The 16th Coho Confab will be held August 9-11, 2013, at the Grange in the Mattole River Valley. Trees Foundation and the Salmonid Restoration Federation are the co-hosts of this educational event and are excited to be partnering this year with the Mattole River and Range Partnership that includes Sanctuary Forest, the Mattole Salmon Group, and the Mattole Restoration Council. The Confab is also sponsored by the CA Department of Fish & Wildlife.

The Coho Confab is a symposium to explore watershed restoration, learn restoration techniques to recover coho salmon populations, and to network with other fish-centric people. Restoration pioneer Richard Gienger coined the term “Confab” from the verb “confabulate,” which literally means to informally chat or engage in conversation.

The Confab allows for participants and instructors to share innovative techniques, pioneering experience, and scientific methodologies. Participants learn skills and techniques that can be applied to restore habitat in their home watershed. The Coho Confab will open with a Friday evening community dinner. The evening will continue with orientation presentations including a presentation about the History of Mattole Restoration and Partnerships with Sungnome Madrone, Executive Director of the Mattole Salmon Group, and Richard Gienger, Founder of the Coho Confab. Tasha McKee, Executive Director of Sanctuary Forest, will discuss Land and Water Stewardship, Past and Present, and Hezekiah Allen, Executive Director of the Mattole Restoration Council, will give a presentation entitled, Cannabis and Stewardship: Are Family Farms and Rural Homesteads Compatible with Watershed Recovery?

On Saturday there will be several concurrent field tours in the morning including a tour of riparian restoration projects, estuary restoration projects, and a macro-invertebrate sampling workshop. In the afternoon we will have a plenary session focused on Creating a Road Map and Action Plan for Coho Salmon Recovery in the Mattole and Beyond. Carlos Garza, PhD, of NOAA Fisheries will present on coho salmon genetics and recovery actions that would benefit this endangered species. There will be a coho salmon rescue and rehabilitation discussion with representatives of the California Department of Fish and Wildlife, NOAA Fisheries, and staff from the Mattole Salmon Group. The workshop will culminate with an all-star session entitled Innovative Restoration Strategies to Address Key Constraints to Recovery with Tasha McKee of Sanctuary Forest, and special guests Ecologist Tommy Williams, PhD, of the Southwest Fisheries Science Center, Ecosystem Analyst Michael Pollock, PhD, from the Northwest Fisheries Science Center of NOAA Fisheries, and Kevin Shaffer of the Fisheries Restoration Grant Program of the CA Department of Fish and Wildlife.

Sunday concludes with a half-day of concurrent tours including a tour in the Mattole estuary exploring innovative approaches in Baker Creek, a tour focused on Human Communities and Working Lands: Roads, Fuels Reduction, Forestry, and Water Conservation with Hezekiah Allen and Nathan Queener, Mattole Restoration Council, and a tour highlighting erosion control and habitat improvement projects in South Fork Eel River tributaries with the Eel River Salmon Restoration Program.

Saturday evening we are honored that members of the Yurok tribal restoration crew will traditionally prepare Klamath salmon for our coho community dinner, to be followed by a fun-filled cabaret.

To view the agenda and register for the Confab, please visit www.treesfoundation.org or www.calsalmon.org.
This is a watershed year if you are in the fisheries restoration field. This is the driest year in historic record for many California rivers. We have good ocean conditions for fish which will translate to record returns of salmon in a year that will have inadequate instream flows and poor spawning conditions. It is the imperfect storm of variables that will most likely lead to massive fish kills.

