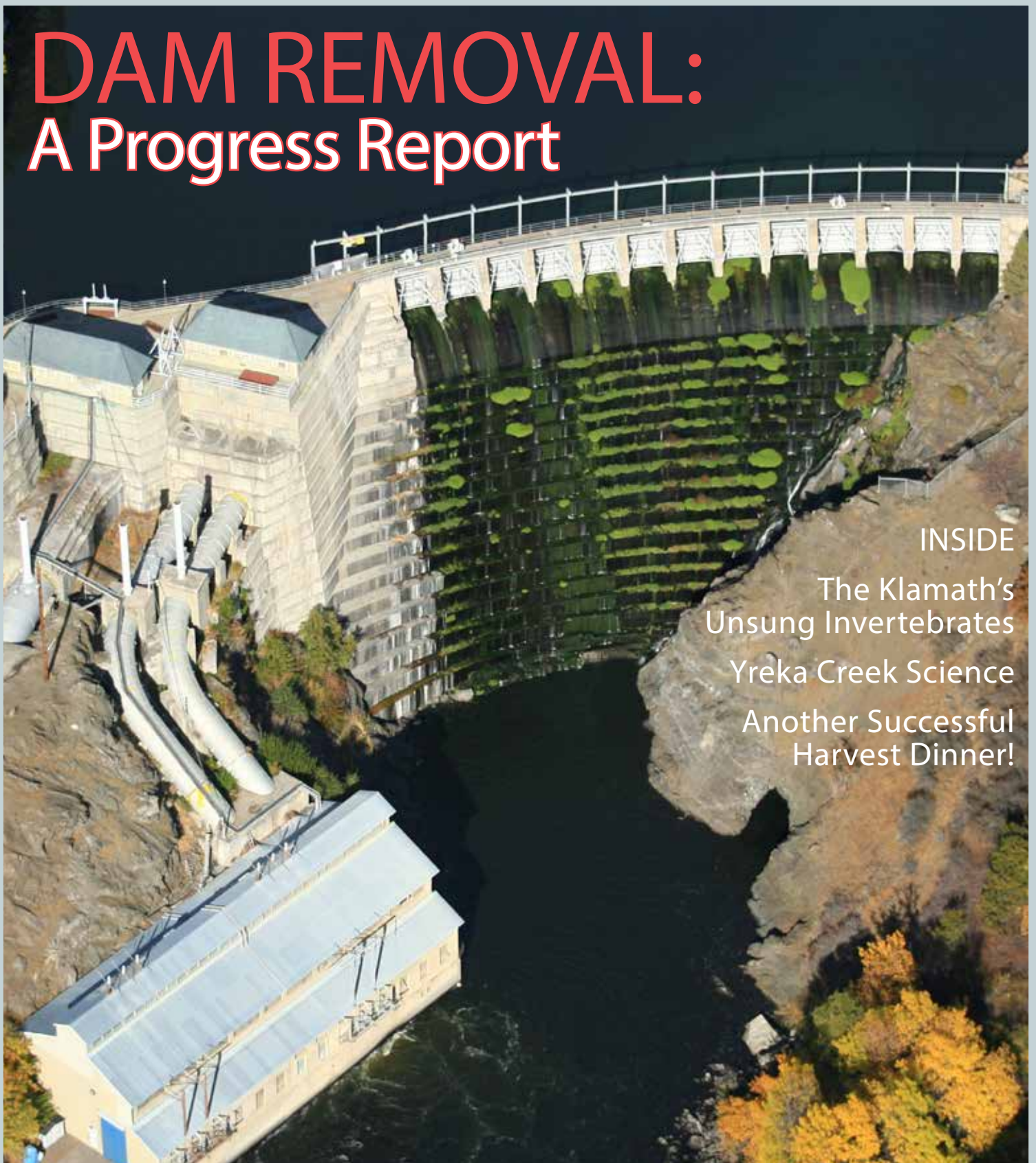


DAM REMOVAL: A Progress Report



INSIDE

The Klamath's
Unsung Invertebrates
Yreka Creek Science
Another Successful
Harvest Dinner!

“In the coming year, your vocal support for Klamath dam removal is more important than ever as Congress considers our coalition’s request for approval and funding.”



KRK STILL ROWING TOWARDS DAM REMOVAL

If you’ve been here before, you know that Siskiyou County is a special place. Home to ancient green sturgeon, disappearing salmon runs, and unique species like Brewer’s Spruce trees, Siskiyou County is also one of the largest areas remaining on the U.S. map free from cell phone coverage.

Yet, in spite of the clear economic benefits that will flow from dam removal to local communities, Siskiyou County is also home to a logic-defying social movement - a group of “dam-huggers” determined to ignore the facts and cling to the Klamath’s outdated and toxic-algae ridden hydro project as a symbol of progress and a source of mythical clean energy. These folks are buoyed by November election results showing that 79 percent of voting Siskiyou County residents want to keep the dams (see p. 9).

The number is daunting, and will likely be used in an attempt to dissuade members of Congress from supporting the Klamath dam removal agreements when legislation is introduced in 2011. But the reality is that the vote against dam removal stemmed from an irrational fear that life without dams means no electricity, diminished property values, sediment problems and flooding.

These assertions simply don’t hold water.

The electricity can be replaced by renewable sources including sun and wind projects that benefit the local economy. Studies show restored fish populations and water quality can lead to higher property values. A growing body of science shows sediment behind the dams is non-toxic and will flush out of the system relatively quickly. The risk of flooding will recede when the antiquated energy infrastructure that artificially alters flows is gone.

KRK’s job, as ever, is to combat this misinformation. In the coming year, your vocal support for Klamath dam removal is more important than ever as Congress considers our coalition’s request for approval and funding.

The Scott and Shasta rivers, both key Klamath tributaries, also set Siskiyou County apart from other places. These rivers are unique not only for their tremendous habitat potential

for coho and Chinook salmon, but also for some local property owners’ willingness to completely dewater and degrade that habitat to grow hay and cattle.

