Spring 2014
Entry 136

CALIFORNIA TROUT
KEEPER OF THE STREAMS

CalTrout's mission is to protect and restore wild trout, steelhead, salmon and their waters throughout California.

Inside

Look for the limited time offer on page 23 and don't forget to visit our website for news, events and more gear!

caltrout.org

24-PAGE PROJECT UPDATE

Streamkeeper's Log

In the words of our Conservation Director...

In this annual update issue, we bring you a detailed look at over 30 on-the-ground restoration, protection and policy projects being driven by our six regional offices. Our work is more important than ever. The months ahead will be challenging for California's fish and water supplies as the state's prolonged drought enters the summer months. Water supplies are stretched thin and some streams are experiencing historic lows.

Fortunately, California's trout, steelhead and salmon have evolved and adapted to prolonged droughts, but human development of California's river systems has largely deprived fish populations of the resiliency needed to persist during tough times. Maintaining adequate water levels for these species, especially in drought years, is a benchmark for our work.

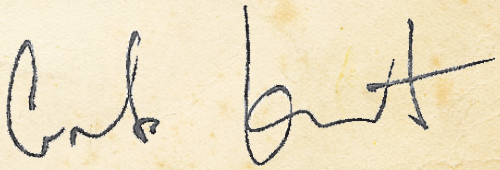
Drought can bring opportunity. Past droughts have resulted in innovative water conservation measures and, this year, there are a number of important water reform measures being introduced in Sacramento. For example, CalTrout is supporting legislation to tackle one of California's most vexing water policy issues – groundwater reform. We remain the only state without statewide groundwater regulation – Texas just beat us out a few years ago. Groundwater depletion is especially pronounced during drought as users turn to pumping when surface flows decrease. For fish, a lowered groundwater table means less streamflow – especially in late summer.

The state legislature is also considering a multi-billion dollar water bond for the November ballot. Recent polls indicate Californians are increasingly worried about water supply and support the need to invest in water infrastructure and other water-related issues. This water bond, similar to past water bonds, is controversial as it increases debate about issues such as the need for water storage while also proposing billions of dollars for watershed restoration. CalTrout is actively involved in this debate in Sacramento providing a strong voice for the fish.

In the midst of drought and efforts to reform water policy, our all-corners-of-the-state portfolio of restoration work charges on. Our model is to work in regional areas and show proof of concept success for fish and water issues. We use this success to demonstrate and drive water and fish policy reform statewide.

It's an impressive project list. At Knagg's Ranch in the Yolo Bypass, we are demonstrating how you can grow fish and rice on the same plot of land to the benefit of both—an increasingly important concept in times of scarce water supplies. We are excited to see our Hat Creek Restoration Project kick into high gear in 2014 taking us a big step forward toward a reinvigorated Hat Creek. Crack open this newsletter, the list of good work goes on…

Thanks again for your support and have a great California fishing season.



Curtis Knight
Conservation Director, CalTrout

McCloud River- Alan Sonneman

Blue Ribbon Waters

Preserving treasured angling experiences across California's most noteworthy fly fishing waters for future generations.

REGION: MOUNT SHASTA

McCloud River Projects

A Trifecta of Issues on a Key Blue Ribbon Water

The McCloud River has been under much scrutiny lately. Three specific initiatives are currently underway: 1) a new flow recommendation related to the McCloud reservoir FERC dam relicensing, 2) a federal agency proposal to reintroduce Chinook salmon above Lake Shasta, and 3) the Bureau of Reclamation's proposed plan to raise Shasta Dam.

Conservation Goals

- Protect and enhance the hydrologic and ecological processes to sustain the long-term health of the McCloud River.
- Protect the quality angling experience.

Recent Accomplishments

- Commented on State Water Board EIR for McCloud River dam relicensing.
- Conducted a Water Talk series on proposed effort to reintroduce salmon and steelhead above Shasta Dam.
- Commented on the Draft EIS for raising Shasta Dam.
- Completed a trout population survey with DFW.

Dam Relicensing Flows

The relicensing process continues – awaiting a State Water Board permit.

Through this process, flows below McCloud dam will be set for the next 40-50 years. Since 2006, CalTrout has been working to protect spawning rainbow trout and rearing fry from current detrimental dam operations (during the winter and early spring) while also protecting the high-quality angling experience.

We have helped craft a flow proposal that meets our goals and we have reviewed the flows with the guiding community to ensure their understanding and buy-in.

Salmon Reintroduction

The National Marine Fisheries Service (NMFS) and the Bureau of Reclamation are conducting feasibility studies for the reintroduction of winter and spring-run Chinook salmon and steelhead into the McCloud and/or Upper Sacramento Rivers. This would entail trapping adults in Redding and downstream and trucking fish around Shasta Dam – and that would be the easy part. Trapping the downstream out-migrating juveniles before they enter Shasta Lake is difficult and expensive.

Philsophically, CalTrout is not in agreement with trap and haul as a long-term, viable solution to salmon recovery. We are engaged with both NMFS and the Bureau of Reclamation to understand the early study proposals, and will stay engaged in the planning of a three-year pilot study that begins this year in an effort to ensure factors of concern are addressed appropriately.

Shasta Dam Raise

CalTrout continues to oppose Bureau of Reclamation's on again/off again plans to raise Shasta Dam by 18 feet. CalTrout is concerned because raising the dam would inundate up to three miles of the Upper Sac and McCloud Rivers. The McCloud is protected under the state Wild and Scenic Rivers Act, and the federal agency in charge of the fish (NMFS) is not even advocating for the raise.

Trout Population Survey

We did have some fun in the name of science on the McCloud River. In cooperation with the Department of Fish and Wildlife (DFW) we

conducted a mark-recapture trout population study. Gathering 10 of the best anglers we could find, we fished a 1-mile section of The Nature Conservancy property, marking all the fish we caught. We then went back a month later and repeated the effort. By comparing marked to unmarked fish, we were able to derive an approximate population estimate of 2,400 fish (> 6 inches) per mile. We will be repeating the study in future years to keep a pulse on the amazing wild trout fishery of the McCloud River. For more information on the McCloud fish population study see our video at https://vimeo.com/81778970 and blog post on Facebook.

What We Will Accomplish in 2014-15

- Final comments and advocacy on McCloud-Pit FERC project. See our position on flows below McCloud Dam at http://caltrout org/2011/05/a-caltrout-screencast-mccloud-river-flows-explained/
- Continue to oppose Shasta Dam raise and protect Wild and Scenic status.
- Go fishing on this amazing river!

Pit River Flow Relicensing

Protecting One of California's Best Blue-Ribbon Waters

Flows on the Pit River increased in 2011, reflecting the terms determined thru the 2003 FERC licensing process. The final approved flows (Pit 3: 300cfs, Pit 4: 375cfs, and Pit 5: 400cfs) represented significant increases over the prior baseline flows and CalTrout's recommendations.

Conservation Goals

- Protect hydrologic and ecological processes to sustain long-term health of Pit River.
- Protect Pit River wild trout populations and the existing blue-ribbon angling experience.

Recent Accomplishments

- Monitored new flow regime to understand impact on fish populations and angling experience.
- Engaged with the Pit River Technical Review Group (TRG) to assess the hydrologic and ecological impact of the new licensed flow regime.
- Evaluated annual PG&E monitoring data to identify trends in wild trout population dynamics.

What We Will Accomplish in 2014-15

- Remain fully engaged with the TRG to monitor and assess new flow impact on fish and angling.
- Continue to engage with the guide and angling community to represent and voice concerns about flows.
- Evaluate annual PG&E monitoring data and utilize FERC Adaptive Management Framework to advocate for improved hydro-management.

Fall River Restoration

Protecting California's Largest Spring-Creek Wild Trout Fishery

At over one million acre feet per year (890 million gallons a day), the Fall River generates more cold, clean, nutrient-rich, spring water than any river in California. This water fuels one of the state's largest hydroelectric projects (Pit River Hydro System), recharges (with steady year-round flows) the state's largest reservoir (Shasta Lake), and irrigates tens of thousands of acres of agricultural lands in the Sacramento Valley (Central Valley Project). Additionally, the Fall River supports the state's largest spring-creek blue-ribbon wild trout fishery. Existing threats to the fishery include invasive aquatic plants (Eurasian watermilfoil), degraded streambanks caused by unrestricted cattle grazing, and over sedimentation of the streambed and channel.

Conservation Goals

- Protect over 1 million acre feet of cold, clean, nutrient-rich spring water for California's largest blue ribbon spring-creek wild trout fishery.
- Restore over 30 miles of spring creek habitat conditions and riparian corridor for wild trout.
- Restore wild trout populations to more than 5,000 fish per mile throughout the Fall River's designated Wild Trout Area.

Recent Accomplishments

- Helped established the Fall River Conservancy (FRC) as a strong regional organization dedicated to the protection of Fall River wild trout populations and the restoration of spring-creek habitat conditions.
- Partnered with FRC, the Department of Fish and Wildlife, and UC Davis to design and coordinate the Fall River's first Passive Integrated Transceiver (PIT) Wild Trout Monitoring Program.
- Tagged 500 Fall River wild trout with PIT tags to monitor population trends and life history patterns and identify key habitat areas for protection.
- Partner with the FRC to launch our 2014 Streambank Restoration Project on the CalTrout property at Island Bridge.
- Funded key research by Chico State, USDA, and UC Davis aimed at restoring native aquatic vegetation and finding solutions to the invasive Eurasian watermilfoil outbreak.
- Clipped 500 fin samples for genetic analysis of wild and native Fall River trout.
- Began analyzing genetic samples at UC Davis to identify possible distinct native sub-species and other unique genetic traits.
- Began collecting and evaluating data on the migration and unique life histories of Fall River wild trout.

