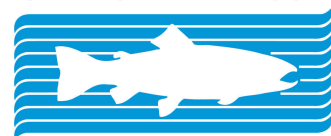


the current

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Summer 2016

CALIFORNIA TROUT



FISH · WATER · PEOPLE



From Headwaters to the Sea

Restoring one of the most prolific fisheries in
California - The Eel



SCIENCE SIDE

A look at Little Kern
golden trout's genetics
and conservation
history



HILTON CREEK

Ensuring the BOR
protect Southern
steelhead below
Bradbury Dam

Cover photo: Brad Finney



A message to you

Our goal with each issue of *The Current* is to bring our stories and projects to life, with more images, videos and links... offering you a rich perspective on the work **your support makes possible**. We are thankful to you, our donors, who help us ensure that there will always be resilient populations of wild fish thriving in healthy waters for a better California.

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From Headwaters to the Sea

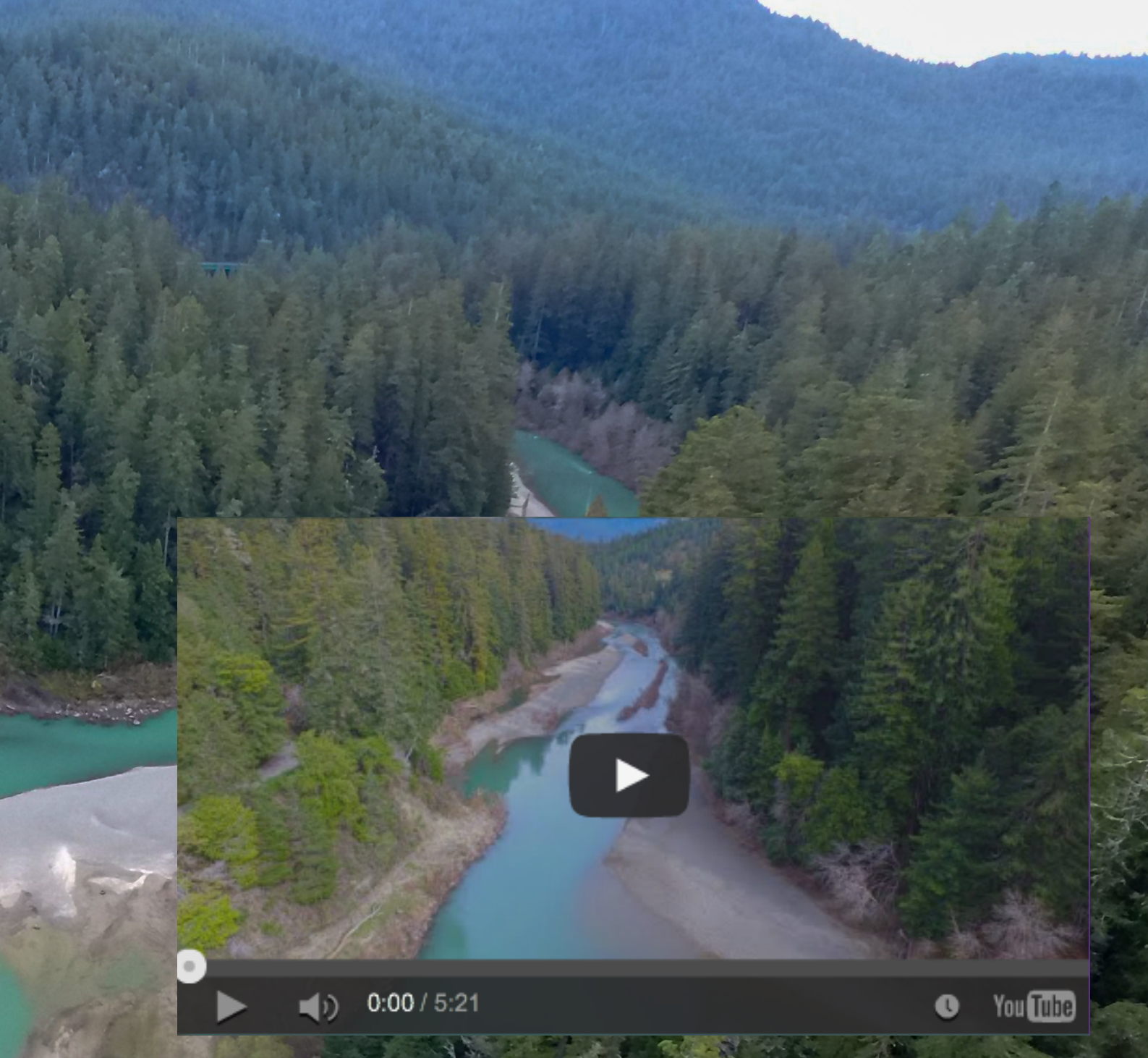
Restoring one of the most prolific fisheries in California - the Eel



by DARREN MIERAU
North Coast Director

Darren is a native Californian, a river ecologist, and joined CalTrout in 2011.

Along the backside of the coastal dunes, sea lions rested lazily on a sandy beach, at home in the vast 15,000 acre Eel River estuary. We wound through a small slough channel and emerged into open water in a small boat piloted by long-time resident and self-taught historian Bruce Slocum. Bruce's boat carried four other long-time Eel River enthusiasts – Dr. Peter Moyle, Dr. Ron Yoshiyama, Dr. John Williams, and me. Two of those distinguished fish-heads – Yoshiyama and Moyle – wrote the definitive story on the history of salmonids in the Eel River for CalTrout in 2010. In that report, they estimated that combined annual salmon and steelhead runs in the Eel River exceeded one million adult fish in good years (~800,000 Chinook salmon, ~100,000 coho salmon, ~150,000 steelhead). This wild river mouth is where those wild fish used to begin their journey. Only a trace of those mighty runs still remains.