As with mainstem Klamath dam removal, KRK’s work to restore the Scott and Shasta is gaining momentum.

Our coalition is advancing precedent-setting lawsuits seeking to reform groundwater use, broaden the scope of the Public Trust Doctrine and strengthen the coho-killing permits required by the Endangered Species Act. We’re pressuring federal and state fish managers to enforce laws and regulations on the ground in the Scott and Shasta. And we’re taking a critical look at the impacts of Dwinnell Dam on the Shasta River, an impediment to fish recovery that needs to be addressed.

Among the various groups involved in restoring the Klamath basin, Klamath Riverkeeper is unique. We are the outside agitator working from inside the basin. We strongly support both ecological restoration and environmental justice. Our power comes from sound science, legal muscle, and you, the grassroots.

So please, help us show decision makers that the wonders of the Klamath watershed and Siskiyou County deserve protection and restoration, send in the comment letter on page 5. The “dam-huggers” may be vocal, but the scientific and economic facts support dam removal and the rewatering of tributaries.

To sustain our unique role in restoring one of the West’s most remarkable rivers, we rely heavily on members of our community who care about water and fish. Whether it’s by signing up to become a member or enlisting as a water quality monitoring volunteer, your support makes a big difference and we’re thankful for it. Keep it up, and we will, too!

For the Klamath,

Erica Terence,
Conservation Director/Executive Director
Klamath Riverkeeper

(Above) Erica Terence keeps an eye on the mid Klamath from the Klamath Riverkeeper raft with a little help from Kari Norgaard and Stormy Staats.

on the cover:

Copco I Dam, built in 1917 at river mile 198 on the Klamath River, is the oldest of PacifiCorp’s Klamath dams and a key culprit in the Klamath’s ongoing toxic algae problems. Photo by Scott Harding/Klamath Riverkeeper with support from Northern California Aerial Photography. View more bird’s-eye-view Klamath shots at <http://picasaweb.google.com/klamathriverkeeper>.

Yreka Creek: REPORT FROM THE FIELD by John Bowman

KRK's Volunteer Water Monitoring Program kicks off with successful first season



“Observing water quality changes gave the volunteers opportunities to understand how seasonal changes and use patterns affect the water quality of our streams.”

and safety measures set by the California State Water Board's Surface Water Ambient Monitoring Program.

As the sampling season progressed, the volunteers were able to become very familiar with the wide variety of changing conditions on the three target streams. Some days brought surprises such as fish and wildlife sightings, interesting and entertaining interactions with community members, and countless conversations and speculations on the changing and varied nature of stream conditions. As air temperatures increased and stream flows decreased, we observed increases in algae growth, contraction of aquatic habitat and disconnection of surface flows in several areas of the watershed.

Observing these changes gave the volunteers opportunities to understand how seasonal changes and use patterns affect the water quality of our streams. In addition, several sampling

sites located close to urban influences provided the opportunity to observe the accumulation of trash and other pollutants. Those sites demonstrated clear examples of the varying degrees of human interaction with the streams that flow through our communities and urban centers and the impact of these interactions.

By the close of the 2010 sampling season, thirteen local volunteers had contributed to the Yreka Creek



(Above left) KRK Monitoring Coordinator John Bowman takes a pH reading on Yreka Creek. (Above) Volunteers learn water quality monitoring

Citizen Water Quality Monitoring Project, with many individuals attending two or more sampling days.

LOOKING FORWARD TO 2011!

Though this year was the first full season of data collection, volunteers were able to collect a respectable amount of high quality information and everyone involved came away with an expanded knowledge of the water quality issues affecting the streams around Yreka, Ca. But above all, KRK staff and project volunteers enjoyed the irreplaceable experience of getting to know the streams and each other while contributing to the knowledge base of our local communities and watersheds. In future sampling seasons, Klamath Riverkeeper hopes to expand our volunteer group, data collection efforts, and the public's knowledge of water quality concepts as they affect streams and aquatic populations in the Klamath River watershed.

If you believe in this great program and want to see it continue, please consider helping out! We can use more volunteers (see yellow box), equipment, and financial support!

SOMETIMES ALL THE NEGOTIATION, legislation, litigation, and outright complications involved in the process of restoring the Klamath River watershed can seem overwhelming. That's why it's nice to know that people from different parts of our communities can get together and just enjoy a day spent knee deep in our local streams, learning about how they work and what they need. And this concept is the essence of Klamath Riverkeeper's Yreka Creek Citizen Water Quality Monitoring Program.

On May 15th, KRK kicked off the program with a volunteer sign-up and training day at the Yreka Creek Greenway restoration site on Oberlin Road in Yreka. The event was attended by enthusiastic volunteers from Yreka and several other communities around the Klamath watershed, who spent the afternoon learning about water quality and the methods for testing it.

Our goal for the project is to educate the public about basic water quality concepts by giving them hands-on experience in the collection of data and samples, while developing first-hand knowledge of the complexity and significance of our watersheds. It is also our hope that the data collected will enable watershed managers and stakeholders to make informed management and restoration decisions by filling current data gaps in the Klamath and Shasta River watersheds.

SCIENCE ON AN URBAN STREAM

Sampling days occurred on a bi-weekly basis from late May through early October. On each of these sampling events, data was collected for a variety of water quality parameters including

BECOME A WATER QUALITY MONITORING VOLUNTEER!

Contact KRK Monitoring Program Coordinator John Bowman at (530) 643-7487 or john@klamathriver.org

dissolved oxygen, pH, conductivity, turbidity, and air and water temperature. In addition, water samples were collected on three occasions for laboratory analysis of E. coli bacterial concentrations. There were four continuous sampling sites on Yreka Creek, two on Greenhorn Creek (a tributary to Yreka Creek), and one on the lower Shasta River below its confluence with Yreka Creek. All of the data and samples were collected by the volunteers themselves under the direct supervision of the KRK Monitoring Coordinator to assure strict adherence to sampling protocol



Blocking fish for nearly a century, PacifiCorp's Copco 1 Dam is so antiquated it would be cheaper to remove than to update. Photo by KRK/Northern California Aerial Photography.