What We Will Accomplish in 2014-15

- Tag an additional 500-1000 fish in 2014.
- Assess Wild Trout Monitoring data to prioritize key habitat and spawning areas for restoration, track migration patterns, establish accurate baseline population estimates , and inform future Fall River wild trout management strategies.
- Collaborate with private land owners to install additional arrays at Lava Creek, Spring Creek, and the lower main-stem Fall River.
- Collaborate with UC Davis to process genetics data and identify possible distinct wild and native sub-species of Fall River wild trout.

Hat Creek Restoration

Bringing Hat Creek Back to Its Glory

Reports from the early 1900s suggest that Hat Creek was once California's premier spring-creek fly fishing experience. By the 1960s, however, the fishery collapsed due to invasive, non-game fish and heavy angling pressure. In 1968, CalTrout founders and CA DFW led a major effort to restore wild trout populations. These efforts were remarkably successful, and in 1972, Hat Creek was designated as the state's first Wild Trout Management Area -- a major paradigm shift away from hatchery supported fisheries. But in the early 1990s, conditions began to deteriorate again due to heavily degraded streambanks, unrestricted cattle grazing, and a collapse of native aquatic vegetation. In 2012, CalTrout secured the largest restoration grant in the organization's 40-year history. This funding is supporting a substantial, three-year project that commenced in the summer of 2013. Funding is being used to stabilize degraded streambanks, replant native vegetation, and restore in-stream habitat conditions.

On-the-ground restoration work is currently scheduled to begin in the summer of 2014 with work carrying through to the fall of 2015. The project consists of three key elements: 1) planting assemblages of over 5,000 native plants, trees, shrubs, and grasses 2) restoration of 1.5 miles of in-stream habitat using large woody debris, and 3) improvement of existing recreational infrastructure including 4.5 miles of trails, a new parking area, and a new low-profile pedestrian bridge at the historic Carbon Bridge site.

Conservation Goals

- Restore Hat Creek wild trout populations to over 5,000 fish per mile.
- Restore 1.5 miles of in-stream wild trout habitat with large wood structures.
- Restore over six acres of riparian corridor with over 5,000 native plants, shrubs, and trees.

Recent Accomplishments

Year 1: 2013 Finalize Plans (completed)

- Completed hydrology and geomorphology assessments of the sediment issue in Hat Creek; developed recommendations for restoring geomorphic function and in-stream habitat conditions in the WTA.
- Finalized an in-stream restoration strategy that will re-introduce large tree structures as habitat.
- Professionally surveyed and mapped the entire WTA, including the flood plain, key cross sections, degraded streambank reaches, historic Carbon Bridge site, and the proposed new parking area.
- Completed the first ever Hat Creek Riparian Restoration and Re-vegetation Plan; developed plans for re-vegetation using native assemblages of over 5,000 plants, trees, shrubs, and grasses.
- Developed partnership with the Pit River Tribe to provide conservation jobs, training, and youth mentorships.
- Partnered with the Pit River Tribe to develop a noxious weed management strategy, a muskrat management/trapping strategy, and a native greenhouse propagation program.
- Completed a professional archaeological and cultural resource inventory of the entire project area.
- Partnered with the CA DFW to establish baseline wild trout population estimates.

Hat Creek Youth Initiative

- Launched year one of the Hat Creek Youth Initiative, which provides local at-risk youth with paid summer internships and hands-on ecological education and applied restoration training.
- Coordinated quarterly Hat Creek Resource Advisory meetings to secure feedback and guidance from over a dozen different partners, state and federal agencies, and stakeholder groups.

What we will Accomplish in 2014 and Beyond

Year 2: 2014 Next Steps

- Secure all final permits and approvals, including the California Environmental Quality Act (CEQA), Section 106 of the Historic Preservation Act, the Clean Water Act, Section 1600 of the CA DFW Code (Streambed Alteration Agreement).
- Secure final project approval from PG&E (land owner), the CA Natural Resources Department, and the California Public Utility Commission (CPUC).
- Begin recreation infrastructure improvements, including trail restoration, parking area re-location, replacement of the historic Carbon Bridge, and interpretive sign plan.
- Begin year one (phase 1) riparian restoration and native plant re-vegetation.
- Launch the Hat Creek Muskrat Control Program to reduce populations.
- Re-introduce large woody debris structure to the Carbon reach (phase 1).
- Continue year two of the Hat Creek Youth Initiative and launch Pit River Tribe workforce training and jobs program.

Year 3: 2015 Complete Construction, Establish Long-Term Maintenance and Monitoring

- Complete second year (phase 2) of riparian restoration and planting.
- Finalize construction of all recreation components: trails, signs, parking area, pedestrian bridge.
- Maintain and monitor all restoration components: measure plant survival rates, re-plant where necessary, monitor trail erosion and sustainability, monitor in-stream habitat restoration impact, measure geomorphic response to in-stream structure, monitor bank stability, muskrat population.
- Utilize adaptive management to improve in-stream habitat strategy based on year one observations.
- Continue working with DFW on wild trout population estimates to measure success of project over time.

Mount Shasta Spring Water Management

Protecting Northern California's Unique Headwater and Springs Resources

Mt Shasta's cold, clean spring waters feed critical municipal water supplies and nourish the region's famous trout populations in the Upper Sac and McCloud Rivers and the salmon and steelhead in the Shasta River. Lack of base-line information and limited awareness of Mt Shasta's water resources makes it difficult to develop science-based water policy and management decisions.

Conservation Goals

- Protect the ecologic and hydrologic integrity of Mount Shasta's unique spring waters.
- Establish an adequate springs monitoring system to measure changes in flows and water quality over time and share information with the public.
- Provide real-time groundwater monitoring data to the community of Mount Shasta to help inform policy and management decisions regarding the proposed Crystal Geyser bottling facility.

Recent Accomplishments

- Presented Mt. Shasta Springs Summary Report to 250 Mt. Shasta community members and decision makers at the Crystal Geyser Town Hall Public Meeting.
- Engaged Crystal Geyser and outlined necessary steps for establishing an adequate groundwater monitoring system for Big Springs on the Upper Sacramento River.

What We Will Accomplish in 2014-15

- Continue to provide to the public reliable spring water monitoring data and policy analysis regarding the proposed Crystal Geyser bottling facility.
- Engage Crystal Geyser and recommend necessary steps for installing a groundwater monitoring system for Big Springs on the Upper Sacramento River.
- Update and expand the Mt. Shasta Spring Waters Study and continue to monitor the 22 spring systems identified in the report for a full suite of water quality and geochemical parameters.
- Develop a comprehensive springs monitoring program that will include water supply forecasting and support for the upgrading of municipal water and wastewater infrastructure.

Preserving ecologic integrity. Photo: Kirston Koths

REGION: EASTERN SIERRA

Eastern Sierra Region Water Management

Balancing Supply and Demand for Fish and Communities

The eastern Sierra region supplies water for numerous economically disadvantaged communities in the area, the City of Los Angeles (30-50% of LADWP's water), as well as local fisheries. At the state level, over exploitation of natural resources to meet urban water demands is posing a threat to the health of Sierra Nevada ecosystems, and thus the health of our imperiled native trout fisheries. Therefore, integrated and comprehensive water planning is essential for the long-term sustainability of our ecosystems. California's Integrated Regional Water Management Program provides an opportunity to coordinate regional resources management to help ensure 1) adequate water supplies and flows, 2) improved water quality and 3) healthy ecosystems. In 2008, CalTrout initiated what has become the Inyo-Mono IRWM Program. For more information, go to inyo-monowater.org.

Conservation Goals

- Protect the water resources necessary for sustaining healthy populations of wild and native trout and the habitats that support them throughout the Inyo-Mono planning region and beyond.
- Increase water-use efficiency resulting in greater water supplies to relevant fisheries.
- Improve water quality throughout the eastern Sierra.
- Remove and control the invasive species threatening eastern Sierra watersheds.

Recent Accomplishments

- Oversaw five fully-funded regional water management staffers.
- Produced the IRWMP plan document which outlines goals and objectives for the region (including a critical climate change vulnerability assessment).
- Implemented an array of projects including: 1) development of the West Walker River restoration plan, 2) Oak Creek watershed restoration plans, and 3) a Phase I stormwater management plan for the town of Mammoth Lakes.
- Mark Drew, CalTrout Eastern Sierra Program Manager, served on the Strategic Focus Group, tasked with providing guidance to DWR's Strategic Vision for IRWMP.

What We Will Accomplish in 2014-15

- Complete various restoration projects including: restoration plan for the West Walker River & Oak Creek Watershed Management Plan.
- Complete a documentary highlighting the importance of water and water resources management in rural, headwater regions of California.
- Develop a regional plan to control and eradicate aquatic invasive species.
- Ensure that Sierra Nevada watersheds receive increased IRWMP funding.

