



SCOTT RIVER
WATERSHED COUNCIL



Scott Watershed Informational Forum SWIF 2020

February 20, 2020

www.ScottRiverWatershedCouncil.com



Scott River Watershed Council is proud to host the annual Scott Watershed Informational 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 these complex and challenging times do not leave us unaffected.

SWIF is designed to bring information and opinions from many professions and points of view to inform the decisions that must be made. Fostering a collective understanding about the issues facing our watershed and greater Klamath River basin remains of the utmost importance, as our river and ecosystem connects us all into one larger community.

Today's event is focused on the various local efforts underway throughout the watershed and across the state which can provide climate change resiliency in our changing times not only for our local landscape, people and rich biodiverse species, but also for species that move across many regions.

We would like to give a special thanks to Freda Walker, Scott Valley community member, for her service today as moderator. The amazing photos featured in today's program were taken by our very own and talented Mel Fechter.

We would also like to thank the community donors who find SWIF an invaluable opportunity for our community and have financially contributed to this event.

Larry and Peggy Alexander (SRWC Board Member)
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 Michael and Lynn Thamer
 Matt Thomas (SRWC Board Member)
 Craig and Jen Thompson (SRWC Board Member)
 Bob Walker and Freda Wagner
 Erich and Danielle Yokel

Collectively we thank everyone who joined us today!

AGENDA

- 8:30-8:50am Check in and order lunch
- 8:50-9:00am Welcoming Statement – Moderator Freda Walker
- 9:00-9:20am Northern California Resource Center, Larry Alexander and Scott River Watershed Council, Charnna Gilmore: Scott River Tailings Reach, A Historic View on Present-Day Challenges and Opportunities
- 9:20-9:40am Southern Oregon University and Scott River Watershed Council, Taylor Owens, Emily Stavneak and Erich Yokel: The Effectiveness of Anthropogenic Logjams as A Restorative Method for Coho Salmon Habitat in Patterson Creek
- 9:40-10:00am EFM, Darrin Stringer: What’s Happening in the Scott River Headwaters
- 10:00-10:15am Break
- 10:15-10:45am Pacific Forest Trust, Jill Harris: Pacific Forest Trust’s Healthy Watersheds California Project
- 10:45-11:15pm University of California Cooperative Extension, Lenya Quinn-Davidson and Jeff Stackhouse: Development of a Siskiyou County Prescribed Burn Association
- 11:15-11:45pm California Deer Association, Dale MacDougall: Blacktail Deer -Watershed Heath, habitat restoration, and the role it plays in wildlife population recovery
- 11:45am-12:15pm Lunch
- 12:15-12:30pm Siskiyou County, Matt Parker: Scott Valley Sustainable Groundwater Management Act (SGMA) – Update
- 12:30-12:50pm River Design Group, Scott Wright: The World’s Largest Dam Removal Project: Klamath River Update
- 12:50-1:10pm Becky Hyde, Ranching and Land Stewardship in the Klamath River Basin in the Era of Dam Removal
- 1:10-1:40pm University of Washington, Cleo Woelfle-Erskine: Landscape ecology in salmon recovery planning: mapping water quality and flow patterns on French and Shackleford Creeks
- 1:40-2:10pm Smith River Alliance, Marisa Parish Hansen: Beaver bank lodge use, distribution and influence on Salmonid rearing habitats
- 2:10-2:30pm Scott River Watershed Council, Erich Yokel: Fisheries response to restoration activities over the past five years within the Scott River watershed
- 2:30-2:45pm Break
- 2:45-3:15pm California Department of Fish and Wildlife, Morgan Knechtle: Status and Trends of Adult Chinook Salmon and Coho Salmon in the Scott River
- 3:15-4:00pm Occidental Arts and Ecology, Brock Dolman and Kate Lundquist: Beaver in California: Creating a Culture of Stewardship
- 4:00-4:30pm Happy Half Hour
- 4:30-5:45pm Beaver Believers Film and Q&A with the filmmaker, Sarah Koenigsberg



Scott River Tailings Reach: A Historic View on Present-Day Challenges and Opportunities

Northern California Resource Center, Larry Alexander and
Scott River Watershed Council, Charnna Gilmore

During their joint session, Larry and Charnna will share a historical perspective of the Scott River tailings reach and the challenges and opportunities for restoration efforts in the future. The degree of anthropogenic impacts have perplexed landowners, agencies, restoration practitioners and engineers for many years. Larry will talk about some of the work that has been done on a section of the reach and Charnna will share opportunities for restoration that are being taken by the Scott River Watershed Council and their partners.