KLAMATH DAM REMOVAL: A Progress Report

Restoration agreements gather support, face funding and legislative hurdles

THIS OCTOBER, KRK AND A GROUP OF KARUK AND Yurok Tribal members drove to Oregon to cook fresh salmon at the Klamath Basin Potato Festival. In the polarization and turmoil of the old Klamath, such a meeting of cultures was unlikely, if not outright risky. But things have changed, and as dam removal and its associated restoration package creeps toward implementation, tribes, irrigators, and activists are working hard together to support it.

Cooking “fish and chips” in the Upper Basin is a symbol of how far we’ve come towards restoration in this basin, but everyone recognizes we still have a lot of work to do. Klamath dam removal faces a gauntlet of complicated bureaucratic processes before it becomes real, and each of us must play our part to make sure the progress we’ve made is here for good.

A KBRA WE CAN WORK WITH

KRK has kept a watchful and critical eye over the Klamath dam removal settlement process over the last 3 years. Remaining outside the negotiations in order to retain the right to litigate, we advocated for strong environmental protections within the resulting Klamath Basin Restoration Agreement (KBRA). Over the last few years, we’ve analyzed and reanalyzed the legal and scientific strengths and weaknesses of the plans while having all manner of heated discussions with both its supporters and detractors. In the end, we found that the benefits outweighed the costs, and we’re throwing our weight behind the KBRA because we believe it’s the best dog in the fight at this time. But the grassroots organizing hasn’t ended. It has just shifted in an attempt to bring the agreements to fruition in a way that respects both the social and environmental needs of this unique and beautiful place.

DAM REMOVAL HEADS TO DC

One of the first major hurdles the dam removal agreements must jump are the legislative approvals needed to authorize, fund and implement the restoration package. While the billion-dollar price tag attached to water balancing, power replacement, and watershed restoration measures in the KBRA is staggering, many of the initiatives are job-creating and therefore the cash represents a direct economic stimulus to hard hit Siskiyou and Klamath Counties. In order to get the bill passed, our crew of hell-raisers must become hand-shakers on Capitol Hill to ensure that the importance of passing legislation this year and bringing the salmon home

is abundantly clear to legislators. Other challenges include effectively countering Siskiyou County’s dam-hugging rhetoric and keeping the intent of the settlement intact during the inevitable political horse-trading that happens during the law-making process. We must also stay vigilant to ensure that the Clean Water Act, Endangered Species Act and other environmental protections on the Klamath aren’t weakened by the bill.

PREPARING FOR THE FINAL DECISION

Meanwhile, numerous teams of federal experts are processing input from scientists, stakeholders and other governments in their push to complete a comprehensive environmental review on implementation of the two agreements. After collecting hundreds of verbal and written comments on the settlement during the summer of 2010, the feds released a National Environmental Policy Act (NEPA) scoping document which forms the groundwork for the final environmental review. That review will play a key role in the make-or-break 2012 Secretarial Determination on whether to remove the dams. Other factors in the determination will include economic studies, consideration by Oregon and California’s Public Utility Commissions and engineering projections and estimates about dam removal. Passage of legislation in 2011 is also key to an affirmative finding on dam removal from U.S. Interior Secretary Ken Salazar.

WHAT ABOUT THAT DROUGHT PLAN?

Even as dam removal and the associated KBRA move ahead in these legal and political arenas, some aspects of the blueprint to restore the Klamath Basin are as yet unresolved. Especially worrisome to some, tribes and irrigators are still negotiating over a contentious drought plan. Disagreement amongst negotiators centers around how to handle consecutive extremely dry years. The question of who will be forced to give up water during the Klamath’s increasingly common low water years cuts to the

heart of the conflict the settlement seeks to address. And in the wake of a very dry 2010 in the Upper Basin, farmers aren’t in a mood to compromise. Neither are tribal representatives, for whom the memory of the disastrous fish kill of 2002 is still raw. However, farming, tribal and fishing communities all concede that the settlement is designed to prevent these types of disasters, so, while formation of the drought plan may slow things down it is unlikely to kill the deal. Though if parties can’t arrive at agreement about it soon the government may take over creation of the drought plan. KRK is



Klamath basin potatoes join Klamath basin salmon at the first ever traditional salmon bake at the Klamath Basin Potato Festival in Merrill, Oregon this fall. Photo

keeping a close eye on this process, and is prepared to step in to provide a strong, independent voice if necessary.

The dam deal is also ambiguous about who will assume responsibility for cleaning up the foul-smelling, oxygen-deprived reach of river above Keno Dam – one of PacifiCorp's dams that is not slated for removal through the agreements. Left out of the KBRA's restoration measures, this reach of river represents a death zone for soon to be reintroduced fish populations struggling to reach the far Upper Basin for the first time in nearly 100 years. KRK is advocating for this orphan piece of the Klamath restoration puzzle in legislation, funding appropriations and regulatory processes to ensure that polluters and government agencies are held accountable for cleaning up the Keno reach.

DAM DEAL GATHERS SUPPORT

Our coalition is more determined than ever to overcome such obstacles to achieve the world's largest dam removal. And our base supporting the package of agreements as the most expedient, sensible way to solve the Klamath crisis continues to grow. Broader and more diverse support for the agreements was on display in the recent formation of the political action committee called Prosper, a brave group of Upper Basin individuals working to persuade their neighbors that the (KBRA) will deliver job security to their rural farm communities and their region. Prosper's tireless community organizing propelled a narrow but significant victory in November, when 52% of Klamath County voters backed participation in the settlement in this November's referendum election. Prosper's battle cry leading up to the vote, KBRA = Jobs, honed in on the plans economic benefits.

With so much at stake, KRK is committed to herding dam removal to completion on the fastest possible timeline without compromising water quality or fish health. We're counting on the grassroots movement that got us this far to speak up louder than ever in the coming year so we can maintain much-needed leverage and momentum for dam removal and fish recovery on the Klamath.



