



Annual Report 2017





Best Photo Winner in CalTrout's 2017 Photo Contest:
"Steelhead Sizing Each Other Up" by Will Boucher

Dear friends

OUR YEAR IN REVIEW

CalTrout is surging forward. What drives this success? Strong values and a unique model, made possible by you. Based on solid science, we rally diverse stakeholders, prove innovative concepts through on-the-ground and in-the-water projects, then take that success and scale it up. We have six field offices throughout the state because being a part of the community is essential for building trust with local interests. Moreover, we have a strong presence in Sacramento, allowing us to drive state policy and funding to benefit fish and water issues at scale. But it all starts with you.

The foundation of our work is strong science. With our partners at the Center for Watershed Sciences at UC Davis, we recently released **SOS II: Fish in Hot Water**. This influential State of the Salmonids (SOS) Report assesses the status of all 32 kinds of trout, salmon, and steelhead in California. The findings were sobering—45% of California's salmonids could be gone in 50 years if current trends continue. As proud Californians, we take this personally. We care about the legacy we leave to our daughters, our sons, and to their children. At CalTrout, we are committed to reversing these trends and halting the decline of our state's wild fish. Our commitment to a strong foundation of science allows CalTrout

to innovate with insight, pioneering new approaches while building credibility and trust with local landowners and agencies alike. We are proving that carbon sequestration in restored meadows can impact climate change effects, one of the key threats to our fish. We work with ranchers and farmers to improve habitat on private land. And we are targeting deadbeat dams for removal, dams being an often insurmountable barrier preventing fish from reaching their home-spawning areas.

CalTrout cannot do this work alone. Partnerships consisting of diverse interests groups are key to the success of all our projects. This fall, we formed the Central Valley Salmon Habitat Partnership, bringing together landowners, water users, conservation groups, and government agencies to benefit salmon, demonstrating our leadership in balancing the needs of wild fish and people.

Advocacy has always been a core value for CalTrout. Our increasing engagement in Sacramento leverages the field office experience solving complex issues to influence statewide policy. In the capitol this year, we steered funding to fish and water priorities, and shaped legislation associated

with the legalization of marijuana that impacts North Coast fisheries.

Ensuring wild fish will thrive again in healthy waters in California is no easy task. Many projects will take years, sometimes decades, before we see the fish return in numbers. It takes endurance to take on a dam removal project like on the Klamath, lasting two decades. Those outcomes would not be possible without your enduring support. You have stood by us, sharing our core values and confidence that our model based on science, innovation, partnerships, and diverse communities will generate enduring impact. Because of you, we can celebrate the successes along the way as we make sure our children and their children will still have wild fish right here in California. Thank you for your support.



Curtis Knight, CalTrout Executive Director



Drew Bassak, CalTrout Board Chair

Science and research

STATUS OF CALIFORNIA'S NATIVE SALMONIDS



This past year, in partnership with the University of California Davis, Center for Watershed Sciences, we released **State of Salmonids (SOS) II: Fish in Hot Water**, a 95-page downloadable report that details the status of California's 32 native fishes. The report is the second such effort undertaken with UC Davis. The first edition was published in 2008 and established a baseline level of health for each native salmonid in the state.

Illustrations by Paul Waters

California is home to 31 kinds of native salmon, steelhead, and trout, 32 if you count the now-extirpated Bull trout, last seen in the McCloud River in 1975. The science behind this report has made it clear: Many of the trout, salmon, and steelhead are in poor condition, with the recent drought pushing several species to the edge of extinction.

The findings: **45% of California's native salmon, steelhead, and trout are likely to be extinct in 50 years, 74% in 100 years, if present trends continue.**

SOS II: Fish in Hot Water provides a profile for each species and describes their top threats. Climate change is the major, overarching threat affecting all salmonids in California. Climate change is expected to reduce cold water habitat, increasingly vary seasonal streamflows, and alter food webs. Compounding the threats from climate change, California salmonids face historical and evolving threats. Anadromous salmonids are threatened by estuary alteration, blocked passage due to major dams, and increasing demands on water supply for agriculture. For inland trout, top threats include invasive species, fire, and hatcheries.

