



Annual Report 2016



A close-up photograph of a person's hands holding a rainbow trout in a stream. The fish is silvery with a pinkish-red stripe along its side and dark spots. Its mouth is open, and its reflection is visible in the water. The background is a blurred stream and a person in a blue jacket.

Everything is flowing—going
somewhere, animals and so-called
lifeless rocks as well as water.
Thus the snow flows fast or slow
in grand beauty-making glaciers
and avalanches; the air in majestic
floods carrying minerals, plant
leaves, seeds, spores, with streams
of music and fragrance; water
streams carrying rocks ... While the
stars go streaming through space
pulsed on and on forever like
blood ... in Nature's warm heart.

- John Muir, My First Summer in the Sierra (1911)

Front cover: Sunrise, Hot Creek Ranch
Photo: Kent Blackburn

This page: Trinity River evening silhouette on a native chromer
Photo: Jonathan Matthews

Dear Friends

Success. It defines 2016 for CalTrout. We met significant milestones this year—restoring Sierra meadows, revitalizing Hat Creek, and scaling up our successful proof of concept to grow fish in rice fields in the Central Valley.

And in 2016, it was settled that the Klamath dams are coming out in 2020. Our effort has moved from advocating for their removal to implementing the largest dam removal and restoration project in US history. I often think about the diverse groups involved with this effort, the Native American tribes, the commercial fishermen, the agencies, the conservation groups, all dedicated people who believed we could make this happen.

Personally, it's a milestone: My first Klamath dams meeting was in January 2001—I remember the snowy drive to Klamath Falls, my eldest daughter was not yet a month old. Today she is a sophomore in high school, a reminder of the long-term commitment needed, by so many, to accomplish big things. With success comes growth, and expanding opportunities to scale up our efforts and increase our impact. We have refined and institutionalized our unique approach: employing the best science, providing thought leadership to diverse interests, and ultimately

marshaling dollars and political will to solve complex resources issues that balance the needs of wild fish and people.

Looking ahead to 2017, we will focus on the Eel River where we have a once in a lifetime opportunity to achieve wild fish abundance. Our Headwaters to the Sea approach is in high gear—including our focus on the Potter Valley Project relicensing starting in April 2017. In addition, we are on our way to 30,000 acres of Sierra meadows restored by 2030 and we are fully engaged in removing Matilija dam in Southern California. These projects will take years; my daughter will be in college when the Klamath dams crumble. With your support, CalTrout will be there, creating lasting impact benefitting fish and people.

Curtis Knight, CalTrout Executive Director



A stylized, handwritten signature in black ink, consisting of a large 'C' followed by a series of loops and a long horizontal stroke.

2016 has been a great year for CalTrout—because of you! You are a key partner in CalTrout's work. Without your support, we could not pursue the multitude of projects that benefit fish in California. Your contributions directly fuel the formation of coalitions that align diverse sets of stakeholders, the science based research, the grant applications, and enable CalTrout to prove concepts to influence and to promote legislation. Your donations are the seed funds that we use to leverage much larger sums, sometimes 10-fold through government and foundation grants, to fully fund large scale restoration projects. It starts with you—this work can only be done because of your generosity. Together we are making a difference. Thank you.

Drew Bassak, CalTrout Board Chair



A stylized, handwritten signature in black ink, featuring a large 'D' and 'B' followed by a series of loops and a long horizontal stroke.



The return to Butte Creek
Photo: Dana Lee

Strongholds

PROTECT AND STRENGTHEN

There are still rivers in California that produce abundant wild steelhead and salmon – and we intend to keep them that way. Places like the Smith River, California’s signature stronghold river, and the Klamath and the Eel, where sustainable wild fish abundance is achievable. CalTrout is working closely with the Wild Salmon Center on California salmon and steelhead strongholds.

SUCCESS

The Smith River

California’s preeminent stronghold—no compromises here. Your support helped us push back on a proposed nickel mine threat, proving we need to stay forever vigilant to protect our wild rivers. This year, together with our partners The Smith River Alliance, conservation groups in Oregon, and your letter writing, we encouraged the California Department of Fish and Wildlife (CDFW) to designate the South Fork Smith River as a Heritage Trout Water under the Department’s Heritage and Wild Trout Program and encouraged the Oregon Water Resources Department (OWRD) to adopt the proposed new protections for the instream uses of these waters. These are critical steps in safeguarding California’s largest undammed and most pristine river.