The singular fact that distinguishes the Eel River is that its salmon and steelhead could be brought back to higher abundance than perhaps any other river in California. It will take a lot of work, but it's eminently feasible.

In 2012, CalTrout embarked on this mission and we're on course to make great strides. CalTrout launched the Eel River Forum in July 2012, and since then we've convened 19 day-long meetings, allowing more than 40 speakers to share their work, their knowledge, and their vision for the Eel River. The collective vision of this 22-member coalition is now expressed more fully than ever in the Final Eel River Action Plan, completed in February 2016 after nearly two years of writing, painstaking editing, wrangling, revising, and final formatting.

The Eel River Forum

The Eel River Forum has taken on a big challenge. The Forum's mission is **to coordinate and integrate conservation and recovery efforts in the Eel River watershed to conserve its ecological resilience, restore its native fish populations, and protect other watershed beneficial uses.**

This mission will require a concerted, dedicated, and long-term effort. This effort isn't a new beginning. An enormous amount of regulatory and restoration planning, on-the-ground restoration work, and considerable financial investment have all been put toward the Eel River over the past several decades, much of that effort by current Forum members. Those past and on-going efforts have collectively described historical Eel River fishery and watershed conditions; surveyed habitat, sediment, fish migration, and riparian conditions in the watershed; and established restoration and monitoring programs to improve instream and watershed conditions. *All of our meeting materials are posted on our website.*



The Forum's mission is to coordinate and integrate conservation and recovery efforts in the Eel River watershed to conserve its ecological resilience, restore its native fish populations, and protect other watershed beneficial uses.

Already the implementation of the Eel River Action Plan is fully underway. Leading by example, CalTrout is demonstrating a headwaters-to-sea whole-watershed approach. A few highlights:

- Since 2013, we have been focusing our energy and resources on restoring significant expanses of the Eel River estuary
- Working on two large-scale construction projects to remove fish migration barriers caused by the Northwestern Pacific railroad line along the mainstem Eel River
- Focusing on instream flows and water diversion policy in the face of an expanding marijuana industry and historic drought
- Assessing steelhead and salmon habitat in the 288 mile watershed above PG&E's Scott Dam and Lake Pillsbury, in anticipation of the upcoming Potter Valley Project (PVP) relicensing effort.

Let's look at these projects in detail...

As ranchers come to trust our goal of protecting working landscapes while enhancing natural resource lands and waterways for the benefit of listed species, our opportunities for collaborative partnerships will expand.

Eel River Estuary

The Eel River delta spans 24 square miles of tidal wetlands, slough channels, dairy-lands and pastures. The loss of approximately 90 percent of delta's original wetland habitat and tidal water resulted from land conversion during the "reclamation" era. A network of levees and tide-gates was erected in the estuary, and has reduced channel connectivity and blocked fish access into food-rich nursery habitats.

For the past several years, CalTrout has been leading a team of planning and design experts to reshape a significant piece of the estuary: The Wildlands Conservancy's 1,200 acre Eel River Estuary Preserve (EREP). It's been a dynamic



partnership, with our team seeking to design enhanced tidal wetland and freshwater habitats important for juvenile salmon and steelhead, reconnect slough and stream channels to their watersheds, create access and opportunities for recreation and outdoor education, and protect these valuable working landscapes from sea-level rise. Significantly, in 2015 the project footprint expanded to include the 600 acre Russ Ranch and Timber (RR&T) properties adjoining EREP to the south. This is an exciting outcome of our work, precisely the cascading result we strive for: as ranchers and other landowners come to understand and trust our goal of protecting working landscapes while enhancing natural resource lands and waterways for the benefit of listed species, our opportunities for meaningful collaborative partnerships on private properties will expand.

Fish Passage at Bridge, Woodman

In 2014 the half-million dollar Bridge Creek fish passage project was completed along the lower Eel at river-mile 35. For the first time in a century, salmon and steelhead can access critical habitat above the former railroad-line barrier. CalTrout is now turning our attention to the second biggest fish passage prize in the Eel River – Woodman Creek. Located in one of the wildest and remote areas along the mainstem Eel River, five miles north of Dos Rios and behind locked gates on private property, we now have all three key landowners on board to support this project. Assessments have shown there are up to **14 MILES** of high quality habitat in this watershed for Chinook, Coho, and steelhead. This year we will complete engineering designs and seek funding to construct this project, which will return the Woodman Creek confluence to its historic alignment with the Eel River, and allow salmon and steelhead once again to migrate, spawn, and rear in this watershed.

Water

While California has suffered from this historic drought and the Central Valley garners the majority of attention for its epic water battles and dwindling fish populations, our north coast watersheds are also thirsty for attention. With passage of the updated California Water Action Plan in 2014, there's been no better time to forge progress. The Eel River's South Fork Basin was selected in that Plan as one of five priority river basins statewide for a focused effort to protect and restore streamflows. With partners from the Humboldt State University River Institute and our Salmon and Steelhead Coalition, CalTrout is leading the effort along with several State agencies - the North Coast Regional Water Board, State Water Board, and CA Department of Fish and Wildlife.

The challenges of managing water in our coastal watersheds are complex. Gradually diminishing streamflows in the spring, typically beginning in May and lasting through September, is the natural stressful condition salmon and steelhead encounter in the South Fork Eel River. But with each passing decade, authorized and unauthorized riparian and appropriative water diversions, as well as a changing climate, have cumulatively altered streamflows and threaten juvenile salmon and steelhead.