To combat these threats, we have established a plan for a **Return to Resilience**, with emphasis on three major areas:

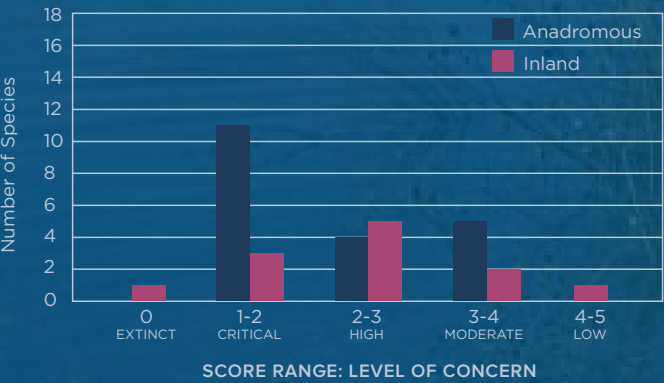
- 1) **Strongholds**—protect the best habitats that remain relatively healthy, like the Smith River, South Fork Eel River, and Butte Creek,
- 2) **Source Waters**—restore and protect healthy meadow function in the High Sierra and Mt. Shasta areas, and 3) focus on improving **Productive and Diverse Habitats**—estuaries, coastal lagoons, floodplains, and spring-fed rivers that are the nursery grounds for our native fish.

We believe California's wild salmon, steelhead, and trout can Return to Resilience. 31 of our 32 kinds of salmonids still persist, a testament to their inherent 'scrappiness.' They are giving us a chance to reverse the downward trajectory. But we have to act now.



Status of California salmonids: 21 anadromous species and 11 inland species.

Anadromous species include all salmon, steelhead, and Coastal Cutthroat trout. Inland species include all trout (with the exception of Coastal Cutthroat trout and Bull trout) as well as Mountain Whitefish.

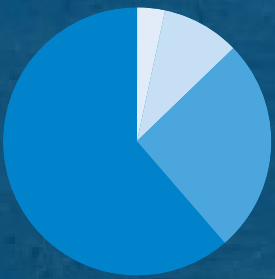
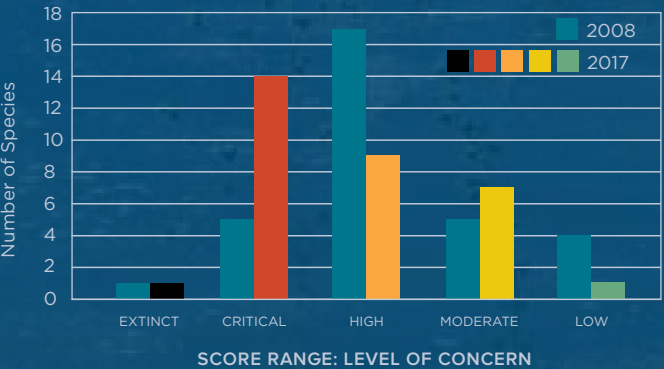


Climate change threat score (%) for California's 31 remaining salmonids.

Climate change was scored as a critical or high threat for 26 of 31 species (87%). It is the major, overarching anthropogenic threat affecting salmonids in California. Due to its high impact and importance to the long term survival of all salmonids in California, it is highlighted below in the pie chart.

Climate change was scored a critical or high threat for a majority of species, and was considered a low threat to only one species.

Change in Level of Concern 2008 to 2017



- Critical 61%
- High 26%
- Moderate 10%
- Low 3%

Extracts from the **SOS II** report and experimental work undertaken at Knaggs Ranch in the Central Valley (background).

Photo: Mike Wier



Seeing the bigger picture: restored Osa Meadow as captured by a drone's camera.

Photo: Mike Wier

Prove concept. Scale up.

HEALTHY MEADOWS BRING MULTIPLE BENEFITS

Meadows encompass less than 5% of the overall geography of the greater Sierra Nevada, yet they are biological hotspots that provide important benefits to fish and wildlife while helping sustain the headwaters crucial to California's water supply. Snowpack in the Sierra provides a natural form of water storage, but the effects of climate change are expected to decrease snowpack by up to 40% by 2050. Warmer temperatures will cause what snow we do get to melt earlier and faster, making it more challenging to store for use later in the year. Restored Sierra meadows can help counteract these effects of climate change, by providing water storage up high that slowly releases over the summer.