(Above) Karuk and Yurok Tribal members serve up fresh caught salmon and share conversation with Klamath Basin Potato Festival goers. (Top right) An Upper Basin irrigator attends a rally to support the KBRA in this November's Klamath County election. Photos by Klamath Riverkeeper.

TAKE ACTION!

Want to be part of the largest dam removal project in the history of the world? Now's your chance!

Help un-dam the Klamath by clipping and sending the note below, and feel free to add your two cents in the space provided.



#Clip and send

Senator Diane Feinstein
One Post Street, Suite 2450
San Francisco, CA 94104
Phone: (415) 393-0707
Fax: (415) 393-0710

Dear Senator Feinstein:

In 2011, Klamath Basin communities have an unprecedented opportunity to resolve one of the West's oldest water wars. The Klamath Basin Restoration Agreements developed between tribes, farmers, ranchers, fishermen, and conservationists would balance water use, remove four obsolete dams, create hundred of jobs, and restore salmon and steelhead to over 600 miles of their historic range.

But we need your support to make this dream a reality. Please commit your support to passing the legislation necessary to implement the Klamath Basin Restoration Agreements.

Personalize your letter to Senator Feinstein here:

Name:

Address:

City/State/Zip:

FRESHWATER MUSSELS

Underwater with the Klamath's unsung invertebrates

by Emily Davis

I AM HANGING UPSIDE DOWN BY ONE ARM, underwater, from a sunken tree branch. The river's current sucks at my neoprene-clad torso, threatening to tear me loose from my precarious perch. My mask fogs up, the oxygen in my lungs runs low, and I am counting freshwater mussels like mad in my head: 33, 34, 35, 36... out of air. Up I come to the surface. I've been tallying mussels at this site with my research partner for two hours. I'm cold, but we've still got two sites to go before we're done surveying for the day. I plunge in again, face first toward the bottom of the river. The mussels, wedged tightly shell to shell in the gravel, wave the purplish fringe of their gills. I rake the dense patch with my eyes, trying to get an accurate count as a school of juvenile Chinook salmon scatters back into the shadows.

Ask someone to name a threatened species that makes its home in the Klamath River, and odds are the answer you'll hear will be salmon, followed by suckers or maybe even sturgeon. But fish aren't the only aquatic creatures threatened by human activities on the Klamath. Salmon, the lynchpin of Klamath basin indigenous cultures, receive a lot of funding and scientific attention. But mussels, an uncharismatic yet ecologically important species, are also a traditional food and culturally important species on the Klamath. A bio-indicator of aquatic ecosystem health, freshwater mussels are both one of North America's most diverse group of organisms and one of its most endangered.

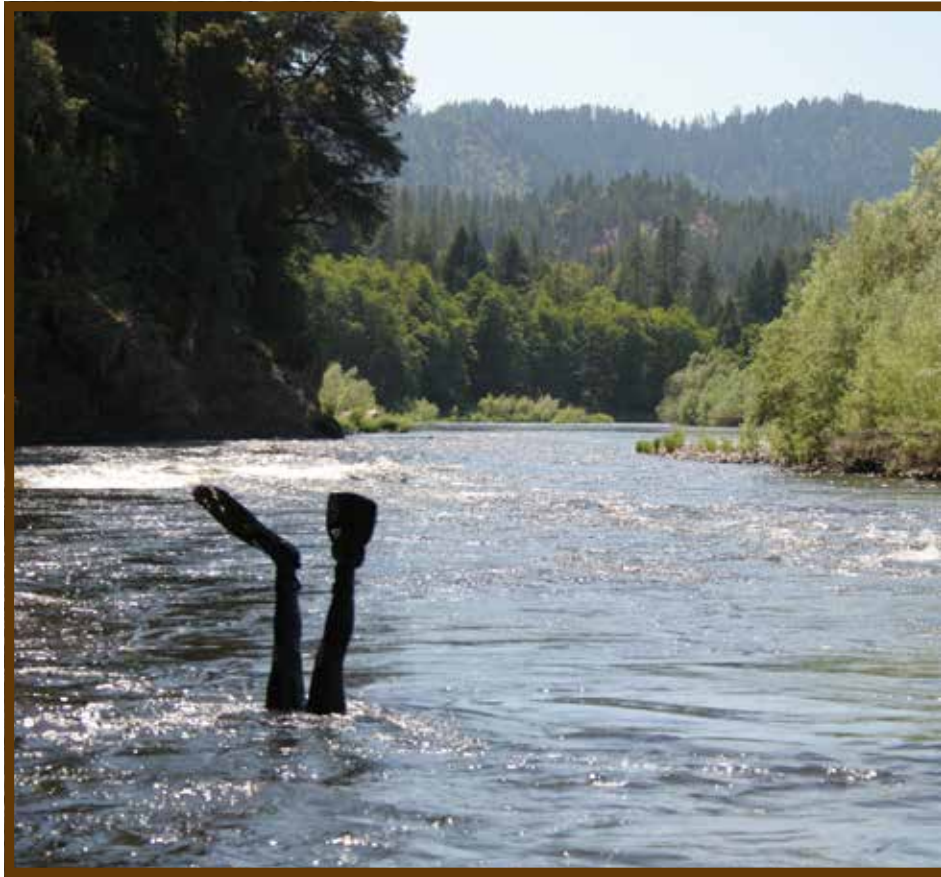
IN 2007, I BEGAN WORK WITH THE KLAMATH Freshwater Mussel Project, a collaboration between students from Whitman College, the Karuk Tribe, and the Confederated Tribes of the Umatilla. The following year

“Despite the physically and mentally challenging work, at the end of the day I loved doing research in the Klamath, where each instant is a unique matrix of interactions, an invisible, reticulate fabric of stone and current and creature.”

the Karuk Tribe received a two-year USFWS Tribal Wildlife Grant to expand study of the Klamath's mussel fauna with Whitman college students again helping out with the fieldwork and data analysis. The Karuk Tribe's mussel research has focused on the presence, absence, and distribution of mussel species within the river, as well as factors related to their habitat preference. Gathering this basic data will help the tribe develop baseline data that they can use in the future

to gage the status of mussel populations. In 2009 the tribe began study of mussel population age structure. Comparing the numbers of old vs. young mussels can tell us whether or not a given population is successfully reproducing. This year presence-absence surveys were also expanded into major tributaries like the Scott and Shasta Rivers.