(continued on page 54)



WHAT THE SCIENCE SAYS

This NEW column will highlight important scientific publications, by CalTrout staff and others, that expand upon our understanding of the management or science regarding trout, steelhead and salmon in California.



By DR. ROB LUSARDI
CalTrout/UC Davis Wild &
Coldwater Fish Research Lead

Threat Evolution

Conservation of inland trout populations in Califo

Native fish conservation and recovery is an onerous task. While there are many threats, hybridization has played an integral role in the demise of numerous inland trout species throughout the western United States. Nowhere is this more evident than California where introduced rainbow trout have threatened the genetic integrity of California golden trout, Little Kern golden trout, Kern River rainbow trout, Paiute cutthroat trout, and Lahontan cutthroat trout.

Species recovery, however, is challenging. Managers must often balance short-term goals of reversing a trend towards extinction with long-term species persistence. These objectives rarely align, in part



Photo by Mike Wier

nia

because they operate at different time scales, but also because threats can shift through time as a result of management intervention. Lusardi et al. (2015) recently examined this phenomenon in the Little Kern golden trout (*Oncorhynchus mykiss whitei*), an endemic species to the Little Kern River watershed in the southern Sierra Nevada. Similar to many western inland trout populations, introductions of coastal rainbow trout greatly reduced the range of Little Kern golden trout by approximately 90% with fewer than 5,000 individuals isolated in five small headwater streams by 1975 (Moyle 2002). The primary cause of decline was hybridization with introduced rainbow trout.

Recovery Uncovers New Threats

In order to improve Little Kern golden trout genetics and reduce the threat of hybridization, recovery actions focused on isolating populations with instream barriers (many of which were natural), eradicating hybrid populations using piscicides such as rotenone, and re-establishing unhybridized populations using hatchery fish. Similar strategies have been used on other California endemic inland trout such as Paiute cutthroat trout. The strategy was largely successful in slowing the rate of hybridization, with most populations exhibiting minimal rainbow trout genetic influence. There were, however, consequences associated with these recovery actions.

While the threat of hybridization was greatly reduced, re-introduced Little Kern golden trout populations exhibited very low levels of genetic diversity. Genetic diversity is important because it enables species to adapt to changes in their environment. If sufficient diversity does not exist, adapting to change becomes a difficult task and the potential for extinction increases. While resource managers were able to greatly reduce the threat of hybridization in Little Kern golden trout, a new threat of low genetic diversity emerged.

In describing the conservation history of the Little Kern golden trout, Lusardi et al. (2015) introduces the term **'threat evolution'** and defines it as fixing an initial threat (hybridization) through management action, but in so doing creating a secondary threat (low genetic diversity). A review of the literature suggests that the phenomenon has occurred in numerous other western inland trout species. This points to an inherent difficulty in salmonid recovery. Immediate action is often required to slow further demise, but those actions might produce new threats which could equally compromise long-term persistence. This is why adaptive management is an important tool to assist in species recovery. Management strategies must be flexible in their approach, understanding that different actions can elicit different responses that operate at diverse time scales.



Improving Genetic Diversity

Improving Little Kern golden trout genetic diversity will not be easy. Defining the entire genetic landscape of the Little Kern Basin appears to be a logical first step. Resource managers can then focus on removing remaining hybridized populations and promoting connections between isolated unhybridized populations. In some cases, this may mean altering barriers to promote connectivity or moving fish from one population to another in an effort to improve genetic diversity. There are risks associated with these types of management actions, but if approached cautiously and within a scientific framework, there are also potentially great benefits. Establishing Little Kern golden trout refuge populations outside of the basin should also be considered. Low genetic diversity and small population sizes that currently plague the Little Kern golden trout suggest that the fish is more vulnerable to random events such as disease, wildfire, drought, or further introductions of non-native fish. Establishing refuge populations would provide insurance against the potential future loss of salmonid biodiversity.



Numerous inland trout populations are threatened by the introduction of non-native rainbow trout. Recovery of inland trout populations is a difficult task and is, at times, uncertain. Uncertainty, however, should not mean inaction. New tools such as structured decision making allow managers to weigh the relative risks and benefits of particular recovery actions and identify uncertainty. Key to all of this is understanding that the recovery of inland trout populations will take time. Adaptive management and using the best available science to guide recovery provides the best path forward.

To read the original article that appeared in the September issue of *Reviews in Fish Biology and Fisheries* [click here](#).

Lusardi RA, Stephens MR, Moyle PB, McGuire CL and Hull JM. , 2015. Threat evolution: negative feedbacks between management actions and species recovery in threatened trout (Salmonidae). Reviews in Fish Biology and Fisheries 25: 521-535.



2016 Meadows Conference: Building Sierra conservation partners converge to develop framework for

On February 9th-12th, 2016 California Trout, with support from partners, National Fish & Wildlife Foundation and the CA Dept. of Fish & Wildlife organized the second Sierra Meadows Workshop at Mayacamas Ranch in Calistoga, California. Over the three days, there were approximately 70 workshop attendees representing more than 20 different State and Federal, non-profit environmental, academic and private consulting agencies.

The purpose of the workshop was to continue to build a broader meadows partnership with a focus on (1) how restoration affects greenhouse gas dynamics and the potential for developing “carbon credits” and (2) development of a Sierra Meadow Strategy and Prioritization Framework necessary to increase the pace and scale of meadow restoration in the greater Sierra.