Hot Creek/Upper Owens Water Quality

Controlling Pollutants Associated with Development

Mammoth Creek and by extension, Hot Creek and the Upper Owens, are iconic fisheries in the eastern Sierra, yet they remain vulnerable to impairments associated with stream chemistry and hydrologic characteristics. These possible impairments to the river are the result of historic mining and development in the area. Excessive metal concentrations in streams (often due to historic landuse activities) can degrade aquatic ecosystem and, in turn, local fisheries. CalTrout is working to identify and mitigate potentially harmful metals in the Mammoth Creek corridor.

"Hot Creek" - Michael Carl

Conservation Goals

- Identify and characterize sources of non-point pollution impacting waters of the Mammoth Lakes Basin and downstream rivers within the Upper Owens hydrologic region.
- Develop management recommendations and strategies to mitigate non-point sources of pollution in the Upper Owens hydrologic region.
- Improve water quality (and in turn the fisheries) in the Upper Owens hydrologic region.

Recent Accomplishments

- Completed a multi-year project to identify potentially harmful constituents in Mammoth Creek with a consortium of partners (American Rivers, USFS, TOML, etc.).

What We Will Accomplish in 2014-15

- Working with US Forest Service, develop strategies to mitigate the presence of mercury within the Mammoth Lakes Basin.

Mammoth Creek Flow/Habitat

Instream Flows to Support Healthy Fish

Mammoth Lakes Basin sits above and feeds the Upper Owens River. Mammoth Creek, which flows into Hot Creek, is a primary tributary to the Upper Owens. So, the health of Mammoth Creek is directly related to the health of Hot Creek and, in turn, the Upper Owens River system. After reaching a settlement agreement with CA DFW and the Mammoth Community Water District and with the approval of the Mammoth Creek EIR that ensures (among other things) adequate instream flows, CalTrout is now turning its attention to the implementation of the settlement agreement.

Conservation Goals

- Enhance and protect fisheries in Mammoth Creek and Hot Creek.
- Improve water conservation for the town of Mammoth Lakes.
- Improve health of the Mammoth Lakes watershed.

Recent Accomplishments

- Initiated the implementation of the Settlement Agreement, including the Mammoth Lakes Basin Fisheries Enhancement Fund to improve local fisheries.
- Monitored groundwater extraction to ensure instream flows are not negatively impacted.
- Communicated Settlement Agreement progress to stakeholders and the community.

What We Will Accomplish in 2014-15

- Work with the Mammoth Community Water District and CA DFW to fully implement all terms of the settlement agreement.
- Petition State Water Resources Control Board to designate the Mammoth Lakes Basin as fully appropriated, ensuring no more additional surface water will be diverted.
- Initiate first annual Mammoth Creek Fisheries Enhancement Grant Program.
- Ensure legally binding instream flows are achieved.
- Review and monitor MCWD's comprehensive water conservation program.
- Monitor groundwater pumping to ensure over-exploitation of groundwater does not occur.

Mono Basin Campaign

Ensuring Healthy Flows on Four Main Tributaries

In 2014, the Los Angeles Department of Water and Power (LADWP) is scheduled to pursue an amended water license from the State Water Resources Control Board (SWRCB). The terms of the new license are subject to the terms that are included in a landmark settlement agreement (SA) between CalTrout, CA DFW, The Mono Lake Committee (MLC) and LADWP that was reached in September, 2013. The SA includes comprehensive obligations on the part of LADWP to ensure instream flows are optimized to support healthy fisheries for decades to come. The next step is for the SA parties to finalize an amended license for LADWP that will be submitted to the SWRCB for their approval. Once approved, all requirements of the SA will be implemented.

Conservation Goals

- Restore ecosystem processes of the Mono Basin's four primary tributaries essential for self-sustaining populations of wild trout.
- Ensure implementation of base flows and stream ecosystem flows for Rush, Lee Vining, Parker and Walker Creeks.
- Ensure LADWP remains in compliance with SWRCB orders relating to protecting the fisheries of the Mono Basin.

Recent Accomplishments

- Achieved a landmark settlement agreement with the MLC, CA DFW and the LADWP to resolve outstanding issues associated with implementing recommended flows and a long-term monitoring plan for the Mono Basin.

What We Will Accomplish in 2014-15

- Working with settlement agreement partners, finalize and seek approval of amended water license.
- Partner with DFW, MLC and LADWP on the implementation of long-term flows and monitoring programs.

Mono Basin Agreement Group

Carson River Restoration

Wild Trout Populations Are Dwindling

This highly regarded angling destination is in a state of decline. There has been limited focus on fisheries conservation resulting in dwindling wild trout population and an over-dependence on stocking. Furthermore, habitat is declining due to agricultural impact and channelization.

Conservation Goal

- Significantly increase the number and distribution of wild and native trout in the Carson and ensure their long-term sustainability.

Recent Accomplishments

- Completed a comprehensive literature review of the Carson Watershed and presented findings to the Carson Watershed Council.

What We Will Accomplish in 2014-15

- Develop a long-term strategy for the Carson, including a comprehensive set of restoration and recovery actions.

Imperiled Native Trout

Reestablishing resilient populations of inland trout which maintain the biodiversity and genetic integrity unique to California.

REGION: NORTHERN SIERRA

Upper Truckee River Wild and Scenic

Saving an Endangered Species

The Lahontan cutthroat trout (LCT) species suffers a high likelihood of extinction in California. The only wild stream population of LCT found within the Tahoe Basin resides in the Upper Truckee River. Population expansion through restoration would create the largest meta-population within the Sierra.

Conservation Goals

- Protect headwater population of LCT in large part by securing Wild and Scenic designation of the headwaters.
- Improve degraded habitat and remove non-native competitors in lower river sections thus expanding upstream populations.

Recent Accomplishments

- Supported Wild & Scenic designation for the Upper Truckee being included as a proposed action in the Lake Tahoe Basin Management Unit Plan.

What We Will Accomplish in 2014-15

- Advocate for proposed action of including Wild & Scenic status for the Upper Truckee.
- Continue to garner local, regional, state and federal support for Upper Truckee Wild & Scenic designation.

Walker River Lahontan Cutthroat Trout Preservation

Expanding Threatened Populations in the Upper Walker

The LCT situation in the Walker River Basin is bleak. The only remaining Walker River strain populations of LCT within the watershed are small, disconnected and threatened by non-native competitors. The project to protect LCT in the Walker River Basin requires not only electro-shocking and removing non-native brook trout, but also creating secure barriers to prevent non-native repopulation. Slinkard Creek and Silver Creek, two upper Walker River tributaries, have been identified as prime recovery opportunities.

Conservation Goal

- Recover LCT across the entire Upper Walker River Basin through research, restoration, community engagement and long-term management planning.

Recent Accomplishments

- Working with project partners, began initial fieldwork to eradicate invasive species on Silver Creek.
- With DWR funding, initiated the West Walker Restoration Plan project.
- Developed education and outreach materials for public dissemination as a means to communicate our work and the importance of restoring LCT populations to their native range.

What We Will Accomplish in 2014-15

- Complete non-native fish removal on a one-mile stretch of Slinkard Creek.
- Complete non-native fish removal on a one-mile stretch of Silver Creek.
- Complete an outreach and education program, including construction of a LCT-informational kiosk.

Eagle Lake Rainbow Preservation

Enabling Survival without Human Intervention

This unique species, native to Eagle Lake and its tributaries, is no longer naturally self-sustaining. Historically, this fish migrated to surrounding streams for rearing prior to spawn. Due to decreased flows in surrounding tributaries (such as Pine Creek), passage is now impossible. CA DFW must physically transport fish up into spawning tributaries past fish barriers. And even this upstream habitat is not in ideal condition, so restoration improvements are required.

Conservation Goal

- Create a healthy self-sustaining population of Eagle Lake rainbow trout requiring no human intervention.

Recent Accomplishments

- Engaged and partnered with Trout Unlimited, NFWF, and Eagle Lake Coordinated Resource committee to assess needs and opportunities related to fish passage and spawning habitat restoration.
- Identified habitat and ecosystem issues impacting Eagle Lake rainbows.

What We Will Accomplish in 2014-15

- Work with agencies and other partners to draft an action plan to guide future management of habitat restoration and fish passage.

REGION: EASTERN SIERRA

US Forest Management Planning

New Management Plans to Benefit Sierra Nevada Watersheds

Once every decade or longer, the USFS embarks on a revision to their Forest Management Plans. In the case of the Inyo National Forest, it has been more than two decades since they have fully revised their management plan. Three National Forests, all located in the Southern Sierra region, are in the midst of revising their management plans providing a unique opportunity to influence forest management activities, particularly those relating to aquatic habitats. CalTrout is a fully engaged partner, focusing particularly on the Inyo National Forest plan. Filling an important niche, CalTrout helps ensure fisheries and supporting habitats are duly considered both at the Sierra-wide and individual forest scales.

Conservation Goal

- Ensure the revised National Forest Management Plans adequately address the needs of target aquatic species.

Recent Accomplishments

- Actively engaged in a plethora of meetings and submitted specific recommendations to forest planning issues.
- Presented at the Sierra Cascade Dialogue, highlighting the importance of managing fisheries and aquatic habitats in Sierra Nevada forest planning.

What We Will Accomplish in 2014-15

- Ensure essential fishery and aquatic habitat needs are adequately addressed in Forest Management Plans.

