



### Restoring our Relationship to Fire: *Better Late than Never!*

By Will Harling

If there is a silver lining to the devastation of the 2018 Camp and Carr Fires, it is that Californians are more ready to change how we live with fire than any other time in recent history. A ground swell of local organizing, legislative action in state government, and agency support for practices like prescribed burning are setting the stage for major shifts in fire management at local, regional, and state levels. At the same time, it is clear that we as a society are not ready to fully acknowledge what it means to live with fire on the landscape. Right now, homes are being re-constructed in places that will continue to burn at high severity due to local topography and winds. Home construction sites surrounded by skeletons of Knobcone pines that finally set seed after a century of fire exclusion speak to a future sorrow, a lesson not learned. But this level of re-thinking our concepts of private property and development planning may take several more rounds of significant loss to be reflected in zoning regulations and society.

Here along the Klamath River, we are looking at the long game of fire on our landscape. Strategic funding from the Nature Conservancy's North American Fire Initiative, through a series of learning networks including the Fire Learning Network, Fire Adapted Communities Learning Network, Indigenous Peoples Burning Network, and the TREX Coaches Network, are working together to help shape a fire future that holds more promise than foreboding, one of restoration and revitalization and resilience.



The After Action Review on the Camp Creek Prescribed Burn, 2018 Klamath TREX by Stormy Staats



The Ukonom Wildfire in the Klamath National Forest by Wind Beaver

Strategic fire planning has begun to collaboratively develop a series of landscape scale fuelbreaks that we can use to have more choice about when and where fire returns. Instead of last minute firelines slapped in to stop raging wildfires in the middle of summer, strategic fuelbreaks constructed ahead of time by local crews that minimize environmental and cultural impacts will give us opportunities to stop unwanted wildfires, manage wildfires for resource objectives, and implement large scale prescribed burns on the edges of wildfire season



Prescribed Fire, Orleans 2018 TREX by Stormy Staats

# Letter from the Directors, Will Harling and Luna Latimer

After several years of smoke-filled summer skies, it has been a welcome respite to enjoy life on the River without having to involuntarily inhale the equivalent of literally packs of cigarettes a day in wildfire smoke! A wet winter and relatively mild summer, in addition to keeping wildfires at bay, have kept our rivers cooler and higher, giving our struggling salmon runs a chance to rebound after long periods of drought. One thing is clear: wet years like this are becoming fewer and far between. Fire season here, on average, has increased by nearly two months in the past 20 years. And annual salmon runs in the Klamath River are declining across the board. The Salmon River Spring Chinook run this year, despite good in-river conditions, was the second lowest on record with 161 fish returning. Even though improving ocean conditions due to Pacific Decadal Oscillation (PDO) may help our 2019 Fall Chinook run, the trend of lower highs and lower lows is becoming clear.

While we don't have time to spare in restoring fire process in our forests and access to quality instream habitat, it appears that Klamath dam removal may be postponed another year from 2021 to 2022 due to permitting difficulties. That means another year with juvenile salmon diseases associated with these dams infecting a majority of outmigrating salmon, another year with elevated temperatures and toxic algae (microcystin) in the mainstem Klamath, another year our salmon and steelhead can't access nearly 400 miles of spawning, rearing, and holding habitat above the dams. It has been over a 100 years since fish passage to the upper Klamath Basin was blocked in 1917. Similarly it has been over a 100 years since the national policy of full fire suppression was adopted in 1911. While forests and salmon have evolved to survive, and sometimes even thrive, after pulse disturbances (which occur as a relatively discrete event in time like large fires and floods, the effects of press disturbances (a more gradual or cumulative pressure on a system) like dams and altered fire regimes are severe and widespread.



Luna Latimer

While it may seem like we don't have time to spare, our work through the Mid Klamath Watershed Council has made it clear that **the only way forward is through collaboration with diverse interests to influence management decisions that reflect our shared values, decisions we may not wholly support, but can live with.** As we built the foundation of the Western Klamath Restoration Partnership (WKR), lead facilitator Mary Huffman from TNC's North American Fire Initiative reminded us "sometimes you have to go slow to go fast." Eventually we realized that only when we had built a foundation of trust, could we work together to create meaningful change and stop the infighting that takes the power away from our local communities.

For WKR, this means implementing our first landscape scale fuels project that has employed over 50 local people already, and includes a combination of manual and mechanical thinning in preparation for over 5,000 acres of prescribed burning to protect our most at-risk neighborhoods and restore cultural resources over the next five years. Industry, tribes, NGO's, USFS, CALFIRE, environmental groups, and others are all working together to make this happen. This summer, we also finalized plans to a 30% design level at 15 sites on the mainstem Klamath River where we can safely reconnect floodplains while at the same time removing chronic impacts from dredge tailings and increase the amount of summer and winter salmon rearing habitat. On key tributaries like Horse Creek and Seiad Creek, recent coho habitat restoration projects have been incredibly effective, and annual surveys are showing increases in spawning coho salmon as a result.

Like Bill Tripp, Deputy Director for Eco-Cultural Revitalization with the Karuk Department of Natural Resources, said in the documentary "Catching Fire", "it may take us 900 years to get back to where we were 100 years ago, but we have to start now." We are lucky to work with MKWC staff and partners who are guided by this long vision for removing press disturbances and restoring natural processes in a way that works for our human communities throughout the Klamath Basin. Together we can make it happen!



Will Harling



# Brian Tripp's Public Art Project at MKWC

By Erica Terence

The Sentinels

In September, a small but dedicated team of folks stood up two locust log sculptures in the backyard amphitheater space between the Panamnik Building and the Klamath River in downtown Orleans. The stand-up was a proud moment, after years of talking and dreaming about the public art project.

The Humboldt Area Foundation Native Cultures Fund underwrote the project, with artistic vision and direction by Karuk elder and internationally renowned artist Brian D. Tripp, known sometimes as BDT.

Locals, Justin Szabo and young Karuk artist Tyler Conrad, as well as MKWC Panamnik Building coordinator Michael Stearns, provided knowledge, equipment operator hours, muscle, and grit to make the process a success.

One day years ago, after volunteers had cleared the thorny locusts from the central space where the community envisioned an outdoor amphitheater, BDT eyed the decks of locust logs during a community event in the Panamnik Building backyard.

"Those are people," he said. "They're supposed to be standing up." Thus began an idea that spurred this project to become a reality. This is how BDT sees the world. This way of seeing



Standing Tall all photos this article by Erica Terence



Old friends meet again.

has led him to create figures from mostly natural materials. However, these locust log sculptures are the biggest scale he has ever crafted.

After Karuk Tribe archaeologists inspected the site when we dug footing holes and signed off, Michael descended on a ladder into the hole to construct a rebar grid. A cement truck backed up to the holes and filled the holes halfway. Then Justin, BDT, and Tyler worked with Michael to hook cables and blocks to the logs and yard them to the right places, then stand them up and prop them carefully at the right angles in the holes. Finally, the cement truck filled the holes completely. The figures are simple wooden forms with a strong presence. They speak for themselves, watching over the labor and celebrations that unfold here.

At the end of the stand-up day, BDT beamed up at the larger figure. "These guys came out even better than I imagined they would," he said.