Larry Alexander is a Biologist/Hydrologist with over 30 years of experience in Watershed Restoration and Wildland Fire and is the owner of the REC and Northern California Resource Center.

Charnna Gilmore has been with the Scott River Watershed Council since 2007 and was hired as the Executive Director 2014. Charnna's life passions are around youth, community, and the natural world. As director of the SRWC, she is inspired daily to find ways of bringing these three passions together.

The Effectiveness of Anthropogenic Logjams as A Restorative Method for Coho Salmon Habitat in Patterson Creek

Southern Oregon University – Emily Stavneak and Taylor Owen

Patterson Creek, a tributary to the Scott River in Northern California, has been identified as a high priority stream for endangered Coho Salmon spawning and rearing habitat rehabilitation efforts. In October 2018, the Scott River Watershed Council introduced instream woody debris structures to Patterson Creek in order to enhance the suitability of streambed substrates for Coho Salmon spawning and pools for juvenile rearing habitat. Our research quantifies Patterson Creek's current discharge, water temperature, streambed substrate composition, pool frequency and quality, and vegetative coverage with the intention of establishing a protocol for monitoring the continued effects of the instream woody debris structures on Coho Salmon habitat in the creek. Additionally, we assess whether there is a statistically significant association between suitable substrate composition and proximity to instream woody debris in the creek.

Emily Stavneak is a native Iowan who thoroughly enjoys extending her love for the natural world throughout a variety of landscapes. Her conservationism answers a call to action from culturally-significant species whose quality of life is threatened by human neglect. She intends to be an active steward for the land through engaging in restoration efforts, educating herself and her community, and enhancing the symbiosis between the natural world and her personal life. Emily will graduate from Southern Oregon University as an Environmental Science and Policy major with a minor in Biology. She aspires to work and play within coastal ecosystems.

Taylor Owen is a Fall 2019 graduate of Southern Oregon University. She recently completed her Bachelor of Science degree, majoring in Environmental Science and Policy and minoring in Communication Studies. Since May 2nd, 2019, she and Emily Stavneak have been working in partnership with the SRWC conducting capstone monitoring field work on Patterson Creek. Moving forward, Taylor hopes to continue her work with natural resources and restoration monitoring.

What's Happening on the Scott River Headwaters

EFM, Darin Stringer

EFM's forester, Darin Stringer will share management plans and accomplishments on the Scott River Headwaters property. This 40,000 acre tract was purchased in 2017 by EFM. Work includes reducing fire risk on the property and surrounding community, enhancing meadow, aspen and riparian habitats and reforesting burned lands.

Darin Stringer has been Senior Forester for EFM since 2016. He has worked in the Pacific Northwest and beyond as a consultant to develop innovative forest management systems for clients ranging from local land trusts to the U.S Forest Service International Programs. Darin has an M.S. in Forest Ecology and Silviculture from Oregon State University. Recently he has served as an advisor to a US AID funded project to restore the cedars of Lebanon.



Pacific Forest Trust's Healthy Watersheds California Project

Pacific Forest Trust, Jill Harris

Pacific Forest Trust is a nonprofit working lands conservation organization that started in 1993 – headquarters are in the Presidio of San Francisco with offices in Sacramento, Portland, and now Mt. Shasta. The organization's primary focus has been to establish working forest conservation easements on private forestlands in Northern California, Oregon and Washington. Healthy Watersheds California is an innovative and unique approach to permanently safeguard our water and increase supplies by restoring and securing California's primary watersheds.