FRESHWATER MUSSELS ARE THE LUNGS of the West's riverine ecosystems. As filter feeders, they suck particles out of the water and deposit them as excretions on the river bottom, making nutrients available for benthic organisms. With a single mussel filtering up to one liter of water per hour, mussels are nature's water purifiers, reducing turbidity and maintaining water quality. A large part of the river's total biomass, mussels are also lunch for animals like mink, otters, and herons. Because they are sedentary, long-lived (up to 100 years) filter feeders, mussels can provide cumulative long-term indication of environmental conditions at a site of



interest. Mussels are very sensitive to the effects of agriculture, logging, dam-building, etc., which can pollute, warm up, dewater, or increase sediment in the streams where they make their homes. The growth rings on a mussel's shell can act like tree rings, telling a water quality story many years long.

Mussels depend on fish, including some salmon and trout species, to complete part of their life cycle. They must pass through a larval stage as parasites on host fish, during which they grow and metamorphose into juvenile mussels before dropping off to settle onto the substrate. Without the right host fish, mussels can't pass out of the larval stage to adulthood, and therefore, conservation of mussel species is very much dependent on the conservation of the host fish they parasitize.

THREE SPECIES OF FRESHWATER MUSSELS have been observed in the Klamath, Salmon, Scott or Shasta Rivers. The most common by far is *Gonidea angulata*, the Western Ridged Mussel which can live up to 80 years and is tolerant of turbidity and poor water quality. *Margaritifera falcata*, the Western Pearlshell, is also found in the Klamath, although in far fewer numbers, and mostly downriver between Orleans and Weitchpec, on the South Fork Salmon, and in the Scott Canyon. *M. falcata* thrives best in very cold, clear water, such as the headwaters of streams, can live up to 120 years, and is sensitive to pollution. It requires salmonid species, such as steelhead, Chinook, and coho, to reproduce. The third species of mussel in the Klamath is a short-lived (5-10 years) unidentified species in the genus *Anodonta*, found sporadically only at sites upriver of Seiad Valley and just below Irongate Dam. *Anodonta* are generalists where host fish are concerned, and have a high tolerance for stagnant water and pollution.

We are currently unsure which, if any, of these mussel populations are

MUSSELS celebrates...



in decline, since there is no data on populations from before 2007. We do know that some species are relatively abundant—Klamath mussel beds can contain tens of thousands of mussels each and the largest found so far contained an estimated 25,000!

THROUGH MY LONG TERM INVOLVEMENT with the mussel project, I've had the awesome opportunity to collaborate with the Karuk Tribe on cutting-edge research of an understudied species in a threatened system. I've also been able to meet and work with many scientists, activists and advocates for the Klamath, such as Karuk cultural biologist Ron Reed.

In that first field season, after long field days spent negotiating dangerous whitewater, overwhelmingly numerous mussel beds, and the occasional bear, my research partner Aaron and I staggered back to our tents at night, a few more chicken scratches added to our notebooks—numbers we hoped, but weren't sure, would eventually mean something scientifically valid that could be used to protect and conserve these unsung invertebrates. At the end of the day, I loved doing research on the Klamath, where each instant is a unique matrix of interactions, an invisible, reticulate fabric of stone and current and creature. Though the tribe has not reapplied for funding to continue the mussel work in 2011, the project has so far successfully raised awareness of the importance of freshwater mussels among land management agencies, tribes, and non-profit organizations throughout the basin. Tribal members have a rejuvenated sense of knowledge and engagement with this traditional food species, and freshwater mussels are making their presence known at dam removal hearings, regional science conferences, and in local

classrooms.

The next time you go down to the riverbank, take a look around for mussel shells. The next time you see a salmon, imagine the microscopic mussel larvae hitching a ride to their destination on its gills, and take a minute to think about all those thousands of hidden mussels, doing the important task of filtering the Klamath through their bodies day in and day out. If we persevere, with knowledge, care, and the right conservation strategy, these “lungs of the river” will hopefully continue to thrive in the Klamath for many generations to come.

Emily Davis is a former Whitman College student and Mid Klamath Watershed Council staffmember who, along with her survey partner Aaron David, was part of the first field crew to begin studying the location and quantity of freshwater mussels on the Klamath River.

Klamath mussels & environmental justice

By Maymi Preston & Emily Davis

MMUSSELS HAVE A LONG HISTORY ON THE Klamath River beyond their important roles in the river ecosystem. The shells were used by women as spoons and as tools to cord iris rope. Iris rope itself was used in all aspects of tribal life from making dip nets to head rolls for Jump Dance and other ceremonies. The Karuk words for mussel are axchahaxúnanach and axthah / axthaha for river mussels or saltwater mussels. The Yurok word for mussel is pee'eeh.

Tribes also once ate the mussels in large amounts as they were an easy source of protein. After all, one need not chase down a mussel or wrangle it ashore in his net!

One traveler, passing through Karuk country in 1851, wrote: “[Freshwater mussels] form a favorite article of food with the Indians, who boil them in baskets by means of hot stones.” In times of hunger mussels were always there for the people. Today, however, mussels are no longer safe for people to eat.

In addition to the surveys described at left, the Karuk Tribe's Water Quality Department collected mussels for a special tissue analysis in 2007, 2008, and 2009. Alarmingly, they found liver toxins at unsafe levels within the flesh of the mussels. Microcystin, a liver toxin released by the blue-green algae blooms in the reservoirs behind PacifiCorp's dams, was documented at over 100 times the World Health Organization's established levels for safe human consumption.