# MKWC Youth Stewardship Interns—Where Are They Now?

By Carol Earnest

Since 2010, MKWC has hired teen interns for summertime internships. During their 6-week long internship, these youth work on a variety of MKWC projects, like fish habitat improvement, invasive plant removal, native plant seed collection, school garden maintenance, snorkel surveys, fire-safe work, and so much more. The internship serves as a jumping-off point for local youth. We always enjoy getting updates from them and hearing about what they are pursuing within the Klamath River watershed and beyond. We caught up with a few of MKWC’s past interns to see what they are doing. We asked them three questions: 1. What are you up to now?, 2. Did the MKWC internship help you reach this point?, and 3. Do you have any words of advice for someone still in high school? Or for the next intern crew?

## Alyssa Allgier, MKWC Intern '14, '15

I’m currently working as an office assistant for MKWC and am passionate about nature.

Without the internship I would have never had the opportunity to learn more about the area I grew up in.

My advice to high school students is: don’t let others’ actions stop you from being motivated in school.

For our next intern crew I would recommend that they stay safe while on the job (don’t goof off too much), but also have fun (it’s a blast!).



Alyssa currently works as an office assistant at MKWC.

## Ella Galindo, MKWC Intern '17, '18

I am currently attending UC Berkeley on a full ride scholarship. I am undeclared but am still interested in pursuing some form of science.

The MKWC internship gave me a jump start in my work experience, let me bug Carol for references (that were very helpful), and let me learn from incredibly knowledgeable and passionate people including Berkeley alums.

I suggest taking advantage of unique opportunities like this to anyone that is looking to expand their skill set or explore career paths.



Ella Galindo during a intern backpacking trip into the wilderness scouting for invasive plants. Ella is currently in her first year at UC Berkeley.

## Geena Talley, MKWC Intern '13, '14, '15

I just graduated from UCSC in June with a degree in Psychology and a minor in Education. I am now living in Portland and looking for work in the education field, particularly environmental education. I am passionate about supporting the mental health and academic wellness of all students as well as working with youth to emphasize the importance of respecting and caring for the natural world.



Geena Talley, at her recent graduation from UCSC with a degree in Psychology and a minor in Education

Working with MKWC was a great way to learn even more about the land I already felt so connected to and it definitely bolstered my excitement for learning about our environment, especially aquatic ecosystems. I think MKWC 100% strengthened my passion for environmental education and I hope I am able to work in that field someday.

Go at your own pace and choose your own path! There are so many pressures at that age to follow a certain outline, but I would say to find something you are excited about doing or learning and follow that.

## And, Our 2019 Interns



MKWC youth interns from summer 2019 participated in the annual Spring Chinook Salmon River dives, hosted by the Salmon River Restoration Council.



We would like to give a huge thank you to our 2019 youth interns: Tashawna Brink, Adriana Garcia, Allison Head, Martina Mapatis, Max Nelson, and Brooklyn Villanueva.

### Intern Summer Projects

Each year, the interns complete independent projects. They pick a topic that relates to one of MKWC's programs, create a project, work on it over the course of the internship, and then present it to the MKWC staff. The 2019 interns created exemplary projects, including a movie that documented the internship, an informational sign of Klamath River species that was posted at river access points, a plot and line sample to estimate the percentage of invasive plants at a worksite, and an Orleans Elementary School garden workday. Check out their projects at the MKWC website.



MKWC youth interns from summer 2019 clean up trash along the highway.

## The Klamath-Siskiyou Outdoor School

The Klamath-Siskiyou Outdoor School (KSOS) is a cost-free summer experience for youth living in the Mid Klamath area in rural Northern California. Since 2008, KSOS has engaged 220 local youth in hands-on natural resource restoration, outdoor recreation, natural history, and place-based environmental programs through rafting, kayaking, and backpacking activities during this week-long outdoor school.



KSOS participants, top left, proudly pose after completing their fish passage improvement project. Fishing in the wilderness, top right, is one of KSOS's favorite activities. Youth participants learn about safe and appropriate fishing techniques, fish filleting, and cooking fish on a campfire. They also participate in restoration projects in the Klamath basin. Here, bottom left, they construct step-pools to ease juvenile fish passage into a cold-water tributary. Our first day of KSOS, bottom right, rafting down the beautiful Klamath River.



# Western Klamath Restoration Partnership (WKRP) Ramping Up at Last!

By Jodie Pixley

This year, 2019, the (Western Klamath Restoration Partnership (WKRP) has been ramping up locally and rippling out onto the national scene! In July of 2018, WKRP took the last step of a five-year planning process for its innovative pilot project and completed its Environmental Assessment; naming the project the Somes Bar Integrated Fire Management Project (i.e. Somes Project). Implementation of restoration work began this year.

The crews of the Karuk Tribe and Mid Klamath Watershed Council (MKWC) in the Patterson focal area, the first of four focal areas making up the Somes Project, show the collaborative nature of this work. Both fire and fuels crews are on schedule to complete about 500 acres by the end of the year, a significant portion of the manual treatments for the project. These crews are breaking up fuel continuity around private properties and preparing strategic fuel breaks that will ready areas for future prescribed burns.

In addition to the Somes Project, WKRP's mission and message is rippling out through its partnership with the Six Rivers National Forest (NF). This spring, the Six Rivers NF submitted its five-year program of work to the California USFS Regional



Bill Tripp and Eric Darragh keep an eye on a prescribed burn during the 2018 Klamath TREX. *by Stormy Staats*

Office (RO). This program of work was created collaboratively with WKRP and will become part of WKRP's strategic plan in moving forward over the next few years. The map, above right, shows the proposed projects that the Six Rivers NF submitted to the RO.

It's been a long process getting to this place where partners are working together from the same principles, and with the same goals. Initially, WKRP emerged from a failed collaborative attempt; partners would later identify what went wrong and use this as a guide to inform future successful partnership efforts. Since 2013, when the group originally formed, a lot has been accomplished.

Not only has planning and implementation made great strides, but WKRP is also becoming better known in regional and



Mitigating a snag close to a control feature on the Highway units in the Patterson focal area. The Patterson unit is part of The Somes Bar Integrated Fire Management Project.



Burning piles in preparation for Good Fire.





Creating piles to be burnt during the fall and winter months. These piles are constructed with brush and slash that is cut from the understory of project units. This unit is in the Patterson focal area of the Somes Bar Integrated Fire Management Project. Once completed and dried these piles are approximately 5x5x5 feet in size.

national networks. Will Harling, MKWC Co-Director, and Bill Tripp, Deputy Director of Eco-cultural Revitalization for the Karuk Tribe, both co-leads of WKRP, are contributors to two different national networks. Bill is working with the Western Region Strategy Committee (WRSC), and both Will and Bill are working with the Fire Adapted Communities Learning Network (FAC Net). WRSC and FAC Net are organizations that are pushing national dialogue on the transition out of suppression management to a model that instead reevaluates how fire can be utilized to safeguard communities, while also playing a critical role in ecosystem health.



Keeping tools sharp during Prescribed Burn. by Stormy Staats



May 2019, Karuk Tribe and Mid Klamath Watershed Council Fuels Crews gather at the Patterson focal area of the Somes Project.

The Klamath region is special not only for the decades of research and restoration that's taken place on this landscape, but foundationally, because the Karuk Tribe remains here on ancestral lands and provides cultural and traditional ecological knowledge (TEK) dating back millennia. These factors have resulted in our local groups being consulted for creative problem solving in addressing the national wildland fire crisis we all face.

One example of this was a project that Will Harling and Jill Beckmann (formerly of the Karuk Tribe) worked on with FAC Net this year. Together they published an article\* on a unique planning tool developed by WKRP called "values-based spatial planning".