Ms. Harris has over 20 years of experience working in rural communities in Northern California. Her work includes both private and nonprofit industry with roles in economic development, grant program management, and public relations. Jill holds a B.S. in Agricultural Economics from the University of California, Davis. Jill, husband Chris, and daughters Jayne and Nora live in Yreka.

Humboldt County PBA: bringing fire back to the people

University of California Cooperative Extension, Lenya N Quinn-Davidson and Jeffery Stackhouse

Two years ago, community members in Humboldt County formed the first prescribed burn association in the West. Unlike most prescribed fire programs in California, which are led by federal and state agencies, the Humboldt County Prescribed Burn Association is a grassroots, community-led model that focuses on bringing fire back to the people. The inclusive approach allows all people, regardless of experience, to train and burn together. The Humboldt County PBA has burned more than 1,000 acres since 2017, addressing a wide variety of ecological objectives, including fuels reduction, prairie and woodland restoration, and invasive species control. Other counties are following their example, and six more PBAs have formed across California in the last year. This presentation will describe the model in Humboldt County, and share the ways that the Humboldt model can be adapted to fit the needs and opportunities in other parts of the West.

Jeff Stackhouse at University of California Cooperative Extension, Humboldt and Del Norte Counties, Eureka, CA; Livestock and Natural Resources Advisor; California Certified Rangeland Manager #113. Stackhouse is a wildlife biologist and range ecologist with research experience in a wide variety of habitats, from North Dakota to California. His current research program focusses on woody encroachment of coastal prairies and finding economically viable options for resetting late seral habitats to promote biodiversity and early seral beneficial forage plant species for livestock and wildlife.

Lenya N. Quinn-Davidson, University of California Cooperative Extension, Humboldt, Mendocino, Siskiyou, and Trinity Counties, Eureka, CA; Area Fire Advisor. Quinn-Davidson has a background in fire ecology and social science and is interested in the effects of fire suppression on biodiversity in California's fire-adapted ecosystems and in empowering Californians to bring fire back into the land management toolbox.



Blacktail Deer -Watershed Health, habitat restoration, and the role it plays in wildlife population recovery

California Deer Association, Dale MacDougall

Blacktail deer are an indicator species to many aspects of watershed health. This presentation will focus on the California Deer Association's effort throughout the state to assist with project implementation that affect the health of deer and other upland species. Dale will share what actions could be taken by the Scott Valley community to help recover the struggling deer populations.

Dale MacDougall is a State Wildlife Project Director for the California Deer Association. With over 30 years' experience in consulting and various habitat restoration projects including meadow restoration, spring development, conifer encroachment removal, riparian restoration and protection, soil stabilization, erosion control, seeding, logging, wildlife property management, working with various governmental agencies including local, state, and federal.

Scott Valley Sustainable Groundwater Management Update

Siskiyou County, Matt Parker

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package, composed of AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley), collectively known as the Sustainable Groundwater Management Act (SGMA). For the first time in its history, California has a framework for sustainable, groundwater management - "management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results."

SGMA requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, basins should reach sustainability within 20 years of implementing their sustainability plans. Siskiyou County has started the process, ensuring SGMA is a locally driven public process. The Siskiyou County Flood Control and Water Conservation District is the GSA for three medium priority basins; Butte, Scott and Shasta Valley. Advisory committees made up of varying water interests have been established for each basin, which will provide the District Board local expertise and experience.

Klamath River Renewal Project Update Removal of 4 dams on Klamath River

River Design Group, Inc., Scott Wright, PE, PMP Principal / Water Resources Engineer

The Klamath River Renewal Corporation (KRRC) was formed in 2016 with the primary purpose to remove four dams on the Klamath River: JC Boyle, Copco 1, Copco 2 and Iron Gate. KRRC is part of a collaborative effort to re-establish the natural vitality of the Klamath River to support all communities in the basin. This presentation covers the timeline and status of dam removal on the Klamath River. An overview of the significant events leading to the current status will be discussed along with next steps to facilitate this monumental task of restoring the Klamath River.