Environmental conditions for salmon are unfavorable and the financial prognosis for the fisheries restoration field is also daunting. Yet, we have several legislators who are championing bills that could create sustainable funding sources for the fisheries restoration field. Assemblymember Gordon’s bill AB 416, known as the Greenhouse gas bill, would allocate general funds to a grant program for community-based actions and projects that address greenhouse gas reduction and climate change preparedness. The bill specifies that non-profits would be eligible to apply for grants. Projects that create local jobs, job training, and improve the reliability of local water supplies will be eligible for funding. State Senator Lois Wolk is sponsoring Senate Bill 33, an Infrastructure Finance Redistricting bill, which could help remove barriers for local governments to address a backlog of stormwater management, water quality protection, flood risk reduction, and water reclamation projects. The bill was amended to include “facilities and watershed lands used for the collection and treatment of water for urban uses” and the inclusion of “habitat restoration” projects. Additionally, Noreen Evans’ SB 241, the Oil Severance Tax Law, would administer an oil severance tax that would be allocated to the University of California system and to the State Parks. The California Watershed Council, Salmonid Restoration Federation, California Conservation Corps, and other entities are advocating for the oil severance tax to mitigate for environmental impacts and enable habitat restoration.

The watershed projects which are delivered by our resource conservation districts, conservation corps, local agencies and community-based non-profits are necessary for water supply, erosion and fire control, habitat protection, flood risk reduction and water treatment. The state grant programs that have historically supported a significant portion of this work have expended the last of their bond act funding. The oil severance tax revenues would provide a more sustainable and appropriate funding source for maintaining the State’s natural resources. Please track these bills and contact your representatives to encourage them to include watershed restoration projects in these revenue-generating bills.

Other encouraging news includes a pilot project of NOAA Fisheries Restoration Center and the California Conservation Corps that is training military veterans in salmon monitoring and restoration skills. Check out this inspiring video: www.habitat.noaa.gov/highlights/vetsrestorationvideo.html.

Another step forward in restoration planning is a permit streamlining for Fisheries Recovery and Conservation. The NOAA Restoration Center Southwest Region (SWRC) has been developing and promoting restoration permit streamlining as a means to facilitate and expedite salmonid recovery and conservation projects. The NMFS Protected Resources Division SWR has issued two Programmatic Restoration Biological Opinions that cover two-thirds of the coast. In summary, landowners will now have an added incentive to pursue restoration in the coastal zone that could benefit estuary and floodplain restoration efforts.
Salmonid Restoration Federation is hosting the 7th Annual Spring-run Chinook symposium on July 22-23 at Wine and Roses hotel in Lodi, CA. The first day of the symposium will include presentations and panel discussions about the status of Spring-run Chinook recovery efforts in different regions, reintroducing Spring-run Chinook in the San Joaquin River and its tributaries, managing for multiple species in the Central Valley, and restoration efforts in the San Joaquin watershed and surrounding tributaries. The symposium will highlight Sacramento-San Joaquin Delta flow regimes that would benefit salmonids.

The morning session will include a keynote address by Rene Henery of Trout Unlimited regarding questions, challenges, and opportunities for Spring-run recovery in the Central Valley. This presentation will be followed by status reports from Butte Creek, the Yuba River, Mill Creek, and presentations regarding sizing, timing, and recovery strategy of Spring-run Chinook in the San Joaquin.

In the afternoon, Geneticist Carlos Garza from the Southwest Fisheries Science Center will give a presentation on the Reintroduction of Spring-Run Chinook Salmon to the San Joaquin River: Genetic Evaluation of Donor Stocks. Other presentations by Jacob Katz, PhD, Cal Trout and Rhonda Reed of NOAA Fisheries will explore managing for multiple species, listing criteria, and restoration considerations. These presentations will be followed by a panel discussion on race segregation.

The agenda will also feature restoration strategies and lessons from channel and floodplain restoration on the Stanislaus and Merced rivers. Eric Ginney of ESA PWA will present on flow regimes that support channel and floodplain rehabilitation. The afternoon will conclude with a presentation from Michelle Workman of the Anadromous Fisheries Restoration Grant Program of the US FWS, regarding the Status of Spring-run Brood Stock Development for the San Joaquin River Restoration Program.