SUCCESS

The Klamath

California’s second largest watershed will be the site of the most ambitious dam removal and restoration project in US history, opening up more than 400 miles of historic salmon and steelhead spawning habitat. The removal of four dams by 2020 will put the Klamath on track to return as an epic salmon and steelhead stronghold.

OPPORTUNITY

The Eel

The Eel represents California's best opportunity for abundant wild fish—a wild river on the cusp of the most productive wild steelhead and salmon rivers in California. With no hatcheries impacting native populations, genetically robust wild fish are present and ready to thrive.

Caltrot has a comprehensive Headwaters to the Sea approach to increase fish abundance in the Eel River that includes:

1. Estuary—working with the Wildlands Conservancy to restore fish passage and habitat on 1,850 acres of working lands.
2. Barriers—identified 20 barriers along tributaries to the mainstem. We have removed Bridge Creek, Woodman Creek is in progress and more to go!
3. Flows—developed, with our partners The Nature Conservancy and Trout Unlimited, a science based in-stream flow program. This will address water diversions, particularly the impact of increasing legal and illegal marijuana grows, and we will work with agencies to adopt at scale.
4. PG&E's Potter Valley Project—relicensing of this facility in 2017 provides an opportunity to get wild fish above the dams and improve flows for fish.

See more on page 9.



The Eel River, California's best opportunity to bring back abundant wild fish.

Photo: Mike Wier

Headwaters

UNDERSTAND AND RESTORE

With California experiencing its fifth year of drought, source water areas are the life blood of the state—in particular the Sierras and the volcanic spring aquifers of the Mt. Shasta area. Unfortunately, scientists know very little about the region’s aquifers, and there are no comprehensive regulations protecting them from various development threats. CalTrout is working with scientists to understand these complex natural systems, and restoring and protecting these cold water sources critical for fish and people.

SUCCESS AND OPPORTUNITY

Volcanic Aquifers

The spring-fed rivers of the greater Mt. Shasta area—places like the McCloud, Fall River, and Hat Creek—are the home of the state’s best wild trout fisheries. The base spring flows also supply over two million acre-feet a year to Shasta Reservoir’s capacity of four million acre-feet of storage. This year, we published a white paper, “**California’s Cascade Aquifers: Resilient and Unrecognized Source Waters,**” and provided policy recommendations for protecting and assessing the current health of source waters originating from Mt. Shasta, Medicine Lake, and Mt. Lassen. Understanding and protecting these springs and legacy waters means a healthy water supply for the state, and we will continue to work with scientists furthering our understanding of this critical resource.

SUCCESS

Hat Creek

In 2016 CalTrout worked to revitalize the place where it all started for us: Hat Creek, one of the state’s largest source water spring creeks. CalTrout, Lomakatsi, PG&E and the Pit River Tribe completed Phase 1 of the Hat Creek Restoration Project, revitalizing 6.3 acres of the Wild Trout Area by planting over 8,000 native trees, building new trails and reestablishing a foot bridge at Carbon Flats. The project also enhanced 1.5 miles of in-stream habitat for native trout and other listed species, treated 6.3 acres of noxious weeds, and protected the cultural resources of the Illmawi Band of the Pit River Tribe.

Sierra Meadows

Sierra Nevada headwaters provide roughly 60% of California’s domestic water supplies, are home to the majority of California’s inland native trout species and are critical to supporting local and downstream economic livelihoods. However, Sierra Nevada headwater areas are also some of the most degraded. CalTrout is working with a diverse coalition to implement large scale meadow restoration throughout the Sierra and developing the science to quantify water retention and carbon and greenhouse gas sequestration in these restored systems.