The first day’s discussions and presentations focused on updates on the research being done to quantify the potential carbon sequestration of



Building a Broad Coalition for meadow restoration

restored meadow systems as well as a proposed road map towards carbon accreditation. Days two and three were dedicated to continuing work on a proposed Sierra Strategy and Prioritization document to provide a conservation and restoration framework for practitioners, land-managers, funders and policy-makers. *To view the workshop agenda and minutes, [click here](#).*

Outcomes of the workshop include (1) an understanding of current projects involving GHG research in combination with restoration, (2) the process of and barriers to payment for ecosystem services in meadows, (3) direction for completion of the Strategy and Prioritization document and (4) the decision to move efforts forward as the Sierra Meadows Partnership.

The workshop was very supportive in continuing and increasing momentum for meadow restoration in the Sierra along with the strengthening of an ongoing partnership. [Click here](#) to learn more about CalTrout's Sierra Headwaters Keystone Initiative and the efforts to restore Sierra meadows.



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Fish are to the ecosystem as canaries are to the coal mine. As such, abundant fish mean healthy waters and healthy waters mean a better California. Your donation will help ensure that California will always have resilient populations of wild fish in healthy waters.



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Support CalTrout in 2016 with a recurring gift or an amount greater than last year and receive one of these gifts.



By CANDICE MENEKHIN
Conservation Program

Candice comes to CalTrout all the way from South Africa where she studied and worked on natural resource and coastal and marine management. She's been with CalTrout since 2012, working as the Santa Clara River Steelhead Coalition Coordinator.

Hilton Creek Litigation

Ensuring adequate flows for steelhead

On October 21, 2015, a federal court approved settlement of an Endangered Species Act (ESA) case brought against the U.S. Bureau of Reclamation (BOR) by California Trout, represented by the Environmental Defense Center (EDC). The settlement requires, among other tasks, that the BOR complete long-delayed repairs to the watering system that releases water into Hilton Creek, a tributary of the Santa Ynez River below Bradbury Dam, for the benefit of endangered Southern California steelhead (*anadromous Oncorhynchus mykiss*).

The long-beleaguered watering system and faulty pumps failed to work properly on numerous occasions beginning in early 2013, resulting in Hilton Creek (designated critical habitat under the ESA) running dry. This failure led to the deaths of at least 393 steelhead and necessitated the stressful capture and rescue of at least another 634 stranded fish.



After multiple delays in even starting to fix the pumps and watering system, and after the BOR had still not specifically consulted with the National Marine Fisheries Service as required under the ESA concerning these incidents, California Trout brought suit in Federal Court in October, 2014. The suit, alleging violations of the ESA and its regulations, aimed to try to compel faster action to protect one of the most endangered fish in the United States.

The Santa Ynez River and its tributaries, including Hilton Creek, saw steelhead populations precipitously decline following the construction of Bradbury Dam in 1953. The Santa Ynez River steelhead run was estimated at between 13,000–25,000 adult fish in the last century but has fallen to only a handful of adult fish making the migration under current conditions.

BOR must not jeopardize steelhead

The BOR is required by law to release water into Hilton Creek to ensure adequate flows for steelhead to migrate, spawn and mature and to ensure that the fish does not fall further into jeopardy of extinction.

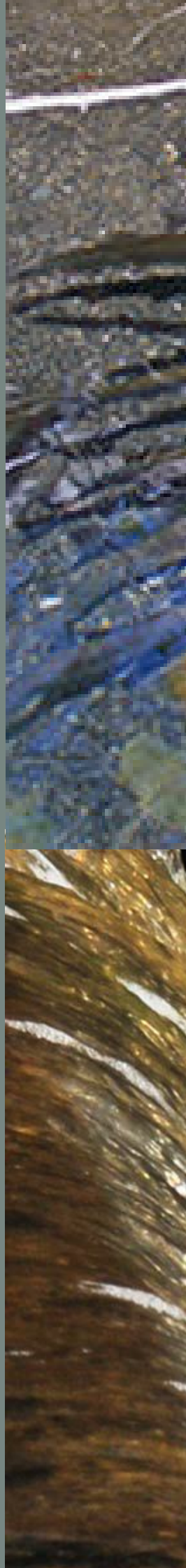
Water released into Hilton Creek flows directly into the main stem of the Santa Ynez River, providing water for downstream agricultural and other users. Unlike the former pumping system, the Hilton Creek Emergency Water Backup System is fully automated such that if the main pumps go down, backup diesel pumps should start automatically. The previous lack of automation was a large part of the long delays that led to fish deaths. The emergency backup system was completed and became fully operational in February, 2016.

Water doesn't flow uphill

However, another issue arose during the first week of December, 2015, when reservoir levels approached a low 665 feet. At that critical point, the pumps fail to work due to declining water surface elevation in Lake Cachuma. The BOR made the decision to preemptively shut the pumps off, instead of allowing them to stop on their own. At the same time they diverted releases effectively dewatering a reach on Hilton Creek.

In an attempt to minimize potential harm to steelhead and reinstate a constant flow from the reservoir, the BOR went from pump flow to gravity flow where they were able to establish a constant delivery rate of approximately 2 cubic feet per second. Throughout the process a Fish Rescue Team (consisting of Cachuma Operation and Maintenance Board and California Department of Fish and Wildlife) rescued and successfully relocated 247 steelhead and 7 prickly sculpin. Unfortunately there were 11 steelhead and 5 sculpin mortalities.

(continued on page 56)





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Photo courtesy Louis Andoloro



Photo courtesy Julia Thompson



George Revel

CalTrout Member since 2011

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JOIN
George in
supporting
CalTrout

"I get so much from the river. Supporting CalTrout is one way to give back".