This symposium will feature a poster session and reception on Monday night. Tuesday will include field tours to the Merced River Ranch to see floodplain restoration and gravel augmentation projects and to the Stanislaus River to visit floodplain reclamation and side-channel projects. To learn about the poster session, please email poster@calsalmon.org.

To see the agenda and registration, please visit www.calsalmon.org.

Why Spring-Run? Questions, Challenges, and Opportunities for Salmon Recovery in the Central Valley

Rene Henery, PhD, Trout Unlimited

Despite the promise of recently improved adult returns, a growing dialogue around salmon recovery in California, and progress on major collaborative programs including the San Joaquin River Restoration Program and the Yuba River Accord, Central Valley salmon populations continue to teeter on the verge of collapse, at a slim fraction of their historic abundance. Decades of research and investment have illuminated not only the critical role salmon play in the fabric of riverine ecosystems, but the mechanisms underlying the plasticity and resilience that enables their adaptation and persistence in California’s diverse and dynamic landscape.

While efforts to conserve and recover imperiled Spring-run salmon populations appropriately value diverse life history as a core component of resilience, a growing body of science invites us to rethink management approaches which silo Central Valley salmon based on run timing or home river. As Central Valley salmon populations increasingly homogenize, behaviorally and genetically, visioning and managing for their recovery challenges us to engage with a different set of questions: How have habitat alteration and hatchery reproduction contributed to declining run-timing diversity and a lack of affinity for place? Is a phenotypic approach to designating conservation status appropriate? Do discrete populations exist within the Central Valley? What could or should the role of genetics be in the conservation and recovery of diversity? Can diversity be conserved or recovered in the absence of the habitat within which it evolved?

The long-term success of salmon populations, independent of run-timing, may lie in the opportunity to integrate and answer these and other related questions in a comprehensive and multi-scale stewardship strategy for Central Valley Watersheds.
Early in 2013, Salmonid Restoration Federation in collaboration with a Humboldt State University sociology graduate student, Sara Schremmer, initiated a study to determine the feasibility of conducting a “technology transfer” of Sanctuary Forest’s successful Mattole headwaters water storage and forbearance program to Redwood Creek on the South Fork Eel River. The Redwood Creek watershed spans 26 square miles and has historically supported strong runs of coho, Chinook, and steelhead. Juveniles of these species are routinely found throughout the watershed in spring and early summer, with Coho and steelhead rearing in the watershed until migrating to the ocean the following spring. Today, the watersheds, tributaries, and drainages of the South Fork Eel River basin are suffering from the legacy impacts of industrial timber management, extensive road networks, and rural sub-divisions. Residential water diversions appear to be compounding the problem. Native salmon populations are now endangered and rural communities have virtually no baseline information or data about historic flows in the small creeks which many local residents depend upon.

To address these concerns, the Redwood Creek Water Conservation Project was designed in order to gather baseline data about human water use and low flows in the watershed, to gauge community interest in establishing a voluntary water conservation program, and to understand the type of water conservation program that might be appropriate for the Redwood Creek watershed and its rural residents. The project is based on the methods employed in Sanctuary Forest’s innovative Mattole headwaters water storage and forbearance program, where during the period from 2007-2012, sixteen participating landowners signed a legal agreement with Sanctuary Forest to store water from the Mattole River during high flows, and to use stored water from their tanks during the low flow season. The program has successfully engaged the community in water conservation efforts and has increased flows in that one-mile reach of the Mattole by 40%, according to data monitored by the CA Department of Fish and Wildlife.

**Surveys & Data Analysis**

The first phase of the project was comprised of an empirical study where an anonymous survey was mailed to the approximately 400 landowners of parcels in the Redwood Creek watershed. In order to gather baseline data and obtain a clear understanding of human water use patterns in the watershed, the survey contained questions related to water source(s), withdrawal rates, and current on-site storage capacity. Questions on community perceptions and values regarding Redwood Creek were also included, in order to gauge the level of interest that residents have in participating in a voluntary water conservation program.