Osa Meadow

CalTrout has completed the restoration of Osa Meadow in the Sequoia National Forest with funding and support from National Fish and Wildlife Foundation (NFWF), CDFW, and the Kern Community Foundation. Osa Meadow is a focal area of CalTrout’s meadows work to develop the science to quantify greenhouse gas and carbon sequestration. Osa Meadow is also important habitat for Kern River rainbow trout, and the restored meadow will retain more water, replenishing summertime stream flows. The restoration of Osa Meadow is an important step toward our goal of restoring 30,000 acres by 2030.



Large tree being positioned by helicopter
at Carbon Flats, Hat Creek to improve trout
habitat and enhance degraded streambanks.
Photo: Val Atkinson

Wild Fish, Altered Landscapes

INNOVATE AND PARTNER

California's rivers and landscapes have been highly altered and as a result, wild fish populations have suffered. We are investing in innovative ways to put nature back into the mix and reestablish abundant wild fish populations within agricultural and urban landscapes. Projects in the Central Valley, Shasta River and Southern California are examples.

SUCCESS

Central Valley

Our Nigiri Project is showing how we can restore ecological function by mimicking natural floodplain processes on working agricultural floodplains. We have proven the concept that raising juvenile salmon on dormant rice fields is beneficial for fish and for farms. The project's research findings are now helping shape California's water management and policy in the region. Projects are underway to install and improve water infrastructure that allow for managed

use of water for the multiple benefits of flood control and fish and waterfowl habitat. One example is Wallace Weir in the Yolo bypass, in strong partnership with Reclamation District 108, the Northern California Water Association and the Resources Agency.

OPPORTUNITY

Shasta River Valley

On an important spring-fed tributary to the Klamath River, we are working with 10 landowners to establish incentive-based Safe Harbor programs in order to improve wild fish habitat on their agricultural landscapes.

OPPORTUNITY

Southern California

23 million people and the fish are still there. Our work in this region focuses on leading local restoration coalitions in Ventura, Orange and San Diego Counties to increase abundance of endangered Southern California steelhead by restoring creeks and

providing passage to upstream spawning habitats. In September, CalTrout partnered with the Conservation Corps of Orange County and the California Department of Fish and Wildlife to remove non-native aquatic species in the Santa Margarita River near San Diego. Non-native species such as bass, sunfish and crayfish compete with the native Southern California steelhead that historically populated this river.

This is one part of the habitat improvement that will provide suitable spawning and rearing habitat for ocean-going trout more than 20 miles inland. Access will be restored once two barriers, currently under remediation, are removed.



Ground breaking at Wallace Weir in Yolo Basin. Retrofitting the weir will significantly reduce the number of adult salmon that go astray in agricultural canals along the Sacramento River.

Photo: Jacob Katz



Dams

EVALUATE AND CHANGE

California's rivers are among the most beautiful and diverse in the world. California is blessed with over 20,000 river miles that we value for fishing, boating, hiking, and other recreational pursuits. Our rivers are also heavily tapped for uses such as hydropower, industrial and municipal use. Dams divert water, block fish passage and degrade downstream river conditions. Currently, CalTrout is involved in three high profile dam projects across the state to improve river conditions while balancing the needs of fish and people.

SUCCESS

Klamath Dams

On the Klamath River, CalTrout is working with many stakeholders, including the PacifiCorp dam owners, to remove four dams on the Klamath River. The aging dams produce a relatively small amount of power and block over 400 miles of steelhead and salmon spawning habitat. PacifiCorp is currently in the process of transferring ownership of the dams to the Klamath River Renewal Corporation, a new entity with the sole purpose of removing the dams by 2020. As signatories to this agreement, CalTrout and conservation partners continue to work with all stakeholders to see this project through.

OPPORTUNITY

Matilija Dam, Ventura River

In Southern California, CalTrout has advocated for the removal of Matilija Dam on the Ventura River. Completed in 1948, the dam has had two disastrous impacts. The Southern California steelhead population, estimated at 5,000 fish in 1940, immediately collapsed starting with a massive fish kill in 1949. Secondly, the dam trapped sediment and starved local beaches, drawing the ire of surfers and beachgoers and degrading coastal ecosystems. Today, the dam is completely silted in and does nothing for flood control or water supply. The decision to remove the dam has been made. CalTrout, the Surfrider Foundation and Patagonia have taken a key role in developing comprehensive dam removal grant proposals and identifying needed funding to complete the project.