George Revel started fly fishing at a very early age. He was drawn to the sport by the visual appeal of the cast, the simplicity of the equipment and of course, the fish.

His favorite California River is the Fall River – year round, cold water, awesome views and technically challenging fishing for rainbow trout with dry fly – it doesn't get much better than that. Although George notes that many of the rivers with great fishing are also beautiful places. For instance, steelhead

fishing up north on rivers meandering through great redwood forests.

George is a three-time National Fly Casting Champion, rod designer, FFF Master Certified Fly Casting Instructor, and past president of the venerable Golden Gate Angling and Casting Club in San Francisco. A well-traveled and seasoned outdoorsman, George loves to connect with nature, to slow down and get back to what's most important.

"Life gets crazy sometimes. Going fishing re-energizes me. And as long as the environment is healthy, I feel I can survive too."
"As an angler I can see the

rivers and fish and can judge their health compared over the years. CalTrout is realistic about its conservation efforts, pragmatic and compromising when needed but always vigilant. As anglers, we get so much from the river – we need to speak up for the trout and the steelhead to ensure they will be here in years to come. And thrive in those beautiful places so future generations can experience the joy of fishing like we do now."

George supports CalTrout and its conservation efforts. He invites you to join him and give back to California's native fish and rivers.



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By CANDICE MENEKHIN
Conservation Program

CalTrout to Restore Habitat in Southern steelhead to benefit from integrated water

Through a rigorous selection process, CalTrout will receive in excess of \$380,000 in grant monies for a Santa Clara River Steelhead Coalition - Invasive Non-Native Plant Removal, Ecosystem Restoration, and Habitat Protection Project on the Lower Santa Clara River. The grants are part of the \$12,296,380 Integrated Regional Water Management (IRWM) funding from Proposition 84 awarded to the County of Ventura. CalTrout has secured \$280,920 from Department of Water Resources IRWM Plan, via the Watersheds Coalition of Ventura County, and a \$100,000 pledge from the Santa Clara River Trustee Council. The project will remove 35-50 acres of invasive non-native plant species, namely *Arundo donax* (Giant Reed), and restore habitat in the Santa Clara River floodplain.

The Santa Clara River watershed drains an extensive and biologically rich region at the junction of five of California's 10 identified bioregions. The river is the



Santa Clara River Floodplain

management project

last major coastal system in southern California that retains much of its natural hydrology and still provides the ecosystem functions necessary to sustain more than 17 federally listed species, including southern Steelhead.

The river system provides critical habitat and landscape linkages between the bioregions, including the Sierra Madre and Santa Felicia mountains to the north and Santa Susana-Simi Hills and Santa Monica Mountains to the south. The river basin also supports some of the most valuable agricultural resources in California, as well as water resources for surrounding urban populations. Although the watershed contains extensive natural areas, it was identified as a critically endangered river by American Rivers in 2005 because of urban development and other threats in the region.

Invasion by arundo is one of the most pressing conservation issues in the watershed.

Since 2000, the State Coastal Conservancy has partnered with The Nature Conservancy's LA-Ventura Project to acquire, manage, and restore Santa Clara River Parkway lands. The Parkway project will result in the acquisition and restoration of a 25 mile-long, or 6,000-acre, corridor from the mouth of the Santa Clara River to the Sespe Creek confluence. The Parkway lands are identified as priority areas for CalTrout's project.

A recent study by the California Invasive Plant Council (Arundo donax Distribution and Impact Report, March 2011) shows that arundo can use up to six times as much water as native vegetation. High water consumption by arundo is undesirable in the Santa Clara River as it limits groundwater recharge of the Fillmore, Santa Paula, and Oxnard Plain groundwater basins. The City of Fillmore's sole water supply is groundwater from the Fillmore Basin. Likewise the sole source of water for the City of Santa Paula is Santa Paula Basin groundwater. Additionally, local agriculture is heavily dependent on groundwater. The projected water savings from CalTrout's project is 800 acre feet per year and will address groundwater overdraft in the Santa Paula and Oxnard Basins. This will serve to minimize water-related conflicts between competing urban, agricultural and environmental needs within the region, especially in times of drought and climate change.

Multiple benefits to arundo removal

Improved habitat will benefit species listed as "threatened", "endangered", or "special concern" under the federal and California Endangered Species Acts such as the Southern California steelhead. The lower Santa Clara River is home to 46 sensitive species, many negatively impacted by arundo due to lack of shading and poor foraging and nesting habitat. Sensitive species that will

benefit from arundo removal include the arroyo toad, fish species such as the spine stickleback and southern vireo.

Removing arundo and restoring wetlands not only provide a terrestrial habitat but also reduce the threat of wildfire by increasing recharge and associated groundwater. Wetlands provide summer rearing habitat for steelhead, as well as adequate riparian corridor to critical rearing habitat in the Santa Paula and Sespe Basins (a highly productive habitat for steelhead in the watershed).

Climate change trends show an increase in extreme rainfall events and an increase in fire frequency. By removing arundo we are addressing some of the climate change dangers in the watershed.

Removing arundo and restoring wetlands will increase groundwater recharge, restore associated wetlands, reduce the risk of accumulation of arundo biomass, and reduce wildfire. All in all, this project provides benefits to an array of species in the Southern steelhead watershed.

CalTrout is spearheading the Santa Clara River Coalition, and will be charged with providing a holistic restoration plan for the watershed-wide, providing an opportunity, and bring a comprehensive overarching plan for restoration.

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ampioning this project which will
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a united steelhead voice to the
oration of the Santa Clara River.