The studies concluded that freshwater mussels are unsafe for human consumption at some times of year; a big concern for tribal members for whom eating mussels is culturally and nutritionally important. When tribal members are disproportionately impacted by environmental pollution in the form of an algae-poisoned traditional food source, environmental justice issues are at play.

The California Water Board has noted that the only realistic way to solve the Klamath's toxic algae problem will be to remove the dams implicated in creating conditions conducive to algae over growth. As dam removal undergoes federal analysis over the next few years (see page 5), Klamath Riverkeeper and other environmental justice advocates will make sure decision makers hear what the Klamath's freshwater mussels have to say!

(Top left and right) The 2009 Klamath mussel field crew conducts surveys on the China Point Run of the Klamath River. Hidden by wetsuits are Christine Tennant, Marie Westover, Michelle Krall, and Emily Davis. Photos by Kari Norgaard. (Bottom right) A Klamath *Gonidea angulata* mussel held by Emily Davis. Photo by

Klamath TMDL Approved!! New rules support dam removal

In a politically charged climate with the future of the Klamath dams, suction dredge mining, and other watershed threats at stake, the California State Water Quality Control Board adopted tough new water pollution rules for the Klamath watershed in September. After years of railing at meetings all over California about the Klamath's pollution problems, KRK and others are pleased the State Board has followed our recommendations for new limits on temperature, toxic algae, nutrients and minimum dissolved oxygen levels.

The approval of these new rules (called TMDLs for Total Maximum Daily Loads) by the State Board is a milestone in the movement to clean up the Klamath. The win is also a feather in the cap for all the tribal people, citizen activists, fishermen and scientists who have shown up again and again to demand that the Clean Water Act is actually implemented and enforced in the Klamath watershed. The TMDL includes not only pollution limits, but also an action plan to bring polluters into compliance with the limits. Because Oregon must meet California's pollution limits at the state line, we expect Oregon's companion TMDL – scheduled for adoption in 2011 – to be equally tough.

In a rare victory of science over corporate wrangling, the TMDL sets such stringent pollution limits on the section of the Klamath around PacifiCorp's dams that dam removal becomes the only realistic option for meeting the new targets. The State Board forwarded the plan to the California Environmental Protection Agency with its blessing (despite predictably loud objections

from PacifiCorp), which sends another nail into the coffin for the dams. The TMDL also draws protective buffers around tributaries and creek mouths, effectively prohibiting disturbing activities such as suction dredging near these vital cold-water refugia. When habitat conditions in the mainstem go south for the summer, fish need a place to escape the warm temperatures, low oxygen levels, and lethally high nutrient loads.

While there is much to cheer about in the new plan, KRK and other clean water supporters are still working hard to ensure loopholes are closed and that the plan is properly implemented and enforced. Our biggest beef is that the TMDL leaves agricultural pollution unregulated until at least 2012. Because pollution reduction measures for farmers and ranchers will be voluntary, not mandatory, in the meantime, KRK is pushing the State Board to expedite the process. "We believe that restoring the Klamath to a fishable, swimmable river has already been put off for too long," said KRK's Erica Terence. "The time for clean water is now, not next year, or the year after that..."

Legal fight continues as 19 coho return to the Shasta in 2010

Thought the Endangered Species Act was ironclad? Turns out there's a fish-sized loophole for industries when protecting endangered species might change how they do business. The loopholes are known as Incidental Take Permits (ITPs), and by "take" they mean kill.

California's Department of Fish and Game (CDFG) proposed in 2009 to grant blanket take permits for endangered coho salmon to cattle ranchers and alfalfa irrigators along the Scott and Shasta Rivers despite shockingly low and dropping fish counts. KRK and allies went to court in the fall of 2009 to challenge the permits on what should be two of the Klamath's most valuable fish-producing tributaries. After more than a year of delays, our legal challenge to the coho-killing ITPs finally got a court hearing in December, 2010. KRK, co-plaintiffs Pacific Coast Federation of Fishermen's Associations, Environmental Protection Information Center, Quartz Valley Indian Tribe, Sierra Club, Northcoast Environmental Center and EarthJustice attorneys for the coalition now await a judgment or further order

Farm machinery supports dam removal and the KBRA in Klamath Falls. Photo by

from the San Francisco Superior Court. Our suit claims CDFG's proposed Scott and Shasta Watershed Wide Permitting Programs failed to meet basic requirements of state environmental laws—particularly the California Environmental Quality Act and California Endangered Species Act.

Deceptively positive measures mandated by the ITPs—like willow plantings along trampled streambanks, fish screen installations to prevent fish from entering irrigation ditches and fish ladders over dams that block fish migration—serve as a smokescreen for a much more serious problem. The permits don't address the single largest threat to endangered fish on the Scott and Shasta: flow deficiencies and total de-watering due to agricultural overdraw. Instead, the permits sanction irrigation at current levels, which have proven lethal for fish. KRK's Erica Terence notes, "You can restore the streambed all you want, but it won't help fish if there's no water in the river."

The permitting programs, viewed by CDFG as a pilot for ITPs in other parts of California, also weaken enforceability of the California Endangered Species Act and lack quantifiable estimates of how many fish have been harmed by dewatering. Without analyzing population declines, the program can't prescribe mitigations equal to the increasing jeopardy faced by struggling coho salmon runs in the Scott and Shasta. The court heard the case in spite of efforts by CDFG and Siskiyou County to dismiss it on procedural grounds, determining that our coalition's claims are too substantial to be thrown out. Meanwhile, a counter lawsuit from the California Farm Bureau questioning CDFG's ability to use the permitting program to keep water in the severely dewatered Klamath tributaries also sits in legal limbo. As reported by the Redding Record Searchlight in October, both ITP lawsuits are the subject of intense scrutiny and anticipation by irrigators in other parts of the state who fear the rulings could be used to force them to give up water for fish elsewhere.