Golden Trout Protection

Saving California's State Fish

In 2004, a Golden Trout Conservation Strategy was developed by relevant agencies (with the help of CalTrout) to support the recovery of California's golden trout, an imperiled native species and California's state fish. Resources are needed to implement the Conservation Strategy. CalTrout remains a key partner in this implementation – meeting with agency representatives and supporting on-the-ground restoration efforts. This past year, CalTrout's work focused primarily on assessing and improving meadow habitats supporting golden trout populations (see Meadow Habitat project for more details).

""California Golden" - Michael Carl

Conservation Goals

- Continue implementation of the CA Golden Trout Conservation Strategy.
- Ensure sustainable land-use practices (including grazing) where appropriate on the Kern Plateau.
- Support completion and implementation of genetics management plan for CA golden, Little Kern golden and Kern River rainbow trout which is necessary for the long-term management of these species.
- Increase public awareness about the importance of wild trout conservation programs relevant to the Kern Plateau.

Recent Accomplishments

- Engaged with state and federal agency representatives involved with restoring populations of golden trout on the Kern Plateau.
- Engaged with Inyo National Forest Service to better understand current and historical impacts of grazing as they prepare a National Environmental Policy. Act (NEPA) to assess the status of Golden trout to determine whether and/or under what conditions grazing should be reintroduced in this area.
- Provided input to the Inyo National Forest Management Plan specifically related to golden trout and meadow habitat protection. See US Forest Management Planning project.

What We Will Accomplish in 2014-15

- Implement the Golden Trout Conservation Strategy and habitat restoration work.
- Provide field support and interns in partnership with CA DFW's Heritage and Wild Trout Program to conduct a golden trout population inventory.
- Provide input and recommendations to the NEPA-grazing assessment to ensure adequate protection of golden trout within the Golden Trout Wilderness.

Meadow Habitat Restoration

90% of Meadows in the Sierra Are Degraded

California's inland native trout are especially vulnerable to degraded habitat conditions as they have limited ability to migrate away from poor conditions. Many of these species are native to high elevation, lower productivity ecosystems, where even minor levels of habitat degradation can have significant impact on the ecosystem's capacity to support the species. Meadow systems are one of the most altered systems in the Sierra, and it has been estimated that as much as 90% are impacted and degraded.

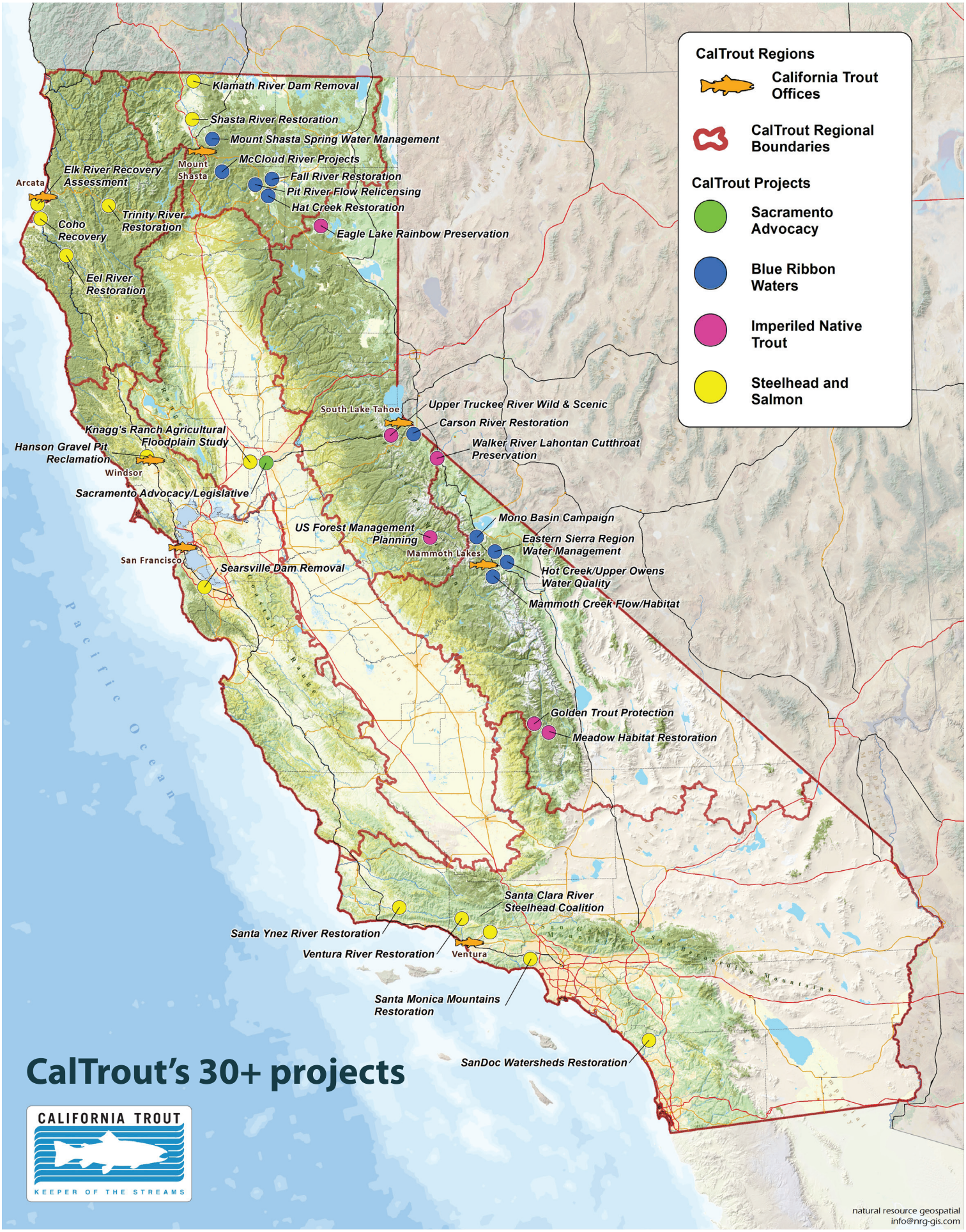
Conservation Goals

- Increase the efficacy of meadow restoration and management through improved scientific understanding, collaboration and targeted monitoring and evaluation.
- Use these practices to restore meadow ecosystems necessary to recover populations of inland native trout.

Recent Accomplishments

- Led a rapid assessment of meadows habitat conditions within the Golden Trout Wilderness in conjunction with Trout Unlimited, UNR and American Rivers. Included were 34 meadows totaling 7,500 acres.
- Completed in-depth field habitat surveys of selected stream reaches in prioritized meadows. A total of 33 reaches across 15 priority meadows were surveyed in depth.
- Developed a prioritized list of meadow restoration needs for the Golden Trout Wilderness.
- Designed and implemented a state-wide survey of meadow restoration projects.
- Organized and convened a state-wide, two-day meadows workshop focused on improving meadow restoration practices and developing recommendations for meadows management relevant to USFS National Forest planning purposes.
- Initiated development of a Sierra Nevada/Southern Cascade Conservation Strategy.

Photo: Kurt Jordan



CalTrout's 30+ projects

CALIFORNIA TROUT
KEEPER OF THE STREAMS

Steelhead & Salmon

Restoring healthy, self-sustaining populations of California's native steelhead and salmon across their historic range.

REGION: NORTH COAST

Coho Recovery

Coho Populations Declining Region-wide

If there ever was an emblematic fish species for the North Coast region, it would be the coho salmon. Not only do they thrive best within the cooler coastal climate provided by much of our region, but their essential requirement for small streams with large wood and complex habitat for juvenile rearing was once abundant here. California coho salmon are listed as threatened under federal and state Endangered Species Act (ESA).

CalTrout was involved in promoting the listing of coho salmon as well as developing the Recovery Strategy for California Coho Salmon (CDFG 2004). Throughout that time, our organization has put forth tremendous effort to promote the protection and recovery of coho salmon, and will continue to pursue recovery of this important species. However, despite the decades-long efforts, coho salmon abundance has continued to decline region-wide – as state and federal agencies (e.g., CA DFW) have not committed enough financial or human resources, nor have they committed to regulatory enforcement in clear cases of Endangered Species Act violations.

Conservation Goals

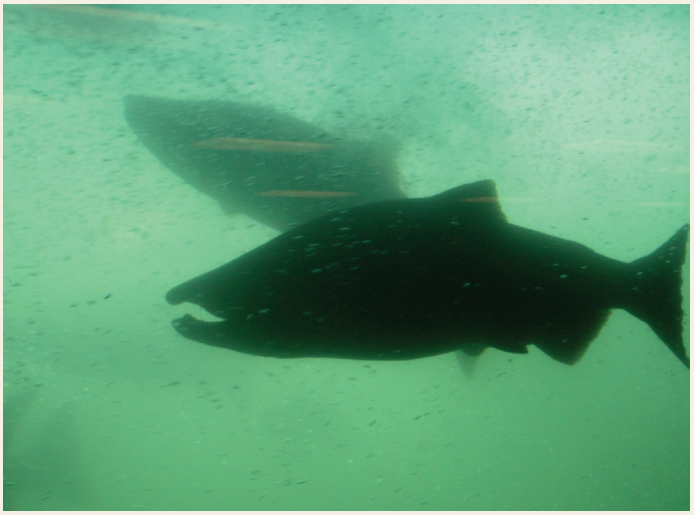
- Facilitate coho salmon recovery through restoration actions, regulatory program implementation, and enforcement of regulatory statutes against Incidental Take.
- Focus on the Shasta River, Smith River and South Fork Eel River as key opportunities for coho recovery.