To learn more about the Santa
Clara River Steelhead Coalition,
"Like" our Facebook Page



Craig's Corner

by Craig Ballenger, CalTrout Ambassador

State's rain - feast or famine

With California's well documented drought put on hold by storms of the past winter, a few observations are worth noting. The State's geographical location has resulted in the view that California water is not in the best of locations, and that it's rain comes at the wrong time of the year.

The State's movement from drought to flood and back again has been documented since the era of California missions, though they were exclusively located in coastal regions. With the advent of the Gold Rush, extremes in climate suddenly had economic repercussions.

The winter of 1852 brought flood to Sacramento City, and in 1862 again. During the era of the fur trappers of the 1830's, winter quarters in the vast Central Valley were confined to Sutter Buttes and French Camp near Stockton. With around 300 horses in their brigades, keeping their feet from rotting in the marshy expanse was paramount. Both the Sacramento and San Joaquin Valley became massive marshes during the winter months.





For example, in the month of January, 1860 brought 1.64" of rain to San Francisco, 1861, 2.47"; **1862, 24.3"**; 1863, 3.63", and 1864, brought 1.83 inches. The 24.3 inches of rain in January 1862 astonished transplanted New England farmers. Boats were the only means of transportation in downtown Sacramento. The stench of rotting livestock mingled with houses and furniture floating in the streets. Sacramento was considered a 'doomed' city by the press of the day and it took months for the water to recede. The State Treasurer estimated the loss to be about one third of taxable property.

While flooding was minimal this past winter, California would do well to be more conservative in allotments of water, and types of crops best suited for a climate where winter monsoons are juxtaposed with months on end when no rain falls. As we move forward, there are great opportunities for the State to rethink 'over-allocated' water.

Whether this happens, moving forward, is a matter of conjecture.



Spot Check

by Mikey Wier

East Walker River

Last week I had the pleasure of visiting the East Walker below Bridgeport Lake. It had been a few years since I had fished that stretch of water. Visiting the Miracle Mile always brings back a flood of good memories from when I as a kid and the many years I guided fly-fishing on that river. Historically it was one of the best tail-water fisheries on the west coast.

When I was 9, I joined the Delta Fly-Fishers club out of Stockton. The old timers often talked about the East Walker and catching 30" browns on dry flies in the 60's and 70's. In the 80's there was a massive fish kill. Warm water released off the top of the reservoir in summer and a huge silt release from the bottom of the dam killed off a large number of trophy fish. By the 90's the river was back in pretty good shape and the fishery was recovered, but as many of the old timers would tell you, "It hasn't been the same since". Regardless of the past, when I moved to the Tahoe area in the mid 90's it was a pretty darn good fishery



still. In winter we spent many fun days fishing beatis hatches on the Nevada side. In summer months I would fish and guide the California water and the Sceirine Ranch on the CA/NV boarder.

Back then, the opening weekend on the California side was a huge deal. People would come from all over the state to hit the water at first light in hopes of a trophy rainbow or brown. Now, both the California and Nevada sections are open year round to catch and release fishing so there's not the nostalgia and frenzy that opening weekend used to bring.

Unfortunately, the drought hit both forks of the Walker pretty hard. With summer flows in the 30 csf range the past couple years and winter flows down into the teens the usable habitat for both aquatic invertebrates and fish became severely diminished. That, coupled with high temps in the summer months, has created less then ideal conditions for the stressed out fish population. These factors led to me giving the fishery a break for a while. I just couldn't justify guiding or spending much time down there picking on the already stressed out fish.

It was a pleasant sight to see the river flowing good and cold this month. When I arrived last week the flows were right around 90 csf which is a great flow for the Walker. Looking at the graph the river hasn't gotten over 150 for the past 3 years! It looked like the old EW I used to know. I could see from the graphs that the river had just come up recently so knew the fish would still be near the deeper pools where they congregate at lower flows. When the water bumps up it gives them a chance to get up into the riffles and spread out into prime feeding water.

My friend Chris and I worked our way through some of our favorite pools fishing the buckets as well as the riffles leading in and out of the pools. Chris started with a dry then fished nymphs while I opted for the streamer. That's a great combo for buddy fishing. One guy can come through with a light nymph rig or dry dropper set up and the streamer guy can run cleanup. That's how's we've done it for years. The day was sunny and warm. It was a Saturday and we only ran into two other fishermen all day so we got to choose our favorite waters.

As far as the fishing goes it was a bit slow but the fish that were caught were all very healthy and high quality. Chris got a nice brown on a small nymph down in the pocket water along the road. A buddy I ran into, who's a guide from the East side, got a super chunky brown on a nymph as well as a couple solid rainbows.

My best shot came in a deep pool up high. I threw a large streamer in looking for a stout fish. On the second cast my line stopped and I thought I'd hooked the moss on the bottom again. I lifted up the rod tip and up came a huge brown with my streamer in his mouth. When he saw me, he just simply opened his mouth and my fly came popping out. I never had a chance to set the hook. A few casts later my line came tight again. This time I set the hook and instantly felt weight on the end of my line. When I lifted up I could see the white of what I thought was a big mouth and saw the tail of a fish. I yelled at my buddy. The fish was waving around in the current but not fighting. My buddy laughed his you-know-what off as I pulled in half a dead fish. Well, that was a real slap in the face from the river gods but that's how it goes sometimes. My only hope was that the big old brown I'd seen just prior had eaten the other half of the mystery fish carcass.