Fish advocates fear that the 19 coho salmon spotted returning to the Shasta River in 2010 may not get the help they need soon enough to reverse course and avoid extinction there. On the heels of even bleaker numbers in 2008 and 2009, the future of the coho—a species with a three-year life cycle—rides on spawning and survival rates this year. Thus, in addition to the ITP lawsuit, KRK has stepped up its campaign



A dry Scott River bed contrasts with irrigated fields in 2009. Restoration efforts in CDFG's proposed Watershed Wide ITPs do not address chronic agricultural de-watering of the Scott and Shasta Rivers. Photo by KRK/Nor. California



to enforce the U.S. Forest Service's instream water right for fish, one of the most obvious legal avenues we have for keeping water in the Scott River. And our coalition is readying a concerted push for more attention to these important salmon streams by the legislature and political appointees at the California State Water Board and CDFG.

A tale of two county elections Klamath & Siskiyou weigh dam removal

Both Siskiyou and Klamath Counties voted on dam removal this fall, with varying results. In Oregon's Klamath County, where agricultural water users face major compromise through the Klamath Basin Restoration Agreement (KBRA), Measure 18-80 opposing dam removal was rejected by a 4 point margin. Meanwhile, 79% of Siskiyou County voters condemned Klamath dam removal in a non legally-binding advisory ballot measure. Klamath County's approval of dam removal may be explained by active campaigning by settlement parties, and a broader spirit of compromise and negotiation between tribes and irrigators.

Opposition to dam removal in Siskiyou County was led by the County's right wing Supervisors and the Siskiyou Water Users Association (whose water use is not affected by Klamath dam removal) who cast dam removal as a break from progress that would depreciate private property and endanger downriver citizens. In fact, dam removal will bring millions in economic stimulus to Siskiyou Co., and will dramatically improve water quality and help beleaguered fish runs - improvements which case studies show are likely to boost tourism and improve private property values. The Siskiyou Supes' ongoing misinformation campaign scored an unfortunate victory this fall, and dam removal supporters are redoubling efforts to both inform local residents of the benefits of a restored river, and make sure lawmakers in Washington D.C. are not swayed by Siskiyou County's fear-based politics of pro-



The fight against suction dredge mining continues

California begins environmental review that could end ban

Klamath Riverkeeper took to the skies to catch outlaws last year after California put temporary bans on destructive suction dredge mining, which sucks up and spits out riverbed material, silting up streams and destabilizing fish habitat. With the assistance of a Lighthawk plane and pilot, former KRK Executive Director and photographer Scott Harding documented 15 illegal suction dredgers from the air and worked with the Karuk Tribe to make sure the authorities made use of the geo-coordinated photos to cite illegal dredgers.

Thanks to the dredging ban, and Scott's diligent follow through, suction mining has nearly ceased on the Klamath River. Kayakers and other river regulars have reported a big improvement in water clarity in the past year as a result. But both the court order to halt suction dredging throughout California and the law that imposed a moratorium on the destructive hobby only prohibit it until the state can complete a thorough environmental review.

The California Department of Fish and Game has released a schedule of five public input meetings to be held in January, 2011 as part of that environmental review process. In order to extend limits on suction dredging the state needs to hear not just from outraged recreational miners who claim their destructive hobby actually benefits fish and rivers but also from defenders of fish who know better.

Please attend one of these hearings and spread the word!

- Wednesday, January 26, 2011: Santa Clarita: Residence Inn by Marriott - 25320 The Old Road, Santa Clarita, CA 91381
- Thursday, January 27, 2011: Fresno: CA Retired Teachers Association - 3930 East Sagnaw Way, Fresno, CA 93726
- Tuesday, February 1, 2011: Sacramento: City of West Sacramento Galleria - 1110 West Capitol Ave., Sacramento, CA. 95691
- Wednesday, February 2, 2011: Redding: Shasta Senior Nutrition Program - 100 Mercy Oaks Drive, Redding, CA 96003
- Thursday, February 3, 2011: Yreka: Miner's Inn - 122 E. Miner Street, Yreka, CA 96097

All meetings will start at 5 pm and run no later than 10 pm. If you can't deliver your comments in person, send written testimony to:

Mark Stopher, Environmental Program Manager
California Department of Fish and Game
601 Locust Street
Redding, CA 96001

(Above) A self-portrait from Lighthawk's plane shows Scott Harding high above the Scott River canyon on the lookout for illegal suction dredge miners. The inset photo shows one of the culprits, a dredger operating after the ban on the Klamath between Horse Creek and the Scott River. Photos by KRK/Lighthawk.

Keepin' up with Klamath Riverkeeper...



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Mission

Klamath Riverkeeper restores water quality and fisheries throughout the Klamath watershed, bringing vitality and abundance back to the river and its people.

Waterkeeper Alliance

Klamath Riverkeeper is a local organization affiliated with the international Waterkeeper Alliance. A grassroots advocacy network with over 190 members, Waterkeeper Alliance connects and supports local Waterkeepers to provide a voice for waterways and their communities worldwide.

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KRK SETS UP SHOP IN KLAMATH FALLS
After three great years our Ashland office has officially closed in preparation for moving KRK's Oregon headquarters to Klamath Falls. While we miss the convenience of being based on the I-5 corridor, KRK looks forward to expanding our presence in the Upper Klamath Basin. KRK's Orleans office will continue as the hub of our California operations.

The shift coincides with a changeover in bookkeepers from the Rogue Valley to Klamath Falls as well. We wish our former bookkeeper, Evelyn Roether, luck as she embarks on a new job as Coordinator of the Bear Creek Watershed Education Partners. Likewise, we welcome our new, Klamath Falls-based bookkeeper Maggie Kelly. Most recently, Maggie has done accounting and office management for the Klamath Crisis Center, Klamath Tribal Health & Family Services, and the Klamath Alcohol and Drug Abuse's Wemble House. A proud owner of a 2010 Harley Davidson, Maggie rides motorcycles with her husband, children, and grandchildren, noting that "the family that rides together, stays together."