Recent Accomplishments

- **Recovery Status Reviews** The CA DFW has prepared a draft Status Report to the Fish and Game Commission which CalTrout is currently reviewing. CalTrout will continue to push for more strategic recovery efforts, more funding, and more regulatory enforcement throughout the coho salmon's range.
- **The Coho Coalition** Government agencies and conservation organizations have spent tens of millions of dollars on habitat restoration actions throughout California. However, one of the most pressing issues facing recovery of coho is low summer streamflows caused by human water consumption. Low flows affect juvenile rearing conditions and survival, and ultimately population health. To address the ongoing water crisis, the Coho Coalition will be teaming up in numerous watersheds to tackle water management challenges, improve streamflows for coho salmon and steelhead, while improving water supply reliability for farmers and homeowners. The geographic scope of the project is the historic range of coho salmon.

What We Will Accomplish in 2014-15

- Create funding incentives and eliminate disincentives, to keep water instream.
- Implement a voluntary Safe Harbor Agreement with key landowners and resource agencies in the Shasta River, to provide regulatory protection for landowners in exchange for habitat protection, restoration, and coordinated water management.
- Facilitate the use of CA Water Code Section 1707 to transfer water rights to instream uses, to benefit fish and wildlife.
- Develop and improve the scientific and policy tools for identifying instream water needs, and regulating and enforcing stream-side diversions for domestic and agricultural uses.



"Salmon" - William Hagen

Eel River Restoration

Coho Populations Once 100,000, Now 1,000

At over 3,600 sq. miles, the Eel River watershed is the third largest in California. While the majority of the watershed is privately owned and managed for timber production, cattle and dairy ranching, the area also includes several state parks, wilderness areas, and national forests.

Historically, the Eel River was a major salmon and steelhead producer with runs in wet periods estimated to annually average over a million adults (~800,000 chinook, ~100,000 coho, ~150,000 steelhead).

Today, nearly all the mainstem and large tributaries in the Eel River Basin have been listed as "impaired" under the Federal EPA's Clean Water Act, primarily due to excessive sediment, habitat degradation and increased water temperatures. As a result, salmon and steelhead populations have been severely depressed over many decades: fall-run chinook and steelhead runs fluctuate between 1,000 and 10,000 adults; coho likely number less than 1,000 adults annually.

In recent years, there have been some encouraging signs of recovery believed to be, in large part, due to very favorable ocean conditions. However, the severe drought experienced in northern CA in the fall/winter 2013-14 delayed the return of adult spawners, disrupted normal patterns of spawning activity, and forced most salmon spawning into the mainstem rivers instead of tributaries. This outcome may have huge implications for population recovery in the coming years.

Conservation Goals

- Continue to drive the Eel River Forum and focus on improving the status of salmonid populations, and develop a comprehensive, basin-wide Monitoring Plan for tracking salmon and steelhead abundance and water quality conditions.
- Work with Regional Water Board to address critical low summer stream flow conditions currently impairing juvenile salmon and steelhead rearing habitat.
- Restore access to ancestral spawning and rearing habitat.
- Reconnect estuary tributaries and improve critical estuary rearing habitat.

Recent Accomplishments

- Initiated and led by CalTrout's North Coast office, the Eel River Forum continued to make tremendous progress in 2013-14. Comprised of 22 federal and state agencies, county resource conservation districts, water agencies / public utilities, tribes and NGOs, the Eel River Forum began reviewing and revising the Eel River Action Plan, a report prepared by CalTrout to summarize the major issues confronting salmon and steelhead recovery efforts in the Eel River.
- Submitted a proposal to the Fisheries Grant Program seeking funding to prepare a comprehensive fisheries and water quality Monitoring Plan for the entire Eel River watershed.
- Made great progress in implementing three restoration and recovery opportunities in the Eel system:

Eel River Estuary

Secured approximately $1 million in funding to develop restoration designs for tidal marsh estuarine habitat enhancement on the 1,200-acre Eel River Estuary Preserve located at the mouth of the Eel. The project footprint may expand to include restoration of Russ Creek and Centerville Slough on neighboring properties.

Bridge Creek

Secured approximately $450,000 in funding for removal of fish passage barriers on Bridge Creek, to restore access to coho and steelhead habitat. The team is poised to begin implementing the project once the construction season opens June 15, 2014.

Woodman Creek

Secured approximately $90,000 in funding to prepare an engineering design for removal of the fish passage barrier at the mouth of Woodman Creek, which currently blocks all salmon and steelhead entry into this 24-mile watershed along the mainstem Eel River.

What We Will Accomplish in 2014-15

- Launch the South Fork Eel River Water Conservation Program (with state and federal resource managers and technical partners) to address the critical low summer streamflow conditions in the SF Eel, and the lack of state water policy regulating the extraction of water from fish-bearing tributaries.
- Complete the restoration and engineering designs for The Wildlands Conservancy's Eel River Estuary Preserve located at the mouth of the Eel River.
- Implement the Bridge Creek fish passage barrier removal project and develop engineering designs and construction plans for the Woodman Creek fish passage barrier removal project.

"Fishing along the Eel River" - Conrad Calimpong

"Lower Eel" - Conrad Calimpong

Trinity River Restoration

Restoring Salmon & Steelhead to Their Near-Historic Abundance

The Trinity River is the largest tributary to the Klamath River and it sustains important tribal, recreational, and commercial salmon fisheries. This northern California steelhead and salmon gem is once again muddled in controversy. The mighty Trinity has been the subject of years of intensive fisheries studies after the dam decimated salmon and steelhead populations. Then there was litigation after the adoption of the 2000 Record of Decision (ROD). And now it's going through the largest-scale river restoration program in California, with more than $12 million spent per year for more than the past decade. But after completion of the Trinity River Restoration Program's (TRRP) Phase 1 activities and an internal review of the Restoration Program by an independent Science Advisory Board (SAB), the TRRP program partners (state and federal agencies, tribes, conservation groups, fishing guides, and the public) are in stark disagreement about where the Program should go next.

A nearly three-year effort (by a group of five top-notch river restoration experts supported by a cadre of technical consultants) resulted in a Summary Report and hundreds of pages of technical appendices. After years in preparation, the SAB team found that there had been a shift in channel reconstruction design philosophy, there was no significant increase in juvenile salmon rearing habitat, and that Phase 1 actions (and Program activities in general) were not organized in a structured way toward achieving increased fish production.

Conservation Goal

- Ensure that the original mission and vision of the Trinity River Record of Decision is fulfilled by the TRRP.

Recent Accomplishments

- Remained involved in the TRRP through participation with the Trinity Adaptive Management Working Group, our long association with the Trinity River fishing guides, and our frequent contact with other Program partners.
- Provided feedback on the SAB findings and recommendations on how the TRRP should move forward in Phase 2 of their plans.

What We Will Accomplish in 2014-15

- Continue to support this vitally important Trinity River program as a model for large-scale river restoration and adaptive management.
- Work with Trinity program partners to ensure the SAB scientific review recommendations are implemented in accordance with the original ROD vision shared by CalTrout.

Elk River Recovery Assessment

Launching a Watershed-Wide Stewardship Program to Recover High Quality Habitat

The Elk River is the largest tributary to Humboldt Bay and once provided many miles of high-quality habitat for Chinook and coho salmon and steelhead. The Elk River is not only part of the Humboldt Bay Tributaries coho salmon population, but it is also listed as a core population within the NMFS Draft Coho Recovery Plan – the highest priority for recovery and restoration efforts.

The Elk River was a central focus of the north coast's "timber wars" over the past several decades. During the period 1988-1997, the watershed became heavily degraded by fine sediment and nuisance flooding resulting from excessive timber harvest activities. The previous industrial timberland owner – Pacific Lumber Company or PALCO – filed for bankruptcy in 2007, and in 2008, transferred its holdings to the Mendocino Redwoods Company, later to become Humboldt Redwood Company (HRC).

In 2014, the North Coast Regional Water Quality Control Board will begin hearings to review the Total Maximum Daily Load (TMDL) allocation under the federal Clean Water Act which will result in a "waste discharge permit" to protect the Elk River's water quality and salmonid habitat from future harm from timber harvest. A watershed-wide stewardship program will be initiated, and CalTrout will lead the recovery assessment, working with local landowners, HRC, the Regional Water Board and State Water Resources Control Board, County Supervisors, and the restoration community.

Conservation Goals

- Provide leadership to a broad group of stakeholders to work toward resolving decades-long contentious and polarizing resource management issues in Elk River.
- Develop a comprehensive and feasible recovery strategy for Elk River.

Recent Accomplishments

- Secured grant funding from state agencies and private sources to conduct a multi-phased recovery assessment and pilot restoration implementation effort, beginning in 2014.

What We Will Accomplish in 2014-15

- Work with key project partners (HRC, Regional Water Board and State Water Resources Control Board, Elk River residents, Coastal Conservancy) to conduct an expanded Elk River Recovery Assessment in an effort to determine feasible and appropriate actions to restore ecosystem functions, abate nuisance flooding, and recover water quality conditions beneficial to salmon and steelhead.
- Begin planning, technical analyses, and stakeholder outreach for an Elk River Stewardship Program, integrating recovery planning and pilot implementation with regulatory program development.