Areas like this are common in forests that are overgrown and stressed for resources. Trees struggle to grow strong roots and over time will start to rely on each other for lateral support. As trees race for sunlight they grow tall and thin. When strong wind or heavy snow loads are experienced the trees will up root or break and create large areas of dense fuel.

\*url:<https://us12.campaignarchive.com/?e=e4f2b8ae5d&u=7e411e9bd91fcad6cf731f6d9&id=fa740bad17>



As WKRP was formed by diverse governmental and non-governmental groups, and community members, one can imagine the many values and varied interests that were involved. This values-based, spatial planning tool utilized mapping techniques to represent these values through “data layers” (one layer per value) which combined 23 different values! The end product was a map that depicted everyone’s interests and concerns. Once the map, bottom right, was presented to the group, “people’s eyes lit up” as their layers appeared on the project map. This innovative problem solving of the group is now helping other collaboratives around the country. It’s great to see our group rippling out beyond the Klamath Watershed.

**Together we can make things happen.**



Lighting a Prescribed Burn during the 2018 Klamath TREX.  
*by Stormy Staats*

## What about the Climate Emergency?

*By Nancy Bailey*

Lately one has to wonder if the work we are doing to restore fish populations, forest health, and biodiversity is enough in the light of the climate emergency. If we listen to the scientists, we know that a human caused warming planet is a fact. If we listen to the news, we understand that the effects are being felt now, not in some distant future but NOW. With glaciers melting, extinctions happening worldwide at an alarming rate, record breaking monster storms and hurricanes, unprecedented floods and fires, we are facing an uncertain future.

Of course, the problems we face here in the Klamath watershed are more complicated than simply a result of climate change. They have been brewing for decades due to a multitude of factors, including unfettered water use, aggressive fire suppression, and other short sighted land management activities based on an economy of extraction. But it is time to take seriously the fact that the overall warming and drying effects run the high risk of making these problems worse.

We often find ourselves saying “yes, but what can we do about it?” In this rural area, our dependence on carbon producing motor vehicles is a given until other modes of transportation are made available. For many of us, living simply and conserving resources comes with the life style. What more? We could pressure our elected representatives to come up with real-life and immediate solutions. We could VOTE. Beyond doing these things and whatever we can to reduce our own

carbon footprints, supporting the local restoration efforts is now more important than ever. Learning about how to “adapt” to an unknown but difficult future is critical.

MKWC is lucky to collaborate with the Karuk Tribe on many restoration efforts, not the least of which is prescribed fire. As the recently published “Karuk Climate Adaptation Plan” stresses; re-establishing a more natural fire regime on the landscape through prescribed burns at appropriate times of year is an important part of adaptation. Indigenous people are disproportionately impacted by the changing climate and at the same time their Traditional Ecological Knowledge of local ecosystems and long history of using fire as a land management tool provides insight into how best to adapt. Quoting Bill Tripp, Deputy Director of the Karuk Natural Resources Department, “Karuk people have long been part of this ecosystem. Climate adaptation is about restoring human responsibilities and appropriate relationships to the natural world....We can’t put an end to fires, but we can work with fire on our own terms,”

Getting fire back into its natural role is only one thing and will take some years to fully accomplish. Other restoration activities are similar in their long term scope. This is just a beginning but we must work harder than ever and quickly now. Join us in adapting to climate change!



*Restoring Our Relationship to Fire*, continued from page 1

when the benefits of fire far outweigh the impacts. At our last WKRP workshop in Happy Camp in May 2019, drafting these strategic control features together helped participants envision the network of firesheds on the Happy Camp Ranger District. Over the next couple years, WKRP partners will be working with Oregon State University, University of Washington, USFS Pacific Northwest Research Station, and others to refine these models to collaboratively develop a network of firesheds for the entire 1.2 million acre WKRP planning area.



Karuk basketry materials need good fire. *by Nancy Bailey*

While these long term planning efforts are taking shape, we will be significantly increasing our local capacity to implement prescribed burns, taking advantage of good burn windows throughout the year. Most of our prescribed burning in the Wildland Urban Interface (WUI) to date has been implemented through the Klamath TREX, which provides the resources necessary to implement complex burns in the WUI, but is constrained by set dates. The development of the Humboldt County and Siskiyou County Prescribed Burn Associations that utilize local volunteer resources and landowner-led prescribed burns, as well as an *All Hands All Lands* approach to burning that uses local, tribal, and agency resources linked through established resource sharing agreements, to burn across ownerships as burn windows arise, hold the promise of greatly increasing annual acres treated by prescribed fire.



Local students learn about good fire. *by Stormy Staats*



The 2018 TREX Group gather for a photo. *by Will Harling*

Recently, MKWC co-director Will Harling, along with Jeff Stackhouse and Lenya Quinn Davidson from UC Cooperative Extension, attended the first ever California Burn Boss certification course in San Luis Obispo, that implements Senate Bill 1260's requirements for California to increase the number of burn bosses statewide to get more good fire on the ground. This will allow individuals from diverse fire backgrounds, not just folks with careers in fire suppression, to become state certified burn bosses qualified to burn on state and private lands.

Recently, several publications have come out that will guide our efforts to restore our relationship to fire in the Western Klamath Mountains. One, the Karuk Tribe's Climate Adaptation Plan, provides an extensive framework for fire management that both protects and enhances cultural and natural resources, while reducing the threats to human life and property from wildfire. Find it online at: [http://www.karuk.us/images/docs/dnr/FINAL%20KARUK%20CLIMATE%20ADAPTATION%20PLAN\\_July2019.pdf](http://www.karuk.us/images/docs/dnr/FINAL%20KARUK%20CLIMATE%20ADAPTATION%20PLAN_July2019.pdf)



Will Harling and Eric Darragh confer on a prescribed burn with the 2018 Klamath TREX. *by StormyStaats*



# Well I'll Be Dammed

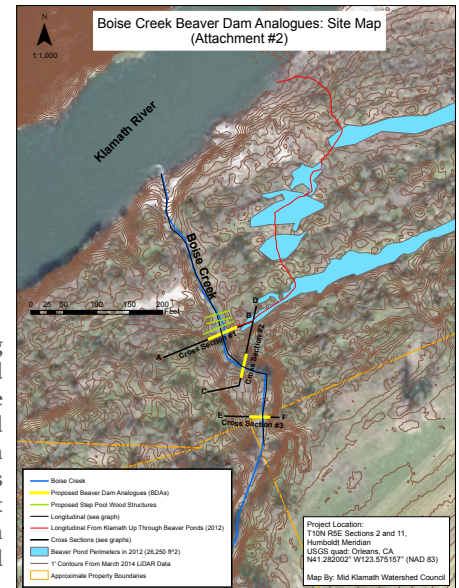
By James Peterson

A long time ago in an ecosystem far, far away, a small furry creature with a penchant for chewing through trees, constructed a dam across Boise Creek. Boise Creek is not big as streams go, but it is a low gradient gem of potential coho salmon habitat in the steep Klamath Canyon on the lower end of the Orleans Valley. This simple structure of sticks, rocks, and mud raised the water level of the creek over four feet and reconnected it to nearly four acres of ponds located in an old Klamath River channel just upstream of the creek. These ponds had been carefully tended by beavers for years, and given direct connection to the creek, juvenile salmonids had year round access to over 25,000 square feet of cold water rearing habitat. The outlet to these ponds also circumvented steep bedrock cascade at the mouth of Boise Creek that blocked juvenile and adult fish passage in most years.