Scott Wright is a principal at River Design Group and has over 26 years of private and public sector water resources experience. Scott has been the engineer of record and project manager for hundreds of river restoration, fish passage, and dam removal projects throughout the Pacific Northwest. Scott's skills include planning, field assessment, restoration design, design-build management, and comprehensive project management. His focus areas include dam removal, fish passage, large-scale in-stream structures, and river structures. Scott served as the project manager for the design-build team that removed the Gold Ray Dam and Gold Hill Dam on the Rogue River. Scott's comprehensive knowledge of construction techniques, permitting, and water resources design provide exceptional solutions to complex problems with multiple stakeholders. Scott was awarded the "Spirit of the Oregon Plan" from the Oregon Watershed and Enhancement Board for his steadfast dedication to watershed restoration. He is currently working on the Klamath Dam Removals, the largest dam removal project in the United States.

Ranching and Land Stewardship in the Klamath River Basin in the Era of Dam Removal

Becky Hatfield-Hyde - Yainix Ranch

Becky ranches, writes and consults from Beatty, Paisley & Brothers Oregon. She's spent the past 20 years focused on water settlement in the Klamath Basin's rural land-based communities, working with Tribes, NGO's, elected officials and the agricultural community to try to find new ground in a place with a tough history and a great deal of environmental degradation primarily from changes made over 100 years ago related to logging, dam building, reclamation for agriculture, flood control, and mining.

Becky supported dam removal long before it was popular in the agricultural community. She helped design the first Tribal water settlement in the Upper Basin on the family's Yamsi ranch. In 2001, with the help of many partners, Taylor & Becky Hyde purchased the Yainix ranch, and set to work restoring the river. The ranch is apparently the only ranch in the United States where an Indian Tribe—the Klamath Tribes holds an easement on private ranch land. The Hyde family has partnered with the Klamath Tribes on restoring this ranch.

Landscape ecology in salmon recovery planning: mapping water quality and flow patterns on French and Shackleford Creeks, Scott River Watershed

University of Washington, Cleo Woelfle- Erskine

What restoration strategies will offer the greatest benefit to aquatic communities and adaptation to changing flow regimes while meshing with current land use? After a habitat enhancement project, what monitoring and data analysis should be conducted to understand how projects affect water temperature, water quality, habitat, and salmonid potential? Working collaboratively with SRWC, QVIR, Karuk Fisheries, and MKWC, we designed and conducted habitat and water quality surveys in four mid-Klamath tributaries (French, Sugar, Shackleford, and Horse creeks), in restored and unrestored stream reaches, BDAs, and off-channel ponds. We also assessed beaver intrinsic potential within the Scott Valley and analyzed the influence of elevation on stream temperature at gauges throughout the Scott Basin during wet, average, and drought years to understand how shifts to earlier snowmelt and spring runoff might change summer stream temperatures. Here we present preliminary results and discuss how they can be used to further develop our partners' restoration planning processes and other initiatives in the region.

Cleo Woelfle- Erskine is a professor at University of Washington, Seattle who studies streamflow recovery and salmon habitat in collaboration with SRWC, QVIR, MKWC, and the Karuk Tribe. He is presenting data that his students collected in collaboration with these groups during a 2019 field course.

Beaver Bank lodge use, distribution, and influence on salmonid rearing habitat

Marisa Parish Hanson, CA State Parks

A lack of productive non-natal rearing habitat limits the survival and recovery of threatened Coho Salmon (*Oncorhynchus kisutch*) population in the Smith River, CA. North American beavers (*Castor canadensis*) have been shown to provide beneficial rearing habitat for juvenile salmonids, largely through their dam construction and maintenance activity. In the Smith River, the beaver population almost wholly utilizes bank lodges, rarely creates dams, and has a distribution that almost entirely overlaps with the Coho Salmon distribution. Surveys were conducted in 2014-15 across the Smith River coastal plain with two objectives: (1) to assess beaver distribution and bank lodge site selection, and (2) evaluate the influence of habitat variables, including beaver created habitat, on Coho Salmon occupancy in non-natal rearing habitats during both the summer and winter months. Beaver distribution was found to vary seasonally, with bank lodges located in areas with steep banks and the presence of a hydrologic control. Volume of cover created by beaver was found to positively influence Coho Salmon occupancy, particularly in the summer months. These data suggest that beaver enhance juvenile Coho Salmon rearing habitat, even where beavers are unable to create channel spanning dams.