In healthy condition, meadows serve as a sponge with highly organic soil that accumulates for hundreds of thousands of years—providing truly long-term carbon sinks. However, 40-60% of these meadows are in a degraded state. Restoring the ecological function of these meadows can increase the benefits of carbon sequestration and water storage while providing diverse habitats for fish and wildlife.

During the summer of last year, we restored the 90-acre Osa meadows. We changed the creek from an incised, linear stream to a more shallow and curved, more natural, one.

This summer, once the roads were passable, we went back to take measurements to verify if the restored meadow is indeed functioning as anticipated.

The findings to date show that healthy and restored meadows have the ability to sequester carbon and reduce greenhouse gas emissions. Our goal is to restore 30,000 acres of degraded meadows by 2030. This amount of carbon reduction would be equivalent to removing over 100,000 cars from the road. Restored meadows, of course, also provide important habitat for fish like the Golden trout.

Forests, meadows, and other natural and working lands store immense amounts of carbon. They are the safest, most expandable carbon sink on earth, which is why Governor Brown and the legislature have described them as the “fifth pillar” of California's climate strategy. CalTrout, leading the Sierra Meadows Partnership, started with one meadow to prove the concept. Now, together with our partners, we can scale up and commit to restoring 30,000 acres by 2030, making California resilient to the impacts of a changing climate.



Diverse interests

COLLABORATING TO HELP SALMON IN THE CENTRAL VALLEY

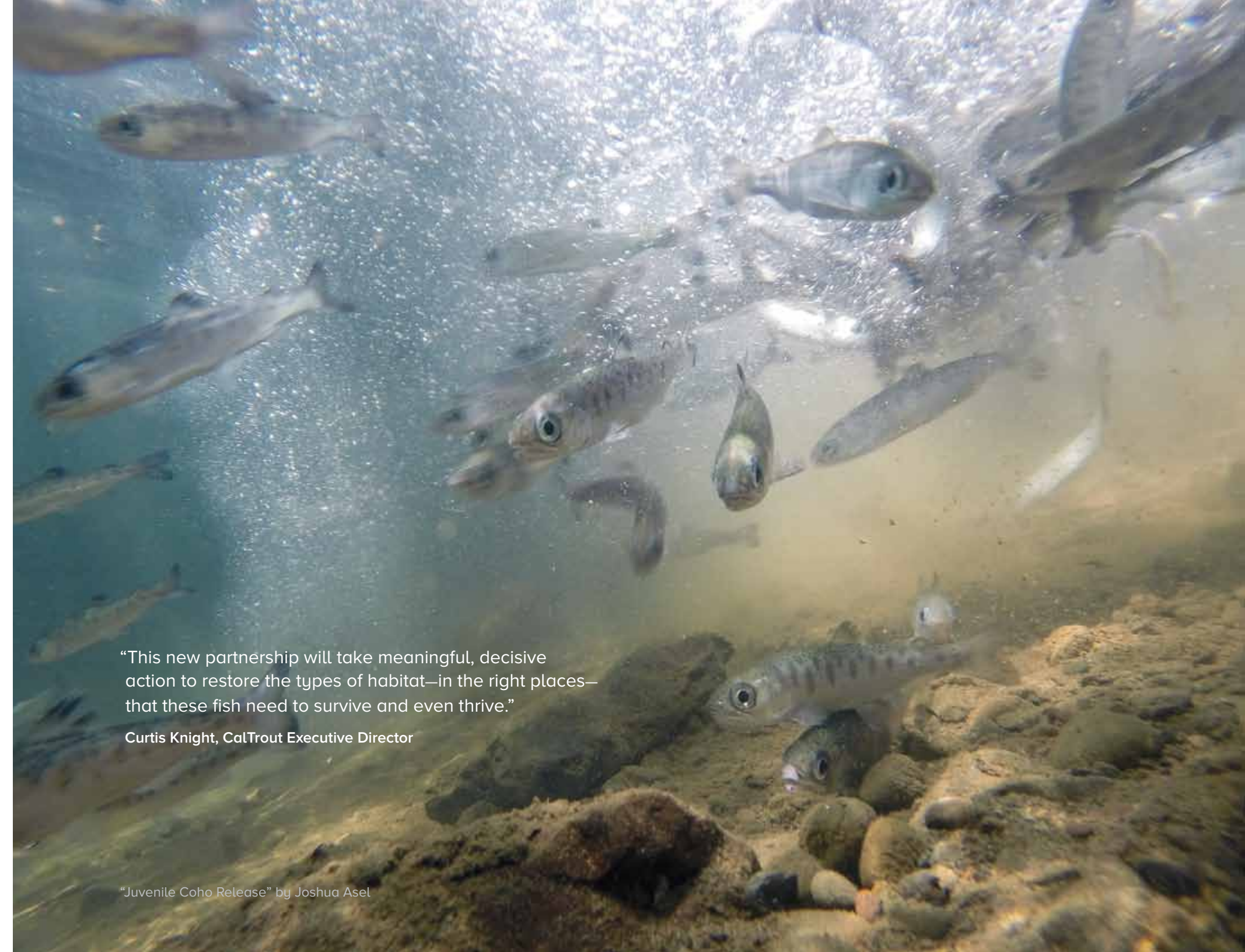
California Trout recognizes that finding solutions to some of the state’s most complex resource issues is not a “my way or the highway” approach. To the contrary, our strength lies in our ability to bring together diverse interests—farmers, conservation groups, tribes, landowners, agencies—to find solutions that meet needs of fish and people. From working with rice farmers to mimic lost Central Valley floodplain rearing habitat for juvenile salmon, to providing incentives to landowners in the Shasta Valley to restore salmon and steelhead habitat, we know collaborating with a range of vested stakeholders is key.