In 2008, 10 Chinook salmon redds (underwater nests where salmon lay their eggs) were observed in the lower two miles of Boise Creek, after many years with no observed redds. Sadly, in 2011 the beaver dam was washed away in high spring flows and the connection to this unique, natural off-channel pond system was lost. Only during very high flow events were the ponds connected to the river system, leaving very small windows for fish to find them. Due to the highly degraded nature of most of our riverine habitats, beavers now struggle to build and maintain dams in areas where they used to flourish. This is due to heavy channel incision caused by human influences of mining, ranching, housing development, clear cut logging, and fire suppression. Most, if not all of our tributaries along the Klamath River suffer from a lack of floodplain connectivity. Because of this, during high water events, these channelized streams have nowhere to disperse



The finished BDA on Boise Creek.



This map is showing the Creek profile and the perimeter of the beaver ponds. The red line going through the beaver ponds is the connection point that was present in 2008 when the original beaver dam was there.



In the spring of 2017, the creek mouth and the beaver ponds  
All photos this article by James Peterson

the stream energy, which then causes further damage to these systems by promoting heavy scouring of the stream channel. With nowhere for water to spread out and slow down, beaver dams are typically washed away within a few years and the beavers stop building them in the stream channels.

With this in mind, the Mid Klamath Watershed Council partnered with the USFS, fisheries biologist Michael Pollock, PhD, and the landowners to construct a series of beaver dam analogs (BDA's) along the lower 500 feet of Boise Creek to reconnect the creek to the pond system. With funding from Patagonia's Wild Trout Initiative, the Bella Vista Foundation, and a private foundation, MKWC contracted BDA expert Michael Pollock to help with the design of these structures. Dr.





MKWC Fisheries Crew (top) weaving willow around Douglas-fir posts. Celebrating a job well done (above).

Pollock has been building and studying BDA's for many years in northeastern Oregon, and is a pioneer in the field for these structures. With his input, MKWC created a plan to install a series of six BDA's in the lower creek.

Starting in early August of 2019, with the help of Peter Thamer, formally of the Scott River Watershed Council, MKWC staff began installation of the planned BDA structures in Boise Creek. Along with Peter, MKWC staff members Jason Reed, Devin Finnegan, Eric Feiberg, Amanaka Yancey, Charles Wickman, Jimmy Peterson, and Will Harling spent several weeks lifting and maneuvering an extremely heavy hydraulic post pounder used to drive 8-10 foot Douglas-fir poles into the stream bed. After the poles were installed at all six sites, long willow cuttings were woven between the stakes to lock them in place as well as to pool water behind the structures. After the willow had been woven, straw is used to plug gaps in the willow followed by larger rocks and mixed sizes of sediment. These reinforced beaver dams then give the beavers in the area a stronger starting structure that can withstand higher

creek flows. The hope is that the beavers will then take over maintenance duties of the structures and patch or plug any holes and even continue to build on them over the years. In Scott Valley, just east of here, the Scott River Watershed Council has built over 20 of these structures, many of which have been adopted by local beavers.

Where other fish habitat restoration projects take time to show benefits, these BDA structures yield immediate benefits. When the process began, the stream was only about ankle deep at most sites. Only a few hours after finishing a few of the BDA's, staff members were wading around in almost chest deep water. This process was repeated at all six of the sites. After the fourth and tallest BDA was installed, we were able to connect the creek channel to the off-channel pond complex. Days after this happened, MKWC senior staff began finding fresh chewed willow sticks in the newly created pools. The beaver(s) living in the pond complex had immediately sensed the new flow of water and came out to investigate. With long pools leading up the creek instead of shallow riffles, beavers now have access to creek habitat that had previously been inhospitable to them and access to food that was unreachable before.

MKWC has deployed a series of game cameras around the site to track and document beaver usage of the sites as the year goes on, as well as collect time lapse photos of the structures throughout the year. Effectiveness monitoring will occur over this coming winter and following summer to track both juvenile and adult salmon usage throughout the creek.

I would like to thank everyone who helped to make this project happen, especially the landowners who supported the project, and USFS Six Rivers NF Fisheries Biologist LeRoy Cyr for all his help with shuttling this project through the federal permitting process. Thank you as well to Jillienne Bishop who wrote the original project proposal, Konrad Fisher for allowing us to harvest willow from his property, and to all MKWC staff members who worked tirelessly to install these structures through intense heat, bugs, hundreds of buckets of rocks carried down the creek, and many long drives to gather willow.



Bear walking across the BDA at night.



## 2019 Coho Confab in the Mid-Klamath

August 23-25<sup>th</sup>, MKWC co-hosted the 22<sup>nd</sup> Annual Coho Confab with the Salmonid Restoration Federation in Orleans, CA. It was the first time the Confab had been held in the Mid-Klamath. This event brings diverse participants from around the state who are working on coho salmon restoration efforts to share information and learn from on-the-ground projects. Talks Friday night from Toz Soto, Mike Belchik, and Will Harling covered a broad range of topics from current coho population and habitat monitoring and restoration efforts in the middle Klamath, to the need to restore fire processes

at the landscape scale to restore fish habitat, to updates on Klamath dam removal. Saturday, MKWC, Karuk Fisheries, Hoopa Fisheries, and the Klamath NF hosted tours to Seiad Creek and Horse Creek upriver, and Mill Creek in Hoopa, as well as mainstem Klamath off-channel projects near Orleans. It was incredibly inspiring to share our work with the larger restoration community. Despite daunting conditions, we are making a difference and turning the tide for coho in the Klamath River.



Mitzi reviewing data at Lawrence Pond on Horse Creek.  
*by Will Harling*



Coho Confab tour at Horsecreek Pond  
*by Mitzi Wickman*



*All underwater photos of Horse Creek Ponds by Will Harling*





**Toz Soto, fisheries biologist with the Karuk Tribe, spoke at the Coho Confab highlighting the importance of groundwater for creating cold water refuges for salmon with the ongoing impacts of climate change and how we are working on projects in places like Seiad Creek to enhance salmon habitats using groundwater as a key ingredient in restoration projects. Seiad Creek disappears into a bed of mine tailings upriver of its confluence with the Klamath River, and then resurfaces before entering the mainstem. This underground journey keeps the water temperatures cold and clear.**



**Jon Grunbaum, fisheries biologist with the Klamath National Forest fell fire-killed trees to create large woody debris fish habitat on Horse Creek. by Will Harling**



**Professor Cleo Wolfe-Erskine (U of Washington) taking dissolved oxygen measurements at Fish Gulch Pond Project. by Mitzi Wickman**



# The Klamath River Now Has the Legal Rights of a Person

A Yurok Tribe Resolution Allows Cases to be Brought on Behalf of the River as a Person in Tribal Court

By Anna V. Smith, *High Country News*, Sept. 24, 2019

This summer, the Yurok Tribe declared rights of personhood for the Klamath River—likely the first to do so for a river in North America. A concept previously restricted to humans (and corporations), “rights of personhood” means, most simply, that an individual or entity has rights, and they’re now being extended to nonhumans.

With the declaration, the Yurok Tribe joins other Indigenous communities in a growing Rights of Nature movement aimed at protecting the environment. Last year, the White Earth Band of Ojibwe adopted the Rights of Manoomin to protect wild rice—manoomin—and the freshwater sources it needs to survive in Minnesota. In 2017, the New Zealand government adopted the Rights of the Whanganui River, stemming from a treaty process with Māori iwis, or tribes, that gives the river its own legal standing in court. “By granting the rights of personhood to the Klamath River, not only does it create laws and legal advocacy routes, but it’s also an expression of Yurok values,” says Geneva Thompson, associate general counsel for the tribe and citizen of the Cherokee Nation, who worked on the resolution. “The idea is that the laws of a nation are an expression of the nation’s values.”

