practices, and highlight the value of using ecologically-based restoration approaches. The overarching goal of ecological restoration is to recover self-sustaining ecological systems, including the organisms, and dynamic processes that support them. I will use montane amphibians to demonstrate how understanding the complex relationships between obligate species and meadow processes can provide insight into meadow restoration design.

Karen's research program aims to address questions to improve aquatic habitat restoration of lakes, streams and wet meadows in the mountains of northern California. She also specializes in applied research directed toward the conservation of montane amphibians.



2:30pm



***Climate Change, Reduced Arctic Ice, the Altered Pacific Jet Stream and the California Wildfire Season: Coincidence?***

Basil Newmerzhycky - BLM, Predictive Program Manager

The effects of climate change are examined in regard to its impact on the Northern California fire season. Specifically, the teleconnection between reduced Arctic sea ice and resulting changes in the upper level jet-stream pattern was found to produce strong, persistent high pressure ridge off the West Coast of the United States. Not only did this upper air pattern produce significant precipitation deficits and record drought across the region, but it also produced more critical and longer lasting dry wind events across Northern California, during the late fall and early winter months in recent years, thus extending the length of the typical fire season by several weeks. The large, damaging late season fires of recent years across Northern California are directly related to this. There are also implications for long term water management with this climatic change.

3:30pm

***Living in an Era of Megafires***

Paul Hessburg, Research Landscape Ecologist, USDA-FS, PNW Research Station, Wenatchee, Washington

Across the western US, terrestrial and aquatic landscapes are fundamentally transformed after 150 years of intensive development and management. Important changes to fish and wildlife habitat abundance and connectivity, stream water temperature and flow regimes, and disturbance regimes are broadly evident, and forest area and density have dramatically increased--feeding the rise of highly destructive wildfires. I discuss how we got here and opportunities we have to do something about it.

Paul is a landscape ecologist who explores landscape pattern and process linkages. He studies fundamental differences in early 20<sup>th</sup> and 21<sup>st</sup> century landscapes, and how changes in forest structure and composition--along with changes in the climate and lifeform patterns--drive wildfire and insect outbreak size and severity, changes in habitat conditions, and overall functionality of the affected landscapes.