A milestone was achieved this past year with the launch of the Central Valley Salmon Habitat Partnership. With the leadership of our Senior Scientist, Jacob Katz, a broad group of stakeholders was formed to work together to restore and protect vital salmon and steelhead populations, habitats and ecosystem conditions.

The Central Valley has been ground zero in the struggle for limited water resources. As a result, salmon have struggled to survive in the highly altered landscape. The Partnership, which includes state and federal water and wildlife agencies, farmers and water suppliers, fishermen, and conservationists, will work to leverage cooperation and science to better align priorities, funding and resources for salmon recovery.

Central Valley Salmon Habitat Partnership signing

Photo: Mike Wier



“This new partnership will take meaningful, decisive action to restore the types of habitat—in the right places—that these fish need to survive and even thrive.”

Curtis Knight, CalTrout Executive Director

“Juvenile Coho Release” by Joshua Asel

CalTrout, by the numbers

A FEW STATISTICS ABOUT CALTROUT AND OUR WORK IN 2017



27 CALTROUT EMPLOYEES

9 PEER-REVIEWED PUBLICATIONS



"Hat Creek, Summertime" by Dan Rhodes

172

PARTNERS WE COLLABORATE WITH
TO BENEFIT WILD FISH AND PEOPLE

"The Mighty Klamath River" by Scott Cunningham

15

FISH PASSAGE AND DAM
REMOVAL PROJECTS

34

GOVERNMENT AND FOUNDATION
GRANTS RECEIVED IN 2017



"Kern River Rainbow" by Richard Arner

7,284

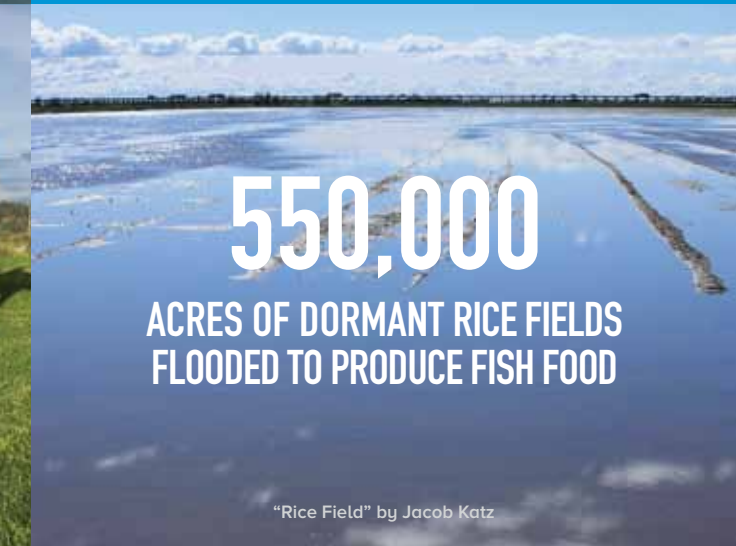
PEOPLE REACHED THROUGH
CALTROUT EVENTS



45 PROJECTS ACROSS THE STATE

550,000

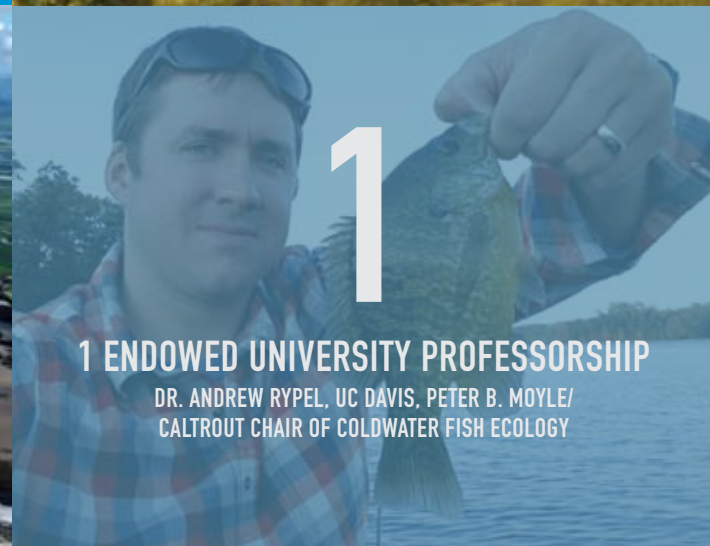
ACRES OF DORMANT RICE FIELDS
FLOODED TO PRODUCE FISH FOOD