Marisa recently began working with CA State Parks North Coast Redwood District as their aquatic coordinator and continues to work with the Smith River Alliance as the Restoration Program Director. In both roles she collaborates with landowners and public trust agencies to develop, fund, and advance watershed restoration projects. Marisa received a M.S. in Natural Resources with a focus in Wildlife Management from Humboldt State University in 2016 and a B.S. in Biological Sciences from Colorado Mesa University in 2007.

Fisheries response to restoration activities over the past five years within the Scott River watershed

Scott River Watershed Council, Erich Yokel

The Scott River Watershed Council has performed anadromous fisheries monitoring in conjunction with stream restoration since the first Beaver Dam Analogue (BDA) structures were installed in 2014. Intensive studies of juvenile Coho Salmon using mark and recapture with PIT tags and passive detection using PIT arrays have been performed in the BDA treated reach of Sugar Creek and a control reach in French Creek since 2016. The sampling and passive detection efforts have been used to study fish condition, movement, survival and estimate populations in reaches with and without habitat enhancement projects. The scope of the fish monitoring has expanded as additional habitat restoration projects are implemented, including BDAs in Miners Creek and a side channel in Mid French Creek and a constructed side channel in Mid French Creek. Past and current research includes multiple collaborative efforts with NOAA Fisheries researchers, Humboldt State University professors and graduate students and UC – Davis researchers to better understand the population of Coho Salmon, habitat characteristics and the stream ecosystem in restored and control reaches.

Erich Yokel has over twenty years' experience working in Western Siskiyou County in the natural resource profession with an emphasis on anadromous fisheries and stream habitat characterization and restoration. Erich has extensive experience performing environmental monitoring throughout the Scott River Watershed working with private landowners, government agencies and researchers. Erich's work with the Scott River Watershed Council has allowed him to continue his professional fascination with Coho Salmon in the Scott Valley and continue to study and enjoy the rich natural resources in this unique and beautiful area.



Status and Trends of Adult Chinook Salmon and Coho Salmon in the Scott River California Department of Fish and Wildlife, Morgan Knechtle

This presentation will focus on the status and trends of Adult Chinook Salmon and Coho Salmon escapement in the Scott River. There will be a brief overview of the methods used to generate these estimates. The data presented for Chinook Salmon will be from the years 1978- 2018 and the Coho Salmon data presented will be from 2007-2018. Preliminary data from the 2019 season will be discussed. Current trends in abundance will be presented both by annual and by brood year. This adult data will be compared to the number of juveniles produced by cohort to evaluate in-river and out of basin productivity.

Knechtle is a Senior Environmental Scientist Specialist who works for CDFW 's Northern Region in Yreka California for the Klamath River Project, and is responsible for managing multiple field projects focused on managing salmonids in the Klamath River Basin. These field projects include operating adult salmonid counting stations and coordinating adult spawning ground surveys on the Shasta River, Scott River and Bogus Creek three highly productive salmonid tributaries to the Klamath River in Siskiyou County. Knechtle also assists with adult recovery efforts at Iron Gate Hatchery. After graduating from Humboldt State University with a Bachelor of Science degree in Freshwater Fisheries Knechtle started working for the Department in the Russian River watershed as a Scientific Aid. Knechtle was first hired as a Biologist in 2000 and spent 4 years working on salmonid life cycle monitoring stations on the Mendocino Coast. Since 2004 Knechtle has worked with salmonids in the Klamath Basin both on the Trinity River and in the tributaries to the Klamath in Siskiyou County. The Chinook salmon work that Knechtle participates in is focused on providing information to accurately forecast abundance to provide fishing opportunities while maintaining enough fish in the river for future generations of fish. The coho salmon monitoring is focused on providing accurate information for status and trends of an independent population of endangered coho salmon.