The Yurok resolution draws inspiration from the Rights of Manoomin, as well as the United Nations Declaration on the Rights of Indigenous People, which enshrines the right of Indigenous people to conserve and protect their lands and resources. Legal personhood provides a different framework for dealing with problems like pollution, drought, and climate change, though no case has yet been brought to put the Whanganui, Manoomin or Klamath rights to the test in court. The crucial aspect to establishing these legal frameworks, Indigenous lawyers say, involves shifting relationships and codifying Indigenous knowledge—in other words, recognizing non-human entities not as resources, but as rights-holders.

“From New Zealand to Colombia, the powerful idea that nature has rights is taking root in legal systems,” says David Boyd,



U.N. special rapporteur on human rights and the environment, of the Yurok Tribe’s resolution. “We must no longer view the natural world as a mere warehouse of commodities for humans to exploit, but rather a remarkable community to which we belong and to whom we owe responsibilities.”

In essence, the Yurok resolution means that if the river is harmed, a case can be made in Yurok tribal court to remedy the problem. Currently, says Yurok Tribe General Counsel Amy Cordalis, laws like the Clean Water or Endangered Species acts can be used to protect rivers by addressing symptoms of problems like diseased fish or pollution. But the Yurok resolution seeks to address the river’s problems directly and holistically, including the impacts of climate change. “You’re working towards making the river whole again,” Cordalis says.

“The idea of having legal avenues to address the harms of climate change is an important next step as legal systems adapt to the climate crisis.”

The resolutions give tribal nations new legal strategies for use in court, especially in regards to climate change: “The idea of having legal avenues to address the harms of climate change is an important next step as legal systems adapt to the climate crisis,” says Thompson at the Yurok Tribe. And they also encourage a change in mindset, says Maia Wikaira, an environmental law attorney who worked with the Yurok Tribe’s legal team, and a member of the Ngāti Tūwharetoa, Te Rarawa and Ngāpuhi tribes of New Zealand. As tribal nations establish rights for nonhumans, it creates an opportunity for states to follow suit, and incorporate the concept into their own court systems. “It’s another example of where long-held Indigenous perspectives and association with the natural world are not only being embedded within our legal system—they’re being seen in popular environmental movements as an innovative way forward and a necessary step,” Wikaira says. “So, old is new again.”

Rights of nature have already been established in Colombia, Ecuador and India, with varying success, and have also appeared in non-Native communities in the U.S. In Ohio this February, voters passed a law—which is already being challenged—granting Lake Erie personhood rights. An attempt in 2017 by Coloradoans to force the state to grant the Colorado River rights of personhood collapsed after the state threatened possible sanctions against the lawyer behind the case.

Now, Thompson says, the relationship between the Yurok Tribe and the Klamath River is reflected in the tribe’s law. “It shifts the conversation, and it shifts the value system, because you see the environment has a right to be clean and protected for the environments sake.”



# Brewer Spruce, *Picea breweriana*

By Dean Davis

Brewer spruce is a rare local endemic alpine tree found in small stands from Iron Mountain in the north near Powers, Oregon to the Trinity Alps in California. It has strikingly pendulous branches that often reach the ground and is commonly called weeping spruce. Most spruce species are sub-arctic or boreal, and tend to dominate northern temperate forests. They were more widespread during the ice ages, and as the climate warmed, several species, including Brewer spruce, retreated to alpine habitats and became isolated, encouraging genetic differentiation.

Black spruce and white spruce are common and widespread across Canada, and Sitka spruce sneaks down the coast into Humboldt County from its major range in Canada and Alaska. Colorado blue and Engelmann spruces are present at higher elevations in the Rocky Mountains, with tiny Engelmann stands growing on alpine sites in Siskiyou County and northern Mexico. Canadian research has shown that these species are distant relatives of Brewer spruce, while surprisingly the closest genetic relatives grow in small mountaintop stands in Mexico. One of several distinct species is Chihuahua spruce, whose bark is quite a bit smoother than the characteristic smooth bark of most spruces.

Research has shown that Brewer spruce ceases growth above 85 degrees, and does not thrive at lower elevations in our area. There are a few doing well in the coastal climate of Brookings, Oregon, but at 2000' locally they are limited in their growth and easily outgrown by our other local species. Heat intolerance, thin bark, and pendulous branches suggest that fire is also a limiting factor in defining their range. They find their best development on cool and moist northern and northeastern sites, often in rocky soils with minimal understory vegetation. They are not fond of serpentine soils, but are found poking around the edges where other conifers are limited. Our genetic investigations revealed that each stand that we collected had unique genes represented, and the species in general had strong variation in every stand. This is important insurance for potential future adaptation to environmental stresses.

Brewer spruce has few insect pests, and their cones often have good seed counts. Birds love the seeds, as do chipmunks, and bird presence is a good indicator of seed ripeness. The cones are extremely pitchy while developing, and look like cigars. They can be green, red, or purple and stick to your hands or gloves when being collected. As they dry, the pitch turns to powder and the opening scales turn all the way backward, giving flight to the tiny winged seeds. All the stands that I visited and collected had trees of all age classes present, and some were pioneering into edge areas.



Brewer Spruce painting by Dean Davis

Bark beetles also are pretty rare, so natural premature mortality from insects is not often observed. One insect of interest found in all Brewer spruce stands is the Cooley spruce gall adelgid, a species of aphid. They have a complex two-year life cycle, reproducing asexually, only females, for several generations. Young nymphs feed on buds and needles, and induce a distinct gall in the buds that appears cone-like. Many people mistake these structures for developing cones, and even after emergence the dried gall persists. I couldn't figure out how these insects found the isolated, tiny spruce stands until I learned that they can adventitiously attack Douglas-fir needles, and look like woolly aphids covered with webbing. Douglas-fir is the link that ties these stands together for the Cooley spruce adelgid.

Another interesting pest of these spruce trees is the dwarf mistletoe, *Arceuthobium abietinum*. Most dwarf mistletoes are very host specific, but this one is more common on white fir, a tree often found in Brewer spruce stands. It forms witches brooms in both species, and is detrimental to their healthy growth. Its occurrence in spruce is most notable in logged or thinned stands, documented by research in the Flattop stand in Josephine County in southern Oregon, so the best intentions



to leave or favor the spruce can lead to its decline. When picking cones, the mistletoe seeds are ripe at the same time, and disturbing the fruits causes them to burst with a popping sound and shoot the sticky seeds everywhere...including my beard and hair. I'm sure it helps them to stick to needles and stems, as well as birds and other vectors.

I'm sad to report the death of a notable Brewer spruce just below Poker Flat on the Happy Camp Ranger District. This 56" diameter specimen had enormous limbs and was surrounded by other majestic individuals, and was damaged but not killed during the Natchez fire last year. I notified incident command of the presence of these stands and marked their locations on their planning map when the fire first began. I had done an oil painting of it several years ago, and loved to see it on day trips to Poker Flat. It was near a spur road, but posed no hazard since it leaned in a favorable direction. In a conversation with Michael Kauffmann in mid-August I was told that several enormous trees were unnecessarily cut by firefighters "for the joy of it". This tree was much older than our nation, and meant a lot to the forest and many people. We have the ability and tools to develop a program to protect Heritage Trees and the inspiration they bring to our living landscape, homeland, and imaginations. I wept for the weeping spruce.