OPPORTUNITY

Potter Valley Project, Eel River

Steelhead and salmon populations in northern California's Eel River watershed are negatively impacted by the impassable Scott Dam, part of PG&E's Potter Valley Project. Current populations of coho, Chinook, and steelhead are estimated to be at 1 – 3% of their historic populations. The Potter Valley Project relicensing process is set to officially begin in April 2017. As part of the Federal Energy Regulatory Commission (FERC) relicensing process, it will be important to understand the impacts of the Potter Valley Project on salmonids and the potential options for providing upstream passage and improving downstream flows in the upper Eel River watershed.



Copco 1 Dam on the Klamath River has blocked salmon and steelhead passage to the Upper Klamath River since its construction in 1918. The dam is one of four scheduled to be removed in 2020.

Photo: Mike Wier

Tagging on Fall River to gather and use information about fish species' movements and population size to assess fish populations.

Photo: Val Atkinson

Leading with Science



Sound science guides our restoration, policy and legal advocacy. CalTrout partners with universities and other experts to conduct original research to put science into action. Here are a few examples:

- 2016 is the second year of the CalTrout/UC Davis cold water fish research position filled by Dr. Rob Lusardi.
- In addition, the CalTrout/Peter Moyle Endowed Professor position was filled, continuing the legacy of applied fish research at UC Davis.
- We memorialized partnerships with UC Santa Barbara and UC Merced, adding them to our current university partners: UC Davis, Humboldt State, University Nevada Reno.
- In partnership with Humboldt State University we are assessing the quantity and quality of salmonid habitat available upstream of the Eel River PG&E Potter Valley Project's impassable Scott Dam (Lake Pillsbury), using high tech remote sensing and targeted ground-truthing.
- We are collaborating on fish tagging and tracking research in Fall River Valley with UC Davis and Department of Fish and Wildlife.
- We are leading the collaborative effort to quantify carbon and greenhouse gas sequestration in restored Sierra meadows.
- We are collecting data and assessing the volcanic spring source water areas of the Mt. Shasta, Medicine Lake, and Lassen area.

Legislation Update

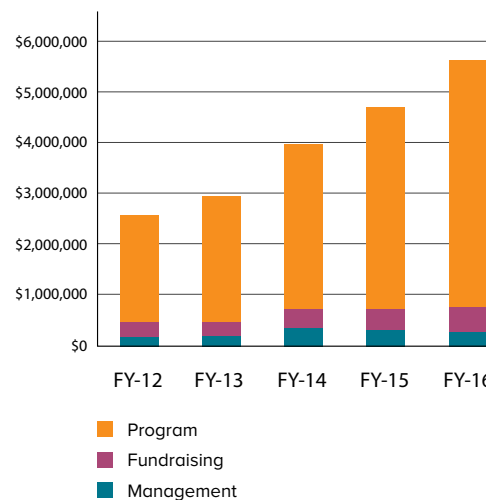
CalTrout works to build and maintain relationships with legislators, along with relevant agencies, on key local, regional, and statewide issues ranging from carbon sequestration policy to funding for floodplain-fish projects. By bringing policy expertise, on the ground experience, community support, science, and advocacy to Sacramento, CalTrout advances critical policies, programs, and funding. Legislative successes from the past year include:

- Successful allocation of Prop 1 funding of \$250 Million for Klamath Dam Removal—a great example of your investment leveraging large scale restoration.
- AB 2087 (Levine) allows agencies to adopt regional conservation plans to identify areas for priority investment for mitigation dollars.
- AB 2480 (Bloom) ensures that California's source watersheds can receive financing considerations on the same basis as infrastructure, i.e. funding for meadows and stream channel restoration.
- AB 1755 (Dodd) establishes a new publically accessible water data platform for data sharing, water rights documentation, and water quality, water-flow, and ecological information. This will help inform better water policy and ensure our rivers and streams do not run dry.