KRK TRAVELS FROM CALIFORNIA TO WASHINGTON FOR SALMON

In September, Klamath Riverkeeper's Erica Terence and the Karuk Tribe's Klamath Campaign Coordinator Craig Tucker joined fellow salmon supporters to put on the annual SalmonAid Festival at the San Francisco Aquarium of the Bay.

As part of the festival, KRK and the South Yuba River Citizens League hosted a film screening featuring documentaries about salmon struggles the world over. KRK also spent two days educating aquarium-goers about issues on the Klamath, and collected hundreds of signatures urging the US Forest Service to use its pivotal in-stream water right on the parched Scott River so fish can swim upstream to spawn.

In November, Terence traveled to the Elwha River on the Olympic Peninsula of Washington State to scope out the site of what will be the world's second largest dam removal (after the Klamath dams, of course). The

(Right) KRK's new bookkeeper Maggie Kelly with husband. (Below) one of the major dams on Washington's Elwha River



Elwha's aging hydroelectric dams are scheduled to be removed in September of 2011, after decades of political and financial delays. Meetings with representatives of the Olympic National Park (where the dams are located) and the Elwha Tribe (whose reservation is situated downstream of the dams) revealed that we have much to learn from our big sister dam removal project, but also that we'll have to design solutions that fit our unique problems in the Klamath.

Ecologists estimate that within five years of dam removal fish will repopulate the Elwha in numbers not seen there since the nineteenth century. They say that the ecosystem might approach "recovery" within 80 years. The Elwha offers us hope that freeing the Klamath from four outdated dams and the destruction they've caused is possible.

THANK YOU!

Pauline and Michael Robinson, Darren Mireau and McBain and Trush fisheries consultants, Judith Schrieman, Stephanie Tidwell, Erick Burres and the California State Water Board Clean Water Team, all our fabulous water quality monitoring volunteers, Don Flickinger, Jerry Mosier, the AmeriCorp Watershed Stewards Project, Laura Hurwitz, HSU Environment and Community Program, Michael Boyle, Elwha Tribe, Olympic National Park staff, Jessie Raeder, Jason Rainey and the South Yuba River Citizens League, Jonathan Rosenfield, Diane Paulson and Organic Nation Spirits, Thomas B. Dunklin, Dan Bacher, Ben Kempas, Chris Sproul, Daniel Cooper, Sara Aminzadeh, Linda Sheehan, California Coast Keepers Alliance, Konrad Fisher, Toz Soto, Will Harling, Susan Corum, Glen Spain, Pacific Coast Federation of Fishermen's Associations, Institute for Fisheries Resources, EarthJustice, Wendy Park, Trent Orr, Greg Loaire, Pat Gallagher, Tom Lee, Mark Dupont and Blythe Reise, Sandy Bar Ranch, Karuk Tribe, Yurok Tribe, Klamath Tribes, Becky Hyde, Steve Kandra, Dick Carlson, Jeff Mitchell, Kathy Walter, Prosper PAC, Kari Norgaard, Whitman College, Maymi Preston, Klamath Siskiyou Wildlands Center, Kimberly Baker, Scott Greacen, Environmental Protection Information Center, Jenny Staats, Klamath Justice Coalition, Anne Golden, Curtis Knight and California Trout, Chuck Bonham and Trout Unlimited, Brian Barr and Geos Institute, James Honey at Sustainable Northwest, Hundredth Monkey Foundation, Norcross Foundation, New World Foundation, Threshold Foundation, Bennett and Co., Noble and Lorraine Hancock and the Allen Hancock Social Change Fund, Thomas H. Jamison, Humboldt Area Foundation, Goldman Fund, Bella Vista Foundation, Weeden Foundation and Marisla Foundation.

Second Annual KRK Harvest Dinner

Makes a splash & earns some cash for river restoration & environmental justice on the Klamath...



Geba Greenberg serves up traditionally cooked Klamath salmon as Crystal Bowman and her daughter Cassidy assist on the food line.



Auctioneer and KRK Board member Leaf Hillman gets the bidding going as Erica Terence looks on.



KRK volunteer extraordinaire Sammy Gensaw helps Kenneth Brinks prepare salmon over a traditional pit fire outside the Panamnik Buiding in Orleans for the Harvest Dinner.



Susan Pienta & Ely Schenk rock out to Taxi on the dance floor.

Harvest Dinner photos by Stormy Staats and Erica



The Hoopa-based band "Taxi" gets the crowd rockin' on the dance floor.



Ashley Myers, Stormy Staats, Tawnia Johnson & Dori Marshal enjoy the fun, food, and festivities.



Yummy salmon and great conversation was had by all...

Thanks to our Event Sponsors & Volunteers!

FISH CATCHERS & COOKERS

Frankie Joe Myers, Leaf Hillman, Sammy Gensaw, Kenneth 'Binx' Brinks

FOOD & DRINK

Marguerite & Pat at Pierce Farm, Claudia & Vaughn at Claudia's Herb Farm, Nancy Doman Sue & Malcolm Terence, Craig Tucker, Robin & Norman at Coates Vineyard, Kim & John at Cabot Vineyard, Jere Cox at Mad River Brewing

MUSIC

Dennis Doran and the band Taxi

VOLUNTEERS

Jenny Staats, Scott Kingery, Chris Love, Corrina Cohen, Marc Robbi, Laura Hurwitz, Sean Borque, Melanie McPherson, Kelly Breen, Kerul Dyer, Crystal Bowman, Oscea Wagner

SPECIAL THANKS

Amy Spowles, Nancy Bailey, Geba Greenberg, Lucius Robbi, James Moots, Tawnia Johnson, Sonny Mitchell, Sol, Florence Crockett, Cassidy Bowman, Nat Pennington, Petey Brucker, Mid Klamath Watershed Council, Sherrie Lewis

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Send me a free t-shirt, my size is ____



A snowy Etna Summit and Salmon River Watershed by Scott

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