Brewer's Spruce (*Picea breweriana*) photo: iNaturalist.org

## Weeds Watch—Himalayan Blackberry

By Tanya Chapple

Everyone living in the Pacific Northwest knows Himalayan blackberry, most delicious of invasive plants. The joy for the fruit is tempered by vicious thorns and vigorous growth making this plant uniquely loved and despised. *Rubus armeniacus*, commonly known as Himalayan blackberry, was introduced to California in 1885 by Luther Burbank. Luther Burbank was an agricultural innovator responsible for many cultivars of plants still popular today, including the Santa Rosa plum and the russet Burbank potato. He purchased seeds from India, grew them in his garden in Santa Rosa, branded it as the Himalayan Giant, and developed clones for sale. The plants spread from there, by people, birds, and wildlife. Now, 134 years later, the Himalayan blackberry is widespread. Most commonly found in areas of human disturbance, along roads and near homesteads, but also found in isolated locations due to birds or bears. When MKWC was busy doing weeds surveys in the wilderness areas, we did not find many invasives outside of human impacted areas, the exception being Himalayan blackberry. This tenacious thorny berry is naturalized throughout the west coast, with especial abundance in our Mid Klamath region.

The Western Klamath Restoration Partnership (WGRP) is taking on Himalayan blackberry and making an effort to determine how the invasive blackberry can be controlled through integrative techniques of prescribed fire, fuels reduction, and manual removal. Part of MKWC's role in the Western Klamath Restoration Projects is the manual removal of small patches of Himalayan blackberry. We have learned that in small wildland patches Himalayan blackberry always grows with closely related native species: *Rubus ursinus*



The native *Rubus leucodermis* (blackcap raspberry)





The native *Rubus ursinus* (trailing blackberry)

(trailing blackberry) and/or *Rubus leucodermis* (blackcap raspberry). The small patches represent areas that have been more recently introduced to the invasive blackberry. It seems likely that invasive blackberry has the same habitat needs of other *Rubus* species, and that before Himalayan blackberry was introduced to the Mid Klamath, there was an abundance of native blackberries and raspberries that have been replaced by the invasive species.

It can be tricky to tell the difference between the native and invasive species when they are young, but they are distinguishable from each other when mature. The trailing blackberry (*Rubus ursinus*) is a ground cover, leaves are in three, and the thorns are straight prickles, not curved.

Blackcap raspberry, also known as whitebark raspberry (*Rubus leucodermis*), has whitish to purple stems, leaves are mostly in three, but sets of five leaflets is common on larger plants. The plants are erect, not a groundcover like the trailing blackberry.

The Himalayan blackberry has leaves in five when mature, leaves in three when young. They grow large canes with large cat claw like thorns. The canes die back and form dense brambles of dead and living thorniness. Himalayan blackberry can quickly alter the bionetwork. The brambles block wildlife access to water (and human access to swimming). The dead canes increase fire hazard. They form a dense monoculture, reducing plant and insect diversity which in turn impacts birds and animals.

So, thank you Luther Burbank for the succulent Santa Rosa plum, but that blackberry is just a bummer!



The NOT native *Rubus armeniacus* (himalayan blackberry)

## Which is Which?

A



by Ben Stever

B



by Stan Shebs

C



by Stan Shebs



*If you build it, they will come!*

## Milkweeds for Monarchs in the Mid Klamath and Beyond

By Heather Campbell

Every fall, kaleidoscopes of orange and black float and flutter south in search of respite from the frozen winters of Northern America. A great migration, undertaken by no other butterflies on earth, the majestic Monarch (*Danaus plexippus plexippus*) will travel thousands of miles, and die and be reborn again and again in a multigenerational journey for survival.

With migration flyways that straddle the great Rocky Mountains, and largely regarded as one of the most iconic and beloved butterflies in the Americas, the North American Monarch will amass on overwintering grounds by the millions in one of nature's most glorious spectacles. In late summer, descending from as far north as Canada, they'll embark on a long and perilous journey in search of dappled light, freshwater and shelter from winter weather—essential distinctive microclimates. Northeastern Monarchs find a haven in the high altitudes of the Oyamel fir forests of Central Mexico, while Western Monarchs will rest in tranquility among the Eucalyptus, Pine, Oak, Sycamore, Cypress, and Redwood of California's Pacific Coast from Mendocino to Baja.

The last born Monarchs of Summer will age eight times more slowly than their predecessors, delay reproduction, and travel vast distances to reach their final destination, an extraordinary group is known as the 'super generation'. As the shadow of winter blankets the north, these unique kaleidoscopes will nestle in the safety and refuge of the clement forests of the South, coloring canopies of green in brilliant shades of orange and black. Once they are settled in this temperate climate, diapause will be activated—a suspended development conserving energy and further stalling reproduction until the spring when they'll awaken to give life to a new generation.



A Monarch and a bee enjoy a flower. by Heather Campbell

Living just a few weeks and covering twenty-five to thirty miles a day, each of this generation (distinct from the 'super generation') will reproduce several times to complete the journey home; a phenomenon known as multigenerational migration. It is thought these amazing insects return to the exact same trees and mountains as their ancestors year after year guided by an internal compass and location coordinates passed down genetically, and navigating by the magnetic pull of the earth or the position of the sun. This sophisticated navigation, coupled with multigenerational migration and the ability to traverse great distances, can leave no doubt as to the Monarch's magnificence.

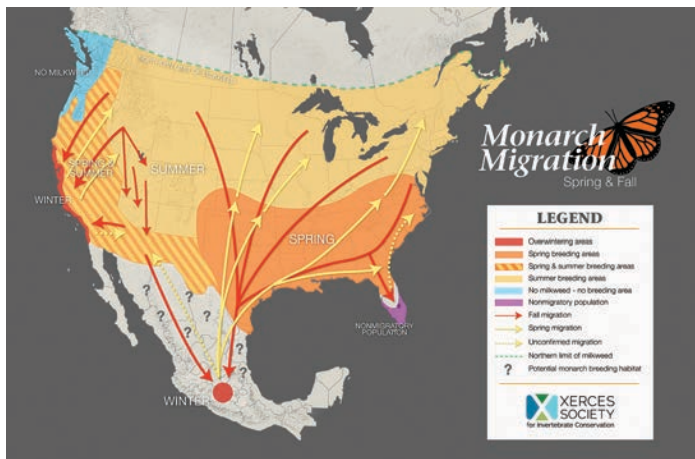
Sadly however, like many other species in our changing climate, their fate is uncertain and seemingly bleak. According to the Petition for Endangered Species Act Protection, over the last twenty years the larger Eastern population is down ninety-seven percent, while closer to home our western population has dwindled from 4.5 million to just twenty-eight thousand—less than 1%! ([xerces.org](http://xerces.org)). The disappearance of milkweeds and much of the unique forested habitat required to survive freezing winter temps have left these incredible invertebrates at risk of extinction. Monarchs across North America are vanishing in the wake of deforestation, urbanization, human activity, as well as disease and predation exacerbated by climate change and severe weather. Research and emerging data on the current state of the Monarch has prompted action among government agencies, non-profits, conservationists, and ordinary citizens alike.