"Rice Field" by Jacob Katz



7 ESTUARIES WE'RE WORKING TO RESTORE



1 ENDOWED UNIVERSITY PROFESSORSHIP

DR. ANDREW RYPEL, UC DAVIS, PETER B. MOYLE/
CALTROUT CHAIR OF COLDWATER FISH ECOLOGY

9

MILES OF KERN RIVER RAINBOW
TROUT HABITAT RESTORED



OVER 100,000

CARS EFFECTIVELY TAKEN OFF THE
ROAD IF WE ACHIEVE OUR GOAL
OF RESTORING 30,000 ACRES OF
SIERRA MEADOWS BY 2030

200

PAGES OF COMMENTS FILED
ON EEL RIVER POTTER VALLEY
RELICENSING PROJECT



11,112 MILES COVERED TO DOCUMENT OUR WORK

"Mike Wier" by Val Atkinson



“If everyone, all of us, each neighbor, could do their part and we connect all the pieces, we can get it done. We feel we need to start that neighborly connection. We need to put the land and its resources first for the next generations. We have an opportunity to better it. Together we can.”

Susan Hart

Being part of the community

WORKING ALONGSIDE CARETAKERS AND STEWARDS OF THE LAND

The Hart family has ranched alongside the spring-fed Little Shasta River since the late 1800s. Five generations have been the caretakers of the 4,500 acre ranch. Blair and Susan Hart wanted to improve their water use efficiency and restore flows back to the Little Shasta to improve fish habitat, at the same time balancing livestock needs with wildlife needs. But they needed help.

CalTrout has offices in key regions throughout California where wild fish are impacted by local communities. Considered to be a “local” of those communities, CalTrout understands the underlying issues and can build trust with diverse interests. We work with land owners like the Hart family directly, as neighbors and partners, to identify solutions that balance the needs of wild fish and people.