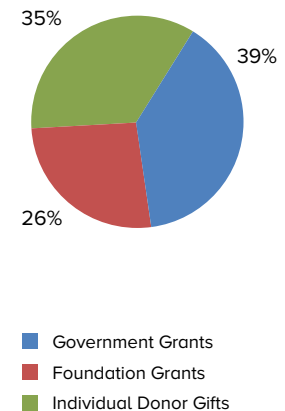
Financials

CalTrout continues to grow, with expenses balancing operating revenue at \$5.6M. At the same time we continue to be lean and efficient, with 85% of our budget going directly to program work. Gifts from people like you are key because they help us to leverage and grow the grant funding and allow us to execute more programs that benefit wild fish and people. Thank you.

Expense Fiscal Year 2012 - 2016



Revenue Fiscal Year 2016



Why I support CalTrout

Armando Quintero, of San Rafael, is the Executive Director of the University of California, Merced Sierra Nevada Research Institute. Mr. Quintero is a Board Member of the Marin Municipal Water District and serves on the California Water Commission.

This summer I participated in CalTrout's Five Rivers Challenge, a fishing tournament on the Hat, Pit, McCloud, Upper Sac and Fall rivers. On each of the big rivers, there were moments of profound vulnerability. My footing, the pressure from the rush of water headed downstream, fraction-of-a-second moments of imbalance and swift reminders of my fragility—then a strong fish on the line would bring me into focus—the adrenaline, hands, line, net, a little bit of chaos—and sometimes a fish in the net. And I would think, how fortunate am I to be here at this moment, on this river, standing in the lifeblood of these places and all the places downstream in California. Some molecules of this water destined for Southern California, for the ag lands in the Central Valley, for cities, towns, parks and some for the sea. I am grateful for the CalTrout efforts to assure these waters are protected for all of us, for the state, for the fish, and for future generations to enjoy.



Armando fishing the Upper Sacramento River at Mossbrae Falls.

Photo: Val Atkinson

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CalTrout Statewide Projects 2016-2017

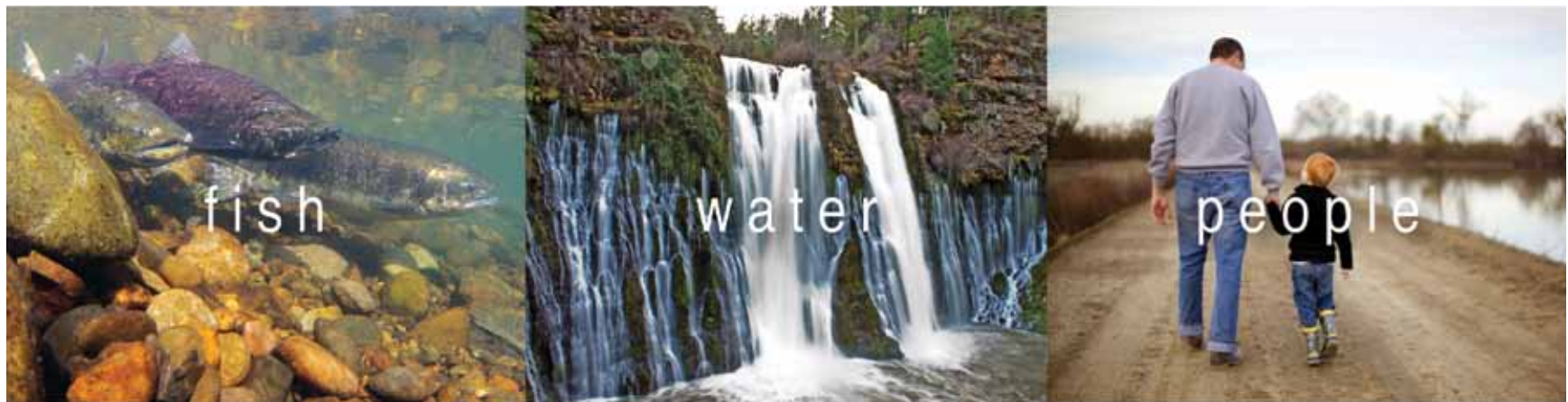


CalTrout staff at Burney Falls.

Photo: Mike Wier.



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Solving complex resource issues while balancing the needs of wild fish and people.

Fish photo: Jim Inman, Water photo: Wyatt Horsley, People photo: Jacob Katz