REGION: MOUNT SHASTA

Shasta River Restoration

Readying Steelhead & Salmon for Dam Removal

The Shasta River is an important and productive spring creek tributary to the Klamath River. As the last major tributary to the Klamath before Iron Gate dam, the Shasta River population of Chinook and coho salmon and steelhead will be the primary natural populations to colonize the area above the Klamath dams once they are removed in 2020. Historic Chinook salmon numbers topped 80,000 and just this last year 29,000 Chinook salmon returned to the relatively small spring creek. ESA and California ESA listed coho salmon numbers are still low and there are many efforts by CalTrout, The Nature Conservancy, DFW, NOAA Fisheries and private landowners to improve conditions for coho salmon. In 2014, we will continue our work with the Farm Bureau to develop a Safe Harbor Agreement with 10 landowners in the Shasta Valley. The Safe Harbor Agreement is an incentive-based federal and state program to provide landowners regulatory assurances in exchange for improving habitat for fish.

Conservation Goals

- Enhance anadramous fish runs to a ten-year average of 10,000 returning adult fall-run Chinook, 2,000 adult coho, and 2,000 adult steelhead.
- Expand and connect cold water refugia for juvenile coho salmon by five miles.

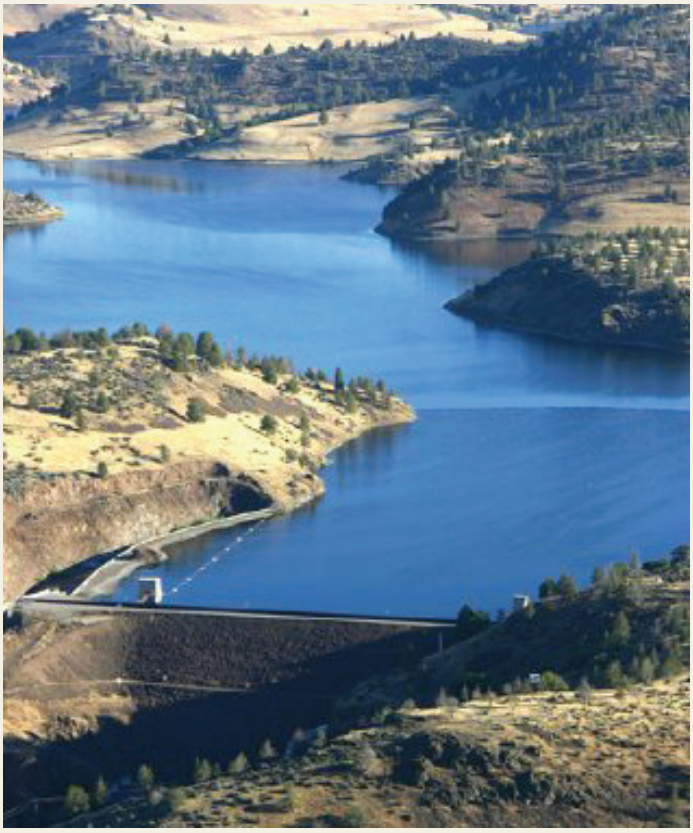
Recent Accomplishments

- Formed working group and holding monthly, on-going meetings with Farm Bureau, The Nature Conservancy, 10 different landowners and agencies to develop terms and conditions of Safe Harbor Agreement.
- Completed alternatives analysis for high priority fish passage barrier.
- Met with large group of Shasta and Scott landowners to discuss Klamath Agreements.

What We Will Accomplish in 2014-15

- Complete draft of Safe Harbor Agreement in 2014, finalize in 2015.
- Work to have habitat restoration, water management and water infrastructure projects identified and prioritized by landowners and agencies by end of 2014.
- Finalize project plans for removal of high priority water diversion to improve fish passage and water quality.

Shasta River in the Klamath watershed



"Klamath Iron Gate" - Thomas Dunklin

Conservation Goals

- Remove four dams and open up 420 miles of habitat for salmon and steelhead by 2020.
- Restore salmonid populations to at least 25% of historic levels (average of 250,000 adult steelhead and salmon).

Recent Accomplishments

- Coordinated media with Klamath Settlement partners to promote Agreements as basin-wide solution to fish and community needs.
- Met with Shasta and Scott Valley landowners to discuss Agreements and identify opportunities to help them and secure support for Agreements.
- Identified funding sources for state of California share of dam removal costs.

What We Will Accomplish in 2014-15

- Work on passage of federal legislation to fully implement and authorize Settlement Agreements through Congress in 2014.
- Continue outreach to Siskiyou County farmers and landowners to gain their support and ensure they benefit from legislation and Agreements.
- Once federal legislation is passed, begin work on fish reintroduction plan and dam removal permitting.

Klamath River Dam Removal

Largest U.S. Dam Removal Leads to Largest River Restoration

The removal of four dams on the Klamath River will be the largest U.S. river restoration project implemented to date. CalTrout and 41 other organizations signed the Klamath Agreements in 2010 and we are awaiting Congressional approval. The two separate but companion agreements address the terms of dam removal (Klamath Hydroelectric Settlement Agreement) and river flows, habitat restoration and community sustainability (Klamath Basin Restoration Agreement).

The removal of four mainstem dams is being planned for 2020 (all out in 1 year) and already over $60 million is in the bank for the expected $290 million removal cost. The Agreements represent the best opportunity to remove these dams—the dam owner is on board and the fund to remove the dams is growing. Full authorization and implementation of the Agreements awaits legislation and Congressional approval.

Last year, significant progress was made through the leadership of Oregon Senator Wyden and more recently California Senator Feinstein. Over the past several months, support for the Settlement Agreement has grown, particularly among agriculture interests in the Upper Klamath basin, helping support Senator Wyden's efforts to introduce legislation in May 2014. CalTrout has been active in broadening the support for the agreements and working to secure California state-obligated funding for dam removal.

REGION: CENTRAL CALIFORNIA

Knagg's Ranch Agricultural Floodplain Study

Salmon Habitat on Rice Fields – A Model for Ag, Flood Protection, and Fish

The Managed Agricultural Habitat Investigation at Knagg's Ranch, operating at the nexus of water, flood, agriculture, and conservation constituencies, is laying the scientific and political groundwork for precedent-setting, multi-benefit water solutions in the Central Valley. The last year has seen the design, construction and successful implementation of the third year of the study. In year one, against intense skepticism, we demonstrated that winter flooded rice fields not only provide sufficient water quality to keep salmon alive but that they thrive and grow rapidly.

In year two, we demonstrated that current rice farming practices are not simply compatible, but provide high quality floodplain rearing habitat for juvenile Chinook salmon as evidenced by the fastest growth rates of juvenile salmon ever recorded in the Central Valley.

This year, in our third field season, which is just winding down, we examined ways in which survival could be increased. The 2014 data has yet to be analyzed, but preliminary results are once again extremely encouraging: growth was similarly rapid as in years past and survival was substantially increased.

In 2014, we built a 40-acre flood plain extension facility designed to catch and hold floodwaters and the natural fish that come with them after Fremont Weir over tops during a flood event. As the early winter of 2014 was among the driest ever recorded in the valley, the bypass did not flood during our field season. Accordingly, we will hope for a wetter winter next year in order to test the feasibility of extending natural flood events to provide greater benefit to rearing salmon.

Floodplain Science: Slow it down, spread it out, grow 'em up.

The abundant wildlife of the historical Central Valley (think birds to turn the sky black and fish to fill the rivers) was a direct result of the Valley's seasonal marshes and floodplains. Recovery of salmon and other native fish populations would be impossible without first reestablishing or mimicking the natural flood processes that are the basis of natural productivity. Each winter and spring broad, shallow wetlands were inundated as the rivers covered the floodplain. The wide shallow waters warmed as they caught sunlight making ideal conditions to grow phytoplankton (algae).

This fertile primary production fed incredible amounts of bugs (zooplankton and aquatic insects) which in turn were eaten by ducks and salmon. This simple floodplain food web (algae-bugs-wildlife) – created as floodwater slowed down and spread across the floodplains – was the engine of productivity that supported prolific numbers of fish and waterfowl in the prehistoric Central Valley.

The Valley has been engineered to drain efficiently and rapidly, shedding high volumes of storm water quickly through incised, armored flood channels. Large levees now confine rivers that once spread out over the floodplain to narrow, swift channels. This rapid high volume drainage system is the antithesis of the historic prolonged, broad and shallow annual inundation of the predevelopment flood pattern. The incredible floodplain food source was lost as marshes and floodplains were drained for agriculture and development. Essentially, Central Valley rivers are now starved systems deprived of the foundation of the aquatic food chain (algae grown on inundated floodplains).

The Knagg's Investigation is demonstrating that mimicking historical floodplain conditions – slowing down the flood water and spreading it out on winter rice fields instead of the marshes which they replaced – still produces phenomenal insect numbers which in turn result in rapid growth and improved body condition of salmon. In essence, we may not be restoring a pristine natural environment, but we are providing native organisms with a system they recognize. When exposed to conditions similar to those under which they evolved and to which they are adapted, fish and bird populations respond favorably and quickly.

By understanding how natural processes in the Valley worked, we can take the key elements of natural productivity and integrate them into the design, operations and management of a Central Valley water infrastructure built in a previous era with little environmental consideration.

We are working to spread this important knowledge directly to those who operate and design California's water system through tours, speaking engagements, targeted reports, scientific literature, and to the general public through active reporting in the general media.