Beaver in California: Creating a Culture of Stewardship

Occidental Arts and Ecology Center WATER Institute,
Brock Dolman and Kate Lundquist

In this session Kate Lundquist and Brock Dolman (Occidental Arts and Ecology Center WATER Institute) will share how beaver restoration fits into the broader context of river restoration and what we call “Conservation Hydrology.” They will share how their watershed work has led to partnering with our native keystone species, the beaver, to increase water quality and quantity, augment aquatic habitat and biodiversity, and help rural and urban communities enhance water security and resiliency to climate change. Drawing from the successes of their award winning Bring Back the Beaver to California Campaign, they will share tools and resources to help you to create a culture of beaver stewardship in your community.

Brock Dolman is a co-founder of the Occidental Arts and Ecology Center (www.oaec.org), where he co-directs WATER Institute in Sonoma County, California. He is a wildlife biologist & watershed ecologist who has been actively promoting the idea of Bringing Back Beaver in California since the early 2000’s. He co-authored two peer reviewed papers in the California Fish and Game Journal on the historic range of beaver in California: (<http://oaec.org/publications/the-historic-range-of-beaver-in-the-sierra-nevada-a-review-of-the-evidence/>) (<http://oaec.org/publications/historical-range-of-beaver-update/>). He was given Salmonid Restoration Federation’s Golden Pipe Award in 2012: “...for his leading role as a proponent of "working with beavers" to restore native habitat. With WATER Institute Co-Director Kate Lundquist they were given the 2014 “Badger Spirit” Award by the Paula Lane Action Network to the Occidental Arts and Ecology Center and WATER Institute in Occidental, CA, for the WATER Institute’s national outreach to “Bring Back the Beaver” towards restoring Coho Salmon in coastal California. In 1992 he completed his BA in Agro-Ecology & Conservation Biology, graduating with honors from the University of California Santa Cruz with the Biology Department and Environmental Studies Department.

Kate Lundquist co-directs the Occidental Arts & Ecology Center’s WATER Institute (www.oaec.org/water) and the Bring Back the Beaver Campaign (www.oaec.org/beaver) to establish beaver restoration as a legitimate approach to optimize aquatic resource conservation and climate change adaptation in California. Through strategic outreach and education, collaborative restoration planning and co-existence demonstration Kate helps landowners, tribal communities and resource agencies integrate beaver stewardship into riparian, meadow and rangeland restoration. Kate’s extensive research and advocacy work has greatly increased the understanding of the historic range, natural history and need for stewardship of beaver in California. In addition to providing species management consultations, Kate writes and speaks to audiences across the west about the importance of beaver to watershed restoration. Kate coordinates the WATER Institute’s citizen-science initiatives and collaborates with multi-stakeholder groups and decision makers to promote beaver restoration implementation and policy change.

Save the Date!
Scott River Restoration Tour &
Scott Watershed Informational Forum (SWIF)
February 17th & 18th, 2021



FILM SYNOPSIS



Sometimes the best solutions to the biggest problems can be found in the most unexpected places. Meet the beaver believers: five scientists and a sassy, spicy hairdresser, tackling climate change, one stick at a time.

The Beaver Believers is the urgent yet whimsical story of an unlikely cadre of activists who share a common vision: restoring the North American Beaver, that most industrious, ingenious, bucktoothed engineer, to the watersheds of the arid West. The Beaver Believers encourage us to embrace a new paradigm for managing

our western lands, one that seeks to partner with the natural world rather than overpower it. As a keystone species, beaver enrich their ecosystems, creating the complexity and resiliency our watersheds need to absorb the impacts of climate change. Beavers can show us the way and even do much of the work for us, if only we can find the humility to trust in the restorative power of nature and our own ability to play a positive role within it. Shot in 8 western US states, Mexico, and Canada, through desert drought, raging wild fires, spring floods, and wetland tranquility, this film will change the way you think about climate change and inspire you to step up confront the challenges we face.