With your support, we bring our expertise on policy and regulatory compliance and work with landowners like the Hart family to develop a Safe Harbor Agreement. This provides incentives to improve water use efficiency and habitat conditions while reducing the regulatory burden and liability under the Endangered Species Act. We also identify and secure funding for habitat improvement projects and provide the science to ensure efficacy.

This year, CalTrout was awarded a \$2.1M grant from the Wildlife Conservation Board (Prop 1) to implement a set of projects on the Hart Ranch to improve flows in the Little Shasta. The projects will remove a barrier to fish passage, improve on-farm water use efficiency, and

result in permanent dedication of 1.5 cubic feet per second of cold water into the Little Shasta River when Coho salmon need it most.

This work builds on our work with landowners in the Shasta and Scott River valleys. These sister rivers are critical habitat for wild steelhead and salmon, in part because of their location just below Iron Gate Dam, the lowermost of four dams to be removed from the Klamath River in 2020. Wild populations of fish in these two rivers will be critical for recolonizing the upper Klamath River after dam removal.

Blair Hart and the family ranch

Photo: Drew Braugh



Endurance

OPENING UP FISH PASSAGE TAKES TIME

Southern steelhead populations persist on the edge of the species' range in Southern California. Southern steelhead epitomize resiliency, having adapted to tolerate low flows and warmer water temperatures than their northern counterparts—up to 77° F. These genetic and behavioral traits are important as climate change is expected to make California warmer and stream flows more variable. These, quite literally are the fish of the future.

Consequently, we are working with urgency to improve fish passage and flows for these unique populations as they struggle to survive among 23 million people in Southern California. When the winter rains come, Southern steelhead move into streams like the Santa Ynez, Santa Clara, Santa Margarita and smaller streams all the way down to San Diego. But they need access to spawning grounds often blocked by freeways, rail lines, or dams. Removing fish passage barriers is key.

CalTrout has worked as part of the Matilija Coalition for many years to remove Matilija Dam. This year progress was made in dealing with sediment downstream, getting us closer to removal. In addition, we helped secure \$30M for fish passage efforts in Southern California in recently passed Senate Bill 5, the Park Bond, which will go before voters next year.

Removing Matilija Dam on the Ventura River and Rindge Dam on Malibu Creek are important to the future of Southern steelhead. We have learned that dam removal takes time—the effort to bring down four dams on the Klamath River is approaching two decades. It takes endurance, and enduring supporters, to make these long-term commitments. CalTrout is committed to persevere until the removal of Matilija Dam is complete.

Removing large dams can be one of the most beneficial ways to open up long-blocked salmon and steelhead habitat and increase fish abundance. But the opportunities for large dam removal are limited and they take time, often decades, to get the deal done.

CalTrout has worked for almost two decades on the deal to remove four dams from the Klamath River, set for removal in 2020. We are actively engaging on a potential dam removal project on the Eel River, where PG&E owns two dams in the upper watershed as part of the Potter Valley Project.

The dams block potential habitat ranging between 291-463 km for steelhead and 89-127 km for Chinook salmon upstream of the Potter Valley Project. In addition, approximately 60 miles of the mainstem Eel River are affected by project minimum flow releases. CalTrout is engaged in a multi-stakeholder alternative agreement that promotes ecosystem health in lieu of a contentious re-licensing battle.



Previous page: Southern steelhead. This page: Scott Dam on the Eel River.

Photos: Mike Wier

Advocacy

PUSHING FOR FUNDING AND POLICY IN SACRAMENTO

Working in the state’s capital is an important part of CalTrout’s working model. We work in regions throughout the state where wild fish and local communities reside. We solve complex resource issues that benefit wild fish and people. We scale up and leverage these successes in Sacramento, through advocacy for new policies and state funding directed at these programs. In turn, the benefits of new policies and funding return to these communities. It is a successful feedback loop.

With the current legislative session just ending, we are pleased to report the successful passing of Senate Bill 5, the new ‘Park Bond.’ This funding bill still needs the governor’s signature (likely) and then goes to the voters next year for passage.

If passed, the \$4.1 billion would go toward water and park projects in California. It also includes funding for the newly formed Central Valley Salmon Habitat Partnership, for multi-

benefit floodplain projects in the Central Valley, and secured funding for Matilija dam removal.