On-site education Photo: Jacob Katz

Conservation Goals

- Optimize habitat benefits for salmon and water birds, while maintaining farming on the largest floodplain of the Sacramento-San Joaquin Delta, the 60,000-acre Yolo Bypass.
- Re-establish self-sustaining stocks of Chinook salmon in the Central Valley by allowing for:
  - more rapid juvenile salmon growth
  - delayed out-migration timing for juvenile salmon
  - superior out-migration route
  - improved survival rates and return rates of Chinook salmon.

Recent Accomplishments

- Expanded project from 5 acres in 2012 to 20 acres in 2013 and now 65 acres in 2014.
- Completed third field season with preliminary results once again extremely encouraging: growth was similarly rapid as in years past and survival was substantially increased.
- Moved forward on plans to take what we have learned in the "Petri dish" of our replicated fields and apply it to construction of a 120-acre managed floodplain and fish passage project in the Upper Yolo Bypass. We hope to break ground this summer (much to the consternation of various permitting agencies).
- Garnered significant interest and excitement locally, regionally and even in the national press.

For reports and news coverage of the Knagg's project, visit *caltrout.org/initiatives/steelhead-salmon/knaggs-ranch-agricultural-floodplain-study/*

What We Will Accomplish in 2014-15

- Expand the program and demonstrate that success can ultimately be achieved on a larger landscape level scale, approximately 3,500 acres.
- Secure funding and landowner agreements to achieve a 3,500-acre roll-out over five years.

Knagg's Ranch Photo: Jacob Katz

Frozen juvenile salmon (left) from 40 days previous are tiny compared to fish that have spent 40 days on the Knaggs Ranch rice fields (right). Photos by Jacob Katz.

"Yolo Bypass" - Jacob Katz

Russian River Hanson Gravel Pit Reclamation

New!

Recreating an Active Floodplain

Historically, and similar to the floodplains of the Central Valley, the off-channel areas of the Russian River flooded periodically in the winter, creating edgewater habitats rich in food resources for fish and wildlife. Today, instead of productive habitat, deep gravel pit ponds full of bass and other warm water, non-native predators (remnants of an old mining operation) occupy the middle Russian River's historic floodplain.

CalTrout recently became involved in the Hanson Russian River Restoration Project. The project's goal is to reestablish a stable, periodic connection between the river and its floodplain on the 358-acre Hanson Aggregates property just downstream from the town of Healdsburg. The restored floodplain will provide essential ecological processes that sustain aquatic, riparian, wetland and upland habitats essential to restoring fish (coho, Chinook and steelhead) and wildlife populations.

In the 1990's, the scientific community recommended keeping the gravel ponds isolated from the river due to concerns that juvenile salmonids could become trapped in them and eaten by bass and other predators. Also of concern was the possibility that high flood flows could breach the unreinforced levees allowing the river to change course into the pits,– a destabilizing process known as "river capture." However, a NOAA and USGS study of the site where floodwaters overtop the levees and inundate the ponds nearly every year has shown pit capture to be unlikely, so plans are now in progress to use the gravel in the levees to fill the pits, thereby recreating an active floodplain.

Conservation Goals

- Re-establish native riparian and wetland habitats to benefit threatened and endangered coho, Chinook, and steelhead populations and other native fish.
- Establish science-based standards for similar river sites.

Recent Accomplishments

- Coordinated the scientific advisory panel for the project in collaboration with The Endangered Habitats Conservancy, National Marine Fisheries Service, Sonoma County, California Coastal Conservancy, US Geological Survey and CA DFW.

What we will accomplish in 2014-15:

- Continue to work with scientific working group to complete feasibility study.

Searsville Dam Removal

Returning San Francisquito Creek to an "Anchor Watershed" for Steelhead

CalTrout and partners (American Rivers and the Beyond Searsville Dam Coalition) have been urging Stanford University to assess the feasibility of fish passage and removal of Searsville Dam on the San Francisquito Creek which flows through the Stanford campus. For over a century, Stanford University's antiquated Searsville Dam has impacted San Francisquito Creek watershed and the greater San Francisco Bay estuary. Built in 1892, Searsville Dam has lost over 90% of its original water storage capacity as roughly 1.5 million cubic yards of sediment has filled in the reservoir. Searsville Dam does not provide potable water, flood control, or hydropower – its primary use is providing irrigation water to Stanford campus.

Conservation Goal

- Remove Searsville Dam to allow steelhead to return to over 10 miles of habitat in the upper watershed. The removal of the dam will allow San Francisquito Creek to be one of the critical "anchor watersheds" for threatened steelhead trout recovery in the San Francisco Bay Area.

Recent Accomplishments

- Stanford University has responded to our and others' request to assess Searsville Dam by embarking on a process to identify and recommend a set of actions and strategies that address the dam, the surrounding resources, and associated watershed. Stanford's Searsville Steering Committee will present its recommendations to the University President and Provost at the end of 2014.
- Appointed to the Searsville Advisory Group (along with American Rivers, Beyond Searsville, representatives) from downstream communities, flood control districts, and other stakeholders) to work with Stanford's Searsville Steering Committee to assess future actions. The Searsville Advisory Group has met once a month since February 2013 to review existing information and identify all the interests and concerns of the various parties. Ultimately, the Advisory Group will provide recommendations to the Steering Committee that will address a long-term vision and 50-year plan, and consider various actions and strategies necessary to reach that vision (including potential interim measures, adaptive management approaches, and sufficient monitoring to assess appropriateness of subsequent actions).

What We Will Accomplish in 2014-15

- Complete assessment of Searsville Dam.
- Develop a dam removal plan for Searsville.
- Continue our legal strategy as back up to the Advisory Group process.

REGION: SOUTHERN CALIFORNIA

Santa Clara River Steelhead Coalition

A Coalition of partners forging ahead together to restore steelhead in a critical watershed.

The Santa Clara River watershed, which straddles Los Angeles and Ventura Counties, drains an enormous area (over 1,600 sq. mi.). The watershed contains a large expanse of high-quality steelhead habitat in upstream reaches, and the National Marine Fisheries Service has designated the small remaining steelhead population there as "Core 1," or the highest priority for recovery. In 2012, to facilitate the species' recovery, CalTrout, convened the Santa Clara River Steelhead Coalition, whose mission is to coordinate steelhead recovery efforts in the watershed. The Santa Clara River Coalition's members and partners include state and federal agencies, non-profits and other environmental stakeholders committed to steelhead recovery.

Conservation Goals

- Provide fish passage to historic spawning / rearing habitat on the Santa Clara River and its major tributaries.
- Promote conservation stewardship and steelhead awareness in the local community, through an array of community engagement opportunities.
- Address other threats to steelhead recovery including invasive species and climate change.

Santa Clara Estuary

SoCal Steelies

Vern Freeman dam

Recent Accomplishments

- Secured $400,000 in funding to restore fish passage at the Harvey Diversion Dam on Santa Paula Creek, a major tributary of the Santa Clara River, by elevating the creek bed below the diversion.
- Coordinated with United Water Conservation District and state and federal agencies to restore fish passage at Vern Freeman Diversion and Santa Felicia Dam.
- Hosted/participated in public outreach events including:
  - Fly Fishing Film Tour in Pasadena, where "Southern California Steelhead: Against All Odds," (the CalTrout produced documentary on the endangered species and the efforts of organizations and individuals to recover the iconic fish) was screened.
  - Science Technology and Mathematics Fair in Ventura, attended by 1,000 + student.s
  - Patagonia's 20th annual Salmon Run with CalTrout and the Santa Clara River Steelhead Coalition, the event's featured non-profits.
  - Salmonid Restoration Conference in Santa Barbara, where CalTrout's Candice Meneghin was the featured speaker on the ongoing work of both the Santa Clara and South Coast Steelhead Coalitions.

What We Will Accomplish in 2014-15

- Implement the Harvey Diversion Fish Passage Restoration Project on Santa Paula Creek to restore fish passage at the diversion.
- Secure funding for other steelhead restoration projects.
- Host a series of Water Talks and other public outreach events to educate the local community on a wide range of water quality/ quantity and steelhead-related issues.
- Secure funding to continue the work of the Santa Clara River Steelhead Coalition.

Santa Clara Steelhead Coalition events and workshops

Santa Ynez River Restoration

Bradbury Dam Blocks Steelhead Access

The Santa Ynez River north of Santa Barbara once supported the largest steelhead run south of San Francisco. In the 1950s, steelhead access to roughly half of the watershed and more than 2/3 of the spawning habitat was completely blocked with the construction of Bradbury Dam, which created Cachuma Lake. Following the listing of southern California steelhead as endangered under the federal Endangered Species Act in 1997, CalTrout filed a water rights challenge with the State Water Board to obtain adequate flows and fish passage at Bradbury. This process was stalled for several years, but hearings could resume later this year.

Conservation Goals

- Provide fish passage to historic spawning / rearing habitat.
- Provide adequate flows to maintain/enhance the steelhead population below Bradbury Dam.

Recent Accomplishments

- Because steelhead continue to utilize habitat below the dam, filed comments to an EIR and appeared at hearings in Solvang opposing the proposed installation of six municipal wells that could negatively impact the lower watershed.

What We Will Accomplish in 2014-15

- The United States Bureau of Reclamation will be issuing a Biological Assessment regarding steelhead as part of the proposed relicensing of the Bradbury Dam, and the National Marine Fisheries Service will follow suit with a more detailed Biological Opinion. CalTrout will losely evaluate and comment on these agency documents to ensure that the protection/restoration of the species is given the highest attention and that the Water Board implements any agency recommendations aimed at improving water flow and/or restoring fish passage.