At the heart of this restoration effort is milkweed—beautiful, yet potentially toxic if ingested in large quantities, milkweed is key to the Monarch's survival, as it is the only plant that can



Monarch caterpillar by Jamie Holt





be utilized for reproduction. Eggs carefully laid on leaves will produce hungry caterpillars and these voracious creatures will feast on the leaves for sustenance, thereby absorbing the toxins they need to be protected from predators. Once abundant along the U.S. Corn Belt, milkweed has been largely eradicated through the rise of large scale agriculture.

Extended use of herbicides and pesticides, and land-use change, have reduced milkweeds to the point that they no longer support the once prolific populations. Conservation efforts on the national scale are underway to aid the recovery and protection of this extraordinary species, but more is needed. Locally, we can support restoration efforts through education and awareness, exclusion of harmful chemicals in gardens and farms, and planting of native milkweeds and nectar plants.

Along with other beneficial species like bees, hummingbirds, beetles, and moths, Monarchs are among the amazing

cooperative we've relied upon from our very beginning—pollinators. Thanks to funding from the U.S. Fish and Wildlife Service Partners program, MKWC will be restoring habitat for Monarchs and other pollinators beginning this fall. Over the next two years, we will be building Monarch Waystations in schools and communities in the Mid-Klamath. Specialized gardens, both beautiful and beneficial, waystations are built exclusively to support Monarchs and pollinators. They'll include two different species of native milkweed and other flowering native nectar plants selected to bloom spring through fall.

The epitome of beauty and grace, and a symbol of hope and transformation, Monarchs are among the most well-known and easily-recognizable butterflies in the Americas—a wonder of nature flitting about among the canopies of the world's most beautiful forests. We are excited and inspired to be able to do our part towards advancing the revival of this splendid species and hope you will be too. Please consider building a Waystation of your own, or add native milkweeds to your gardens or around your home or business to increase Monarch habitat. Seeing even one Monarch is a blessing and no effort is too small—every plant helps! To become a champion and protector of this royal family, or for more information on Monarchs and Waystations call or stop by MKWC or visit [www.monarchmilkweedmapper.org](http://www.monarchmilkweedmapper.org) or [www.xerces.org](http://www.xerces.org)—if you build it, they will come!

*A special acknowledgment and thank you to the U.S. Fish and Wildlife Service Partners Program, and Sheri Hagwood for giving us this amazing opportunity to participate in the recovery of this amazing species.*



<https://www.inverse.com/article/52340-monarch-butterfly-california-decline>



# Biking to Work—Using Muscles Not Gas

By Erica Terence

I've come to look forward to Mondays. Those are the days my co-worker Michael and I bike to work (and back) at the Mid Klamath Watershed Council. They're the days I sail by just feet away from ravens and narrowly miss baby rattlers sunning themselves on the pavement. They're the days I learn the air currents like water currents, when I can break free from gravity on the downgrades and yoke myself to it on the ups. They're the days when I can hear myself think while the wind whistles past.



Erica Terence and Micheal Stearns biking to work over the Orleans bridge.  
by Blythe Reis

It's a 29 mile round trip for me, which makes it a long, exhausting day. But the feeling of pulling into work on a bike is extremely gratifying. The physical activity helps keep me sane through a day of desk work, the spinning, coasting, grinding conversation with Michael sets a good tone of camaraderie for the day of non-profit work, and I feel great knowing I burned zero gas to get to or from my job that day.

I have always liked the idea of biking, and especially biking to work. The fuel efficiency of it appeals to me, and the fact that you propel yourself forward with a series of little hard-earned revolutions to get where you're going is endearing, too. If we're really going to have a net positive impact on the ecosystems and communities we work to improve, we're going to have to burn less gas and oil in the process.

For years of working at MKWC, I have wondered whether I could make it both ways on a bike, somewhere in the back of my mind doubting that I could. I'd work up to it, I told myself. I kept telling myself that while driving to work. Then, one day last year, I wondered what I had to lose and decided to try it. It turns out I was completely capable on the first try, and that I liked the test of my endurance and strength. I liked sucking in the outdoors for an hour and a half before the start of my work day. I needed to budget a solid three hours in my day to transport myself, so that took some planning ahead. I sometimes had to do silly things like soak my feet in hot water on both ends of the ride, or invent my own version of



Erica stops for a selfie on her way to work.

electrolytes to replace the ones I lost on the ride. But my ability to ride both ways showed me that we can do more to cut our emissions down, and to support people who bike.

It doesn't seem like much. Some fraction of a gallon of gas left in the tank for another day. But I could feel my perspective on driving shift. Curious, I searched the internet for the impact my little biking experiment might have, healthwise and environmentally.

Here's what the first calculator I clicked on told me: just my one day a week of this bike commute—if I keep it up over the next 50 years—has the power to extend my life by 420 days while reducing CO2 emissions by 73,874 pounds, the equivalent of 31 carbon-absorbing trees planted. Let's say, as the same calculator does, that I burn 1,329 calories each time I do that ride, which equals about 1.5 kilowatt hours, which is more than a lead acid battery according to a cursory investigation. Highlighted and put in a box

Some of my other co-workers also bike to work, perform a long day in the field, then bike home again. Some bike up impossibly long hills on the way home. They inspire me. My bike commuting journey has made me thankful for the chance to live here, the chance to work every day to restore and care for this place, and the ability to carry my person around this place with just my legs, willpower, and a few spokes and gears.

Join the movement! Bike to work more! What have you got to lose? You might wind up loving Mondays, though.

*C. Rubus leucodermis* (blackcap raspberry)  
*B. Rubus armeniacus* (Himalayan blackberry)  
*A. Rubus ursinus* (trailing blackberry)

Which is Which?



# The Mid Klamath Watershed Council

## "For a Working Watershed"

### MISSION

The mission of the Mid Klamath Watershed Council is to collaboratively plan and implement ecosystem restoration, promote community vitality, and involve people in land stewardship.

### VISION

We envision the diverse communities of the Klamath Basin working together to restore and sustain a resilient watershed, economy, and community.

### GOALS

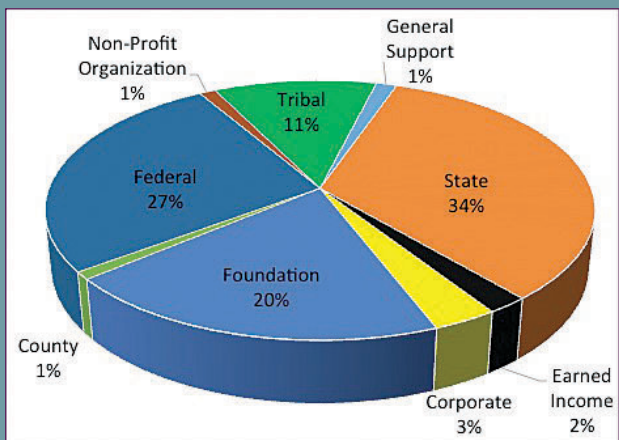
1. Facilitate and support holistic restoration of the natural and cultural resources of the Klamath watershed, including aquatic, riparian, and upslope habitats.
2. Increase understanding of, and inspire action in, the Klamath River region and beyond.
3. Promote community resilience by encouraging cultural and economic activities that sustain our natural resources.



## Admin Nuts & Bolts

We are a team of 8 people—a mix of part and full time positions. Amongst other things, we help MKWC pass our annual audit (with flying colors for the last several years)! This is no small task as we currently manage and administer 60 different awards from 25 different funders.

The graph shows where our income comes from. Thanks to all our funders, large and small!