We also supported AB 109. This Greenhouse Gas Reduction Fund bill approves various investments to fight climate change, including funding for meadow restoration. The recognition of mountain meadow restoration as an important step toward combatting climate change validates CalTrout’s meadows work, developed in the Sierra region, and will ultimately grow and expand these efforts.

Our advocacy work in Sacramento is an integral part of our efforts to ensure statewide funding and policy benefitting trout, salmon, and steelhead.



Bringing home environmental realities through direct experience strengthens our advocacy work in Sacramento. CalTrout facilitated a floodplain workshop for restoration practitioners and agency scientists from around the state and led an all-day field trip of Sacramento Valley water infrastructure. Attendees got to see some of the weirs and bypass systems that were constructed over a century ago with little consideration for fish and fish migration.

Photo: Mike Wier

Financial information

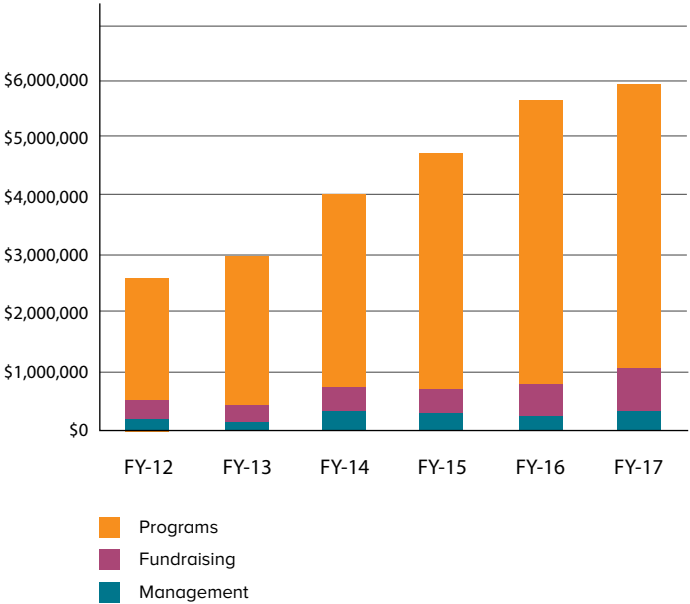
83% OF OUR BUDGET GOES DIRECTLY TO OUR PROGRAMS

CalTrout continues to grow, with expenses balancing operating revenue at just under \$6M. We continue to be lean and efficient with 83% of our budget going directly to program work. Our funding is balanced and diversified, important for sustained growth.

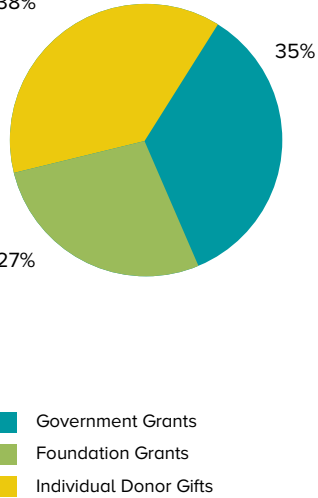
But it starts with you. Gifts from people like you are key because they help us to leverage that grant funding and allow us to execute more programs that benefit wild fish and people.

Thank you.

Expenses Fiscal Years 2012 - 2017



Revenue Fiscal Year 2017



Legacy giving

LOOKING TOWARD THE FUTURE

Your legacy gift, most often a bequest in your will, helps future generations balance the needs of fish and people. A bequest is revocable and provides the flexibility you may need to preserve your assets. A life income gift, while irrevocable, provides you a steady income stream now and has several tax advantages. Bequests, life income gifts, and other legacy options completely avoid estate tax.

When you make such a gift, we'll invite you to join our newly named **Richard May Legacy Circle** and honor you in several ways. For more information contact Julie Seelen: (415) 392-8886, ext. 102, or JSeelen@caltrout.org.