(continued on page 56)





Photo courtesy of Dustin Peters

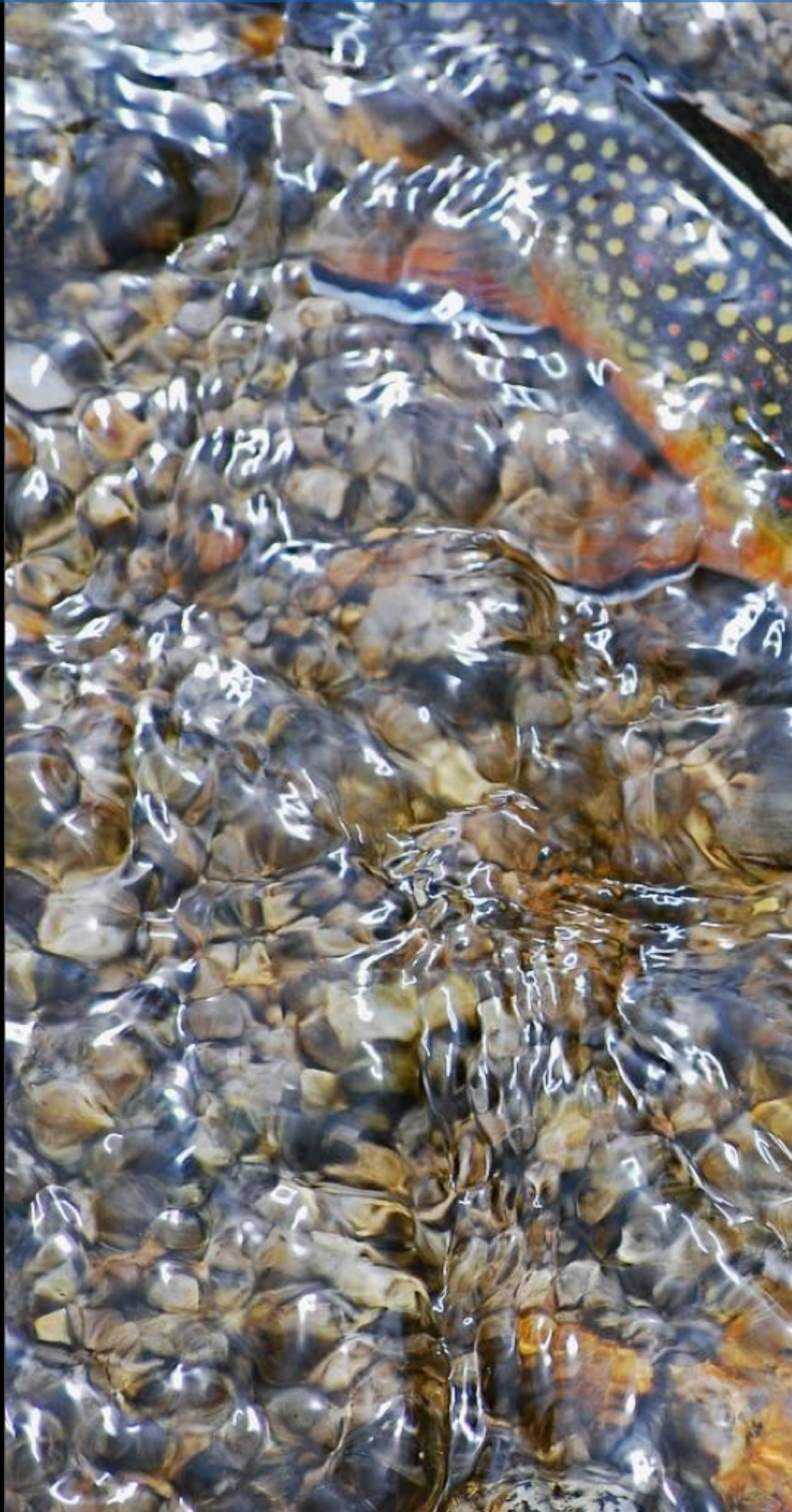


REFLECTIONS

Photos from CalTrout's Instagram followers @californi

JACOB DENAULT, @dnttouchtht

REFLECTIONS



at trout posted to #caltrout



REFLECTIONS

Photos from CalTrout's Instagram followers @californ

JASON FITZGIBBON, @jasonfitzgibbon



iatrout posted to #caltrout



REFLECTIONS

Photos from CalTrout's Instagram Followers @californ

ERIC OSTROM, Danville, CA @tugger_knot



hmatrout posted to #caltrout



REFLECTIONS

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BO ADAMS, @bo_did



matrout posted to #caltrout



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GARRY MCLEOD, @gmstudio



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REFLECTIONS

Photos by CalTrout Members and Followers

GARY ANANIAN, Kern River Conservancy @wilderne



esslyfe



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CALTROUT VIDEO VAULT



ETERNALLY WILD

Official selection of the 2016 Wild & Scenic Film Festival. Eternally Wild is CalTrout and Keith Brauneis Productions' film about the Smith River - its steelhead, its history, and its plight.



DICK GALLAND ON HAT CREEK

Cal Trout board member Dick Galland catches a nice Hat Creek rainbow on a dry fly in the Restoration area of Hat Creek. October 2015

SURFING THE WEB



BEHIND THE EMERALD CURTAIN

From Pacific Rivers - One of our favorites from the 2016 Wild & Scenic Film Festival. Catch it on tour when it comes to your city.



SAN CLEMENTE DAM REMOVAL

By California American Water - We love this project. The largest dam removal project in the history of California restores the Carmel River and steelhead trout.

Who We Are

IN THE SPOTLIGHT



SANDY JACOBSON, PhD, *Coalition Manager*

Sandra has a background in experimental and applied biology, strategic planning and project management in academics and industrial R&D, most recently in the renewable fuels sector. With a doctorate in genetics and a penchant toward science-based conservation, Sandra worked as project manager of the collaborative large-scale trout population genetic study completed in 2014

to identify native trout populations of coastal steelhead lineage in Southern California. She now works with Coalition partners to preserve and expand these remnant populations.