Ventura River Restoration

Removing Dams & Securing Fish Passage

Matilija Dam Removal

Matilija Creek is a major tributary of the Ventura River. Historically, both waters provided miles of high-quality steelhead habitat. Matilija Dam, located on the creek, is a 190-ft. structure with a reservoir that is now filled with 6 million cubic yards of sediment. In its current state, the dam poses seismic/safety risks for downstream communities and completely blocks fish passage. CalTrout helped launch an initiative to remove the dam through the formation of the Matilija Coalition and working groups such as the Matilija Dam Technical Advisory Council (TAC). In the 2012-2013, the TAC completed a workplan addressing preliminary tasks for the removal of the dam.

Conservation Goal

- Provide fish passage to historic spawning / rearing habitat through the removal of Matilija Dam.

Recent Accomplishments

- In March 2013, based on recommendations in the TAC workplan, a Request for Qualifications was sent to consultants addressing their ability to do the following: select feasible dam removal methods, generate order of magnitude cost estimates, create a mitigation plan to address sediment that would be temporarily deposited into Matilija Creek and the Ventura River, and model sediment transport. Thereafter, a team of consultants (TOC) was selected to perform the additional studies recommended by the TAC. The TOC's work has begun and will continue for approximately 18 months.

What We Will Accomplish in 2014-15

- Work with the Coalition to ensure that: 1) the TOC completes its work with input from CalTrout and other environmental stakeholders and 2) dam removal alternatives are selected as expeditiously as possible.

Santa Monica Mountains Restoration

Momentum in Santa Monica Mountains

In 2006, CalTrout released its Santa Monica Mountains Steelhead Habitat Assessment. By outlining priorities and actions across the area's watersheds, the Assessment laid the foundation for a successful steelhead recovery campaign in Los Angeles County. For the past three years, CalTrout has been working to restore fish passage in Zuma Creek, which flows into Zuma Beach near the Pacific Coast Highway. Since the release of the Assessment, other groups have worked to implement critical actions, including restoration work in Malibu Lagoon, Malibu Creek, Topanga Creek and Arroyo Sequit Creek. CalTrout is also a member of the Malibu Creek Watershed Group, which is comprised of environmental stakeholders focused on the removal of the Rindge Dam on Malibu Creek. The 100 ft. dam, which was built in the 1920s, has filled with sediment, and blocks steelhead passage to historic spawning/ rearing habitat.

Conservation Goal

- Provide fish passage to historic spawning / rearing habitat.

Recent Accomplishments

- Completed a feasibility study to replace an "Arizona crossing" and restore steelhead passage near the mouth of Zuma Creek.

What We Will Accomplish in 2014-15

- Seek funding from government and other sources to design and build a state-of the-art bridge to replace the "Arizona crossing" and restore fish passage in Zuma Creek.
- Participate in the Malibu Creek Watershed Group to facilitate the removal of Rindge Dam.

SanDOC Watersheds Restoration

A Complex Watershed Needs CalTrout's Leadership

San Diego and Orange Counties (SanDOC) encompass the largest stretch of undeveloped coastline in southern California. Land is owned by the state and federal government, private entities, two counties and more than a dozen cities. Both counties have experienced explosive development and population growth over the past decades placing incredible demands on resources and particularly, fresh water. CalTrout's leadership is vital to ensure that: 1) the region's watersheds (which historically supported steelhead) are protected, 2) unnecessary fish passage barriers are removed, and 3) invasive species (which consume or compete with steelhead) are eradicated.

To this end, in 2012, CalTrout and Trout Unlimited convened the South Coast Steelhead Coalition, whose mission is to coordinate steelhead recovery efforts in the region. The South Coast Coalition's members and partners include state and federal agencies, non-profits and other environmental stakeholders committed to the species' recovery.

Conservation Goals

- Provide fish passage to historic spawning / rearing habitat in the region's watersheds.
- Promote conservation stewardship and steelhead awareness in the local community, through an array of community engagement opportunities.
- Address other threats to steelhead recovery including invasive species and climate change.

Recent Accomplishments

- Implemented a water quality monitoring program in the San Luis Rey River with generous funding from the National Wildlife Foundation/ Wells Fargo.
- Held educational workshops in the region to publicize the plight of the endangered southern California steelhead and promote the work of the South Coast Coalition.
- Hosted a high-profile, fishing-themed art show to raise steelhead awareness.
- Secured major funding to remove 81 small dams in upper Trabuco Creek watershed.

What We Will Accomplish in 2014-15

- Begin implementation of the removal of 81 small dams in Trabuco Creek watershed.
- Secure funding for other steelhead restoration projects.
- Host a series of Water Talks and other public outreach events to educate local community on a wide range of water quality/quantity and steelhead-related issues.
- Secure funding to continue the work of the South Coast Steelhead Coalition.

Key Partners

CalTrout works in partnership with many organizations, conservation groups and institutions to get our work done. Our list of partners is extensive. It includes universities, Native American tribes, multiple state and regional water agencies and water management authorities, federal and state land and wildlife management agencies, fishing guides, community members, and fly clubs. We could not accomplish our work without these strong collaborations. A list of some of these partners appears on our website at caltrout.org/about/partners.

Terms & Organizations/Groups (used throughout this issue)

CA DFW:	California Department of Fish & Wildlife
CEQA:	California Environmental Quality Act
DWR:	Department of Water Resources
EIS/EIR:	Environmental Impact Study/Report
EPA:	Environmental Protection Agency
ESA:	Endangered Species Act
FRC:	Fall River Conservancy
FERC:	Federal Energy Regulatory Commission
HRC:	Humbolt Redwood Company
IRWMP:	Integrated Regional Water Management Program
LADWP:	Los Angeles Department of Water & Power
LCT:	Lahontan cutthroat trout
MCWD:	Mammoth County Water District
MLC:	Mono Lake Committee
NFWF:	National Fish & Wildlife Foundation
NEPA:	National Environmental Policy Act
NOAA:	National Oceanic and Atmospheric Association
NGO:	Non-governmental organization
NMFS:	National Marine Fisheries Service
SAB:	Science Advisory Board
SanDOC:	San Diego & Orange Counties
TAC:	Technical advisory group
TRG:	Technical review group
TOML:	Town of Mammoth Lakes
TRRP:	Trinity River Restoration Program
TU:	Trout Unlimited
UNR:	University or Nevada, Reno
USFS:	United States Forest Service
USDA:	United States Department of Agriculture
USGS:	United States Geological Survey
WTA:	Wild Trout Area

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Get Your CalTrout-engraved Abel Reels, Nippers & Hemostats!

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In support of CalTrout, Abel has created a limited edition line of CalTrout products. Proceeds from the sale of these items will benefit CalTrout in its mission to protect and restore the wild trout, steelhead, salmon and their waters throughout California.

Hemostats > $160 +tax

The new Abel Hybrid Hemostats feature a unique locking mechanism that only engages when you want it to. It utilizes a precision thumb lock on the top of the handle, and a quick squeeze of the ergonomically designed handles is all that's needed to unlock the stainless steel jaws.

- Ergonomic grip fits any hand
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- Locking Mechanism: 316 I stainless steel
- Replaceable Jaws: 17-4 ph stainless steel
- Weight: 1.2 ounces, Length: 5.600"

Nippers > $70 +tax

- Designed, manufactured and assembled in the USA
- Anodized aluminum body construction
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- Saltwater resistant
- Engineered to Cut 7x - 100 lb mono and braid line
- 2 Year limited warranty on the jaws after initial purchase

Switch Reel > $595 +tax

The Abel Switch reel was introduced to be the perfect tool for the burgeoning switch rod community. It will easily hold 5/6/7 weight Switch or Spey lines with plenty of room for backing, without adding excess weight.

- Weight: 8.5
- Spool Diameter: 3.700"
- Spool Width: 1.000"
- Line Wt/Yards/Backing: 5/6/7 Weight Spey Lines

Super #5N Reel > $690 +tax

The Abel Super 5N has been built to handle virtually any situation thrown its way. The large arbor gives you great line pickup while keeping coiling to a minimum, and the narrow width and low weight of the reel lends itself to excellent feel on 5-weight rods.

- Weight: 5.2 ounces
- Spool Diameter: 3.500"
- Spool Width: 0.750"
- Hub Diameter: 1.850"
- Line Wt/Yards/Backing: 5wt / 125yds / 20#

Super #7/8N Reel > $815 +tax

A narrow-width spool all but eliminates the need to guide the line onto the reel, while the Super 7/8N's large arbor allows for an incredible retrieve rate – perfect for recovering line after a blistering run! This reel will easily hold a saltwater 7- or 8-weight line with plenty of backing to spare, and gives you the stopping power necessary to slow down the hottest of gamefish.

- Weight: 6.8 ounces
- Spool Diameter: 3.900"
- Spool Width: 0.850"
- Hub Diameter: 2.100"
- Line Wt/Yards/Backing: 7wt / 225yds / 20#

All orders must be placed by June 15th, 2014.

Note: A $15 shipping fee will apply.
Please expect delivery by mid-July.

For product details and to place your order, please go to www.caltrout.org/caltrout-gear/abel/
For questions, please contact Lisa Clarke, lclarke@caltrout.org or 415.392.8887 x102.

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Streamkeeper's Log

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