Join Us

We thank the following members of the Richard May Legacy Circle who have so kindly included CalTrout through a bequest in a will or through another type of legacy gift:

Anonymous (6)
The Brookfield Family
George & Becky Coughlin
Frank Eldredge
Ned Engle
William & Susan Epstein
Dick Galland & Annie Callaway
Bill & Terry Krivan
Richard May

Phil Morris & Judy Jacobs
Richard & Laurie Morrison
Steve Rogers
Jerry Zampino

Legacy Gifts Received

It is with sadness that we announce that the following CalTrout supporters have passed on. They left a gift through their estates to help build our opportunity fund, strengthening CalTrout to help maintain resilient populations of fish thriving in healthy waters.

Robert Antonioli
Hamilton W. Budge
James Gerstley
Joseph Geyer
Neil C. Hansen
Jeff Moncur
Kit Crosby Williams

To me, this photo of my grandson Frank and son David captures the essence of CalTrout—paying forward to the next generation. The “Franks” of the world have to carry the torch going forward, both philosophically and with a commitment to solid science in the interest of our environment.”

Bill Krivan, Member, Richard May Legacy Circle



“Perazzo Meadows, Little Truckee River”
by Bill Krivan

Legacy board & staff

FIVE REGIONS, 27 EMPLOYEES

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Drew Bassak
Board Chair
Steve Rogers
Vice Chair

Richard West
Treasurer

Rick Kaufman
Secretary

Linda Ach
Gary Arabian
Tony Brookfield
George Choe
Andy Eckert
Bill Epstein
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Laurie McLellan
Taylor Moore
Bob Payne
Bob Rosenberg
Scott Tucker
Paul Vais
Jeff Williams

San Francisco Central Office

Curtis Knight
Executive Director

Alan Roesberry
Finance Director

Gaby Roff
Institutional Giving Director

Julie Seelen, CFRE
Advancement Director

Tracey Diaz
Marketing and Communications Director

Redgie Collins
Staff Attorney

Nathan Lubarov
Finance & Compliance Manager

Melissa Racklyeft
Grants Associate
Patrick Samuel
Bay Area Program Manager

Alisan Amrhein
Marketing & Development Associate

Evan Reeves
Grants Manager

Casey O'Sullivan
Database Associate
Jocelyn Winkler
Advancement Associate

Regional Offices

CENTRAL CALIFORNIA
Jacob Katz, Ph.D.
Senior Scientist, Central Valley

NORTH COAST
Darren Mierau
North Coast Program Director

Mary Burke
Program Manager

Marissa Adams
Project Manager

MT. SHASTA/KLAMATH
Drew Braugh
Mt. Shasta Program Director

Phoenix Isler
Program Manager

Nicole Dove
Admin Assistant

Craig Ballenger
Fly Fishing Ambassador

SIERRA HEADWATERS
Mark Drew, Ph.D.
Sierra Headwaters Program Director

Janet Hatfield
Sierra Headwaters Project Manager

Levi Keszey
Watershed and Outreach Coordinator

Mike E. Wier
Field Reporter and Videographer

SOUTHERN CALIFORNIA
Candice Meneghin
Conservation Program Manager

Sandra Jacobson, Ph.D.
Coalition Coordinator

Academic/Science Partners

UC Davis, Center for Watershed Sciences
Dr. Peter Moyle
Dr. Jeff Mount
Dr. Jay Lund

Dr. Carson Jeffries

CalTrout/UC Davis Wild Fish Partnership
Dr. Rob Lusardi, Leader

Humbolt State University
Dr. Walt Duffy
Dr. Bill Trush

University Nevada-Reno
Dr. Sudeep Chandra

UC Santa Barbara
Dr. Tom Dudley

Strategic/Legal Advisors

Environmental Defense Center
Manatt, Phelps & Phillips
Shute, Mihaly & Weinberger
Water Power & Law Group,
Richard Roos Collins
Conservation and Natural Resources Group
Environmental and Energy Consulting

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www.caltrout.org



CalTrout Statewide Projects 2016-2017



CalTrout staff at the 2017 Gala
Photo: Mike Wier



California Trout Inc.
360 Pine Street, 4th Floor
San Francisco, CA 94104

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



Above: Fish by Jim Inman, Water by Wyatt Horsley, People by Jacob Katz
Front cover: "Canoe Sunrise" by Patrick Sheehan