Photos: Mike Wier

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Eel River Restoration *continued from page 11*

In 2013, with support from the Resources Legacy Fund and Wild Salmon Center, CalTrout launched the multi-phased South Fork Eel River Water Conservation Program. We leveraged our initial funding into a Clean Water Act grant from the State Water Board to conduct streamflow studies in the South Fork Eel and several of its important tributary watersheds. The goal of this program is to address the crisis in low summer streamflows and water temperature impairments caused by water diversions, and address the need for new state policies to effectively regulate water diversions. To accomplish this goal, we are developing a standardized methodology for conducting streamflow and water supply-and-demand studies, describe watershed-wide diversion management practices for South Fork Eel River watersheds that balance environmental flow needs with human water demand, and eventually implement streamflow improvement actions in the South Fork Eel and tributaries.

And finally, we arrive at the headwaters. Located at river-mile 120 along the mainstem Eel sits Pacific Gas and Electric's Potter Valley Project (PVP). This 85 year-old project consists of two dams, a hydroelectric plant, and an eight-foot diameter diversion tunnel that pumps water from the Upper Mainstem Eel River to the headwaters of the Russian River in the Potter Valley. The PVP blocks migratory access to 288 square miles of protected watershed above Scott Dam, much of which is in the Mendocino National Forest, and releases inadequate spring and summer instream flows - limiting conditions for salmonid population abundance. PG&E has owned and operated the PVP since 1930. The Project's second

50-year hydroelectric power license expires on April 14, 2022 and state and federal agencies are currently in the relicensing process.

The impacts of the PVP to salmonids have been partially addressed downriver, but insufficient data exists to understand salmonid abundance in the headwaters above the dams.

Launched in the fall of 2016, the South Fork Eel River Habitat Assessment is a project designed to answer this fundamental question: what quantity and quality of streamflow is required for spawning and rearing of salmonids? The project capacity in the Eel River basin above Lake Pillsbury. The information from the proposed project will be used in the important "opening gambit" of the relicensing. Results from the assessment are ready in 2017 as stakeholders enter the FERC process.

What is the future of the Eel River? The optimistic one, in which it is restored to its abundance as described in Moyle's historical account. But achieving this vision will require significant investment in restoring functional and healthy estuaries and abundant streamflows below the dams. Our resources are over-allocated to addressing migration barriers to expansion. We need to address impacts from

For more on CalTrout's work on the Eel River Recover Keystone Initiative, visit caltrout.org/eel-river-recover-keystone-initiative

ver license is set to expire
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band habitat access, and
the Potter Valley Project.

ork on the Eel, visit our Eel
nitiative web page.

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Hilton Creek *continued from page 11*

While the BOR's actions may have been an appropriate response, the incident reiterated the importance of a reliable water system that can deliver water at a wider range of lake elevations, as well as an operational back-up system, which at that point had been pending for almost three years (original fish kills occurred in early 2013). CalTrout remains concerned that a pumping system will always be subject to problems, even with a backup system in place. Mechanical systems inevitably have problems, but passive gravity flow, as was always used previously to water Hilton Creek, is more reliable.

The BOR has been exploring possible concepts for redesigning the current watering system but, to date, has not come up with an option that will reliably deliver water to Hilton Creek at all required reservoir elevations. However, it was determined that gravity operational capabilities could be enhanced by providing gravity operations over a greater range of lake elevations, and thereby reducing the reliance on electrical pumping.

On March 25, 2016 CalTrout received a BOR report that acknowledges clear advantages to building a gravity fed system through the Bradbury Dam outlet works but find that it would not be possible to guarantee delivery of two cfs by gravity alone to all the required points under all expected/required conditions. In addition, the BOR believes certain technical, operational, biological, institutional, and other concerns have been raised which require further examination.

As such, the BOR is essentially back at the drawing board for how best to ensure more reliable flows below Bradbury Dam. They have requested a

consultation with National Trout Center, specific to the incidents of 2013, and are currently allowing California Trout to review the BOR's draft of the forthcoming settlement. The result from this consultation will be a key factor in the settlement.

This process will allow CalTrout to help ensure long-term recovery through proper management of the river, and prevent further fish deaths occurring at Hilton Creek. The need to adopt holistic solutions is so that manual water releases are the focus of recovery efforts. The BOR is also working to secure funding for steelhead on the larger Sierra River, solving complex resource issues, and the needs of wild fish and people.

The settlement can be viewed at:

Spot Check *continued*

If you do stop by the East Walker Dam, look out the new kiosk that was installed in the summer of 2014 in the new kiosk area. The plaques tell a story of the Cutthroat and CalTrout's efforts to restore parts of the Walker Basin. The photos from being out there and photographing our restoration efforts over a few summers in the remote area of the Walker.

Tight Lines,
Michael Wier

al Marine Fisheries Service
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Biological Opinion that will
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California Trout and EDC to
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from page 37

st Walker be sure to check
as installed by CalTrout in
e parking lot just below the
about the native Lahontan
efforts to restore the fish in
. They feature some of my
in the field filming and
ation efforts over the past
ote tributaries to the West



Photo courtesy of Tyler Graff

A person in a blue jacket and waders is fly fishing in a wide river. The sun is low on the horizon, creating a warm, golden glow over the water and the forested hills in the background. The water is rippled, and the person's shadow is visible in the water.

Thanks for spending time with
The Current

Please send us your emails, photos and comments to
current@calt trout.org We want to hear from you!