ABOUT THE FILMMAKER

Sarah Koenigsberg is an award-winning filmmaker, photographer, and educator whose work focuses on stories of art, environment, and community in the American West. Her films and teaching cross disciplines, illuminating the power of storytelling as a medium through which to explore complex science and policy issues. Her commercial clients include the US Forest Service, National Park Service, Pacific Northwest National Laboratory, US Department of Energy, Discovery Channel Canada, Grand Canyon Trust, Wallowa Resources, Whitman College, Methow Salmon Recovery Foundation, and River Management Society.

Koenigsberg's work has screened across North America in venues such as the National Climate Adaptation Forum, the North American Congress for Conservation Biology, and The Wildlife Society and American Fisheries Society's annual conferences. Winner of the Green Spark Award from the American Conservation Film Festival, her feature documentary "The Beaver Believers" has screened worldwide in film festivals such as the Banff Centre Mountain Film Festival, Banff World Tour, International Wildlife Film Festival, London Eco-Film Festival, Ireland Wildlife Film Festival, Vancouver International Mountain Film Festival, Environmental Film Festival at Yale, and the Portland EcoFilm Festival, among others.

As an educator, she has developed digital media storytelling curriculums for Whitman College, and has more recently begun offering presentations on science communication. She loves strong coffee, dark chocolate, organizing cupboards, and finding any excuse to climb up high to "get the shot." She detests sticky jar lids and tangled power cords.



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Poster boards available for viewing at SWIF



The intrinsic potential for beavers in the Scott Valley, CA

School of Marine and Environmental Affairs, University of Washington, Deborah Rose

Beavers are ecological engineers and their skills of dam building are being harnessed and mimicked for a variety of restoration purposes. Beaver activity has been shown to be beneficial for creating deep, cold water habitat which is crucial for juvenile salmon, and the construction of dams also stores water that would normally wash out in winter floods. Mimicking beaver activity has already been successfully trialed in the Scott Valley through the construction of beaver dam analogues (BDAs). This paper applies a GIS-based Beaver Intrinsic Potential (BIP) model developed by Dittbrenner et al. (2018) to identify high potential sites for beaver dams in the Scott River Watershed.

Moving Forward While Looking Back: Integrating downscaled climate projections into Scott Valley Watershed Council restoration plans for Coho salmon

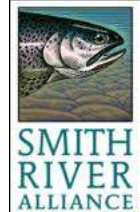
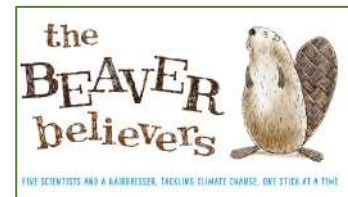
School of Marine and Environmental Affairs, University of Washington, Susannah Maher

Stream restoration conducted by the Scott Valley Watershed Council (SVWC) in Scott Valley, CA combines human water use and seasonal water levels in order to restore suitable stream habitat for declining juvenile salmon populations. As climate change alters systems around the world, in-stream water levels in the Scott Valley are projected to change in volume and seasonal distribution. This could cause streams that have historically supported juvenile salmon to become dry or intermittent during critical salmon migration periods, stranding salmon or resulting in high mortality rates. Restoration projects, such as those underway in French Creek, CA, should incorporate climate change considerations to avoid investing time and resources into sites that will not be viable in the future. I use recent streamflow and temperature data for low, mid, and high-elevation sites within the Scott Valley combined with regional climate projections to understand how prioritized habitat in French Creek will change in the future. Climate predictions and site rankings are contrasted to the published restoration plan by the SVWC to evaluate the extent that climate change has been incorporated into the plan. Recommendations are given on how to further include climate change considerations and projections into the French Creek restoration plan based on a framework by Beechie et. al (2013). This project will enable the SVWC to more successfully plan for salmon habitat restoration projects in both the short-term and coming century by including climate shifts that will change restoration considerations and habitat suitability.

September 17th through 20th 2020
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Thank you to all our SWIF 2020 Presenters and to those make work in the Scott River watershed possible.



Above all else, thank you to our landowners who allow restoration work to be done on their property!