## Directors

Will Harling, *Director*

Luna Latimer, *Director*

Carol Earnest, *Community and Stewardship Program Director*

Charles Wickman, *Fisheries Program Co-Director*

Erica Terence, *Development Program Director*

Myanna Nielsen, *Administrative Director*

Nancy Bailey, *Fire and Fuels Program Co-Director*

Tanya Chapple, *Plants Program Director*

## Technical Specialists

Brendan Twieg, *Fire and Fuels*

Eric Darragh, *Fire and Fuels*

Erin Cadwell, *IT Coordinator*

## Project Coordinators

Jodie Pixley, *Western Klamath Restoration Partnership Project (WKRK) Project Coordinator*

Chris Root, *Fire and Fuels Project Coordinator*

Jimmy Peterson, *Fisheries Monitoring Program Coordinator/ Fisheries Project Coordinator*

Laura Jaffe-Stender, *Community and Stewardship Project Coordinator*

Michael Max Hentz, *Fire and Fuels and Fisheries Project Coordinator*

Michael Stearns, *Panamnik Building Coordinator*

Mitzi Wickman, *Fisheries Project Coordinator, GIS Specialist*

Laurie Adams, *Community & Stewardship Project Coordinator*

## Administrative Staff

Amanda Rudolph, *Accounts Payable*

Blythe Reis, *Administrator, Events Coordinator*

Heather Campbell, *Grants Administrator*

Lesli Dahl, *Payroll Specialist and Grants Administrator*

Alyssa Allgier, *Office Assistant*

Rachel Budai, *Office Assistant*

Salena McLaughlin, *Office Assistant*

## Field Technicians, Program Assistants, and Crew Leaders

Eric Nelson, *Fire and Fuels Crew Leader*

Tony Dennis, *Senior Field Technician, Fisheries Crew Leader*

Andrew Somers, *Fire and Fuels Crew Leader*

Rudy Galindo, *Fire and Fuels Crew Leader*

Jason Reed, *Fire and Fuels Crew Leader and Fisheries Field Technician*

Devin Finegan, *Plants Field Technician, Fisheries Technician, Fire and Fuels Field Technician*

Brandon Tripp, *Fire and Fuels Field Technician*

Chad Wilder, *Fire and Fuels Field Technician*

Daniel Woodman, *Fire and Fuels Field Technician*

Elben Andrews, *Fire and Fuels Field Technician*

Florance Condos, *Fisheries Field Technician*

Jess McLaughlin, *Fire and Fuels Field Technician*

Danny Davis, *Fire and Fuels Field Technician*

George Vest, *Fire and Fuels Field Technician*

Mark Dupont, *Fire and Fuels Field Technician*

David Lambert, *Fire and Fuels Field Technician*

Pamela Ward, *Panamnik Building Custodian*

Rachel Krasner, *Fisheries Field Technician and Program Assistant*

Tai Kim, *Fisheries Field Technician*

David Topps, *Fire and Fuels Field Technician*

Lee Anderson, *Fire and Fuels Field Technician*

William Manzo, *Fire and Fuels Field Technician*

Clifton Whitehouse, *Fire and Fuels Field Technician*

Dennis Whitehouse, *Fire and Fuels Field Technician*

Eric Fieberg, *Fisheries Field Technician*

May Fournier, *Panamnik Building Waste Coordinator*

Amanaka Yancey, *Plants Field Technician*

Teri Chanturay, *Plants Field Technician*

## 2019 Stewardship Interns

Tashawna Brink, Adriana Garcia, Allison Head, Martina Mapatis, Max Nelson, and Brooklyn Villanueva

## Board of Directors

Chris Hatton, *President*

Dean Davis, *Vice President*

Jon Grunbaum, *Secretary*

Molli White, *Treasurer*

Mark DuPont, *Board Member*

Heather Foust, *Board Member*

Jeanerette Johnny-Jacups, *Board Member*

Blythe Reis, *Board Member*

Carol Sharp, *Board Member*

Michael Stearns, *Board Member*

Sinead Talley, *Board Member*



# PANAMNIK BUILDING

## Panamnik Building Capital Campaign Phase III

Almost ten years after buying the Panamnik Building –MKWC has launched our Phase III Capital Campaign, to finish the renovation project we started, as part of our continuing effort to convert our small rural town from an extraction economy to a restoration economy.

- Top priorities include:
- Shifting our offices to the north side of the building
- Completely renovating our community space

Upgrading the electric, sound, and lighting systems, kitchen, and bathrooms

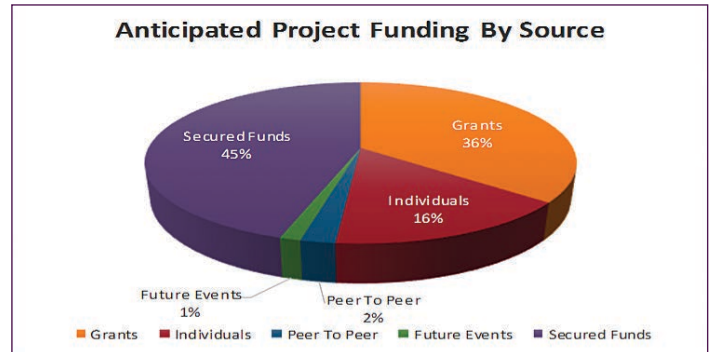
We want you to be a part of this.

Many of our supporters have already contributed significantly to our efforts but if you care to assist further here's some ways you can help:

- Make a donation, if you can, and please think big. Your donation is an investment in the future generations who will be running this place soon enough.
- Talk it up with your friends—even if you're not in a position to give money perhaps someone else you know does or suggest who we should be talking to.



Mothers Day Plant Tables 2017



First Aid Training

- Start a peer-to-peer campaign on Facebook with a goal of \$200 (or whatever you think you can raise). E-mail [erica@mkwc.org](mailto:erica@mkwc.org) to get instructions for setting up a Facebook or other fundraiser.
- Roll up your sleeves and get involved! Get in touch with Development Director Erica Terence to explore what skills, materials, and labor are needed to make different steps happen. All hands-on contributions of time or expertise are appreciated, and represent a significant part of the upgrades we've been able to complete so far.



Panamnik Building Event





# Mid Klamath Watershed Council

Panamnik Building  
38150 Highway 96  
PO Box 409  
Orleans, CA 95556

## Fire and Fuels

- Restoring our Relationship to Fire: Better Late than Never! ..... 1
- WKRP—Ramping Up at Last..... 6
- What About the Climate Emergency?..... 8

## Fisheries

- Boise Creek—Well I’ll Be Dammed ..... 10
- 2019 Coho Confab in the Mid Klamath ..... 12

## Community and Stewardship

- Brian Tripp’s Public Art Project at MKWC ..... 3
- MKWC Youth Stewardship Interns—Where they are Now?..... 4
- Intern Photos and Projects 2019..... 4
- KSOS Highlights ..... 5

## Plants Program

- Brewers Spruce ..... 15
- Weeds Watch—Himalayan blackberry..... 16
- Monarch Butterfly—If You Plant It They Will Come ..... 18

## Misc.

- Letter from the Directors ..... 2
- Klamath River Gains “Rights of Personhood” ..... 14
- Biking to Work—Using Muscles Not Gas..... 20
- MKWC 2019 Strategic Plan..... 21
- MKWC Nuts and Bolts—Admin at Work..... 21
- Who’s Working at MKWC ..... 22
- Panamnik Building Capital Campaign ..... 23

Water fights are par for the course during KSOS summer raft trips.

**We would like to extend our heartfelt gratitude to all who have contributed to our work in the restoration of this watershed. Thanks for all you do.**