Although the data set was relatively small (70 responses out of 400), a few interesting and statistically significant relationships surfaced after analyzing the responses. Figure 2 illustrates a cross-tabulation between two questions: “How frequently or infrequently do you talk to other people in your community about the health of Redwood Creek?” and “How interested or uninterested are you in participating in voluntary flow restoration efforts in Redwood Creek?” From the data, we found that there is a significant relationship between how often respondents talk about the health of the creek and how interested they are in volunteering in restoration efforts. One interpretation of this finding suggests that future efforts to increase levels of volunteer engagement in the community would more likely be successful if we were to provide additional forums for public dialogue among residents of the watershed.

Additionally, we found that there is a significant relationship between a respondent’s interest in volunteering and whether they value Redwood Creek for its aesthetic beauty and habitat for salmon. Values regarding fresh drinking water and water for irrigation did not have a significant impact on the respondent’s level of interest in volunteering. From this information, we could conclude

**Figure 1: Do you have any mechanisms in place to prevent tank overflows?**

**SRF Redwood Creek Project Coordinator, Sara Schremmer, trained with Sanctuary Forest’s monitoring team to learn low-flow study techniques that will be employed in Redwood Creek this summer when we conduct a low-flow study in several tributaries of Redwood Creek.**

**Participants toured a recharge pond as part of the Water Conservation workshop that SRF hosted in February, 2013. Photo: Sara Schremmer**
Community House Meetings

In the second phase of the feasibility study, two house meetings were hosted in Miller Creek and Seely Creek to provide a forum where Redwood Creek residents could participate in the decision-making process regarding the scope and trajectory of a water conservation program for the Redwood Creek watershed. At each meeting, presentations were given by local restoration experts, highlighting the concerns about the watershed from a resource system perspective. Additionally, feedback was gathered from residents on their interest in participating in water storage and forbearance versus other forms of water conservation.

Water Conservation Workshop and Field Tour

The water usage surveys and house meetings culminated in a free water conservation workshop with presentations by staff from Sanctuary Forest, Salmonid Restoration Federation, the Mattole Restoration Council, and the Mattole Salmon Group. Presentations were followed by a three-hour field tour in Briceland in order to teach landowners hands-on water conservation techniques that could be applied to their own homestead. Stops during the field tour included well-constructed lined ponds, groundwater recharge ponds, rainwater catchment tanks, and poly-tank farms, all for the purposes of increasing resident knowledge about options for winter water storage.

Next Steps

Survey results revealed which tributaries of Redwood Creek have landowners and residents living along them that would be amenable to the implementation of a voluntary water storage and forbearance program; however, measuring the social acceptance of water storage and forbearance is just one key component to the project. In order to determine where water storage and forbearance would have the greatest ecological impact in restoring flows, a low flow study will be initiated on Redwood Creek in the summer of 2013.

The low flow study will provide baseline flow data that will illuminate to what extent water diversions are impacting flows on Redwood Creek, as well as which locations in the Redwood Creek watershed are most critical for salmonid population recovery. Salmonid Restoration Federation’s low flow study on Redwood Creek will be guided by a local geologist and restoration practitioner with expert knowledge of the watershed as a resource system.

SRF will continue to work with multiple agency and organizational partners, including Sanctuary Forest, the Mattole Restoration Council, Eel River Salmon Restoration Project, the Department of Fish and Wildlife, Humboldt Area Foundation, Humboldt State University, Trees Foundation, Eel River Watershed Improvement Group, NRCS, and the Briceland Volunteer Fire Department to harness the momentum and excitement around flow restoration that has already been generated by this project. With the active input and continual engagement from the residents of the Redwood Creek watershed, SRF is working to develop and implement a community-led residential water conservation program in the near future that will suit the needs of both people and fish for generations to come.

SRF will be hosting a Water Rights Forum for landowners on Thursday, July 11 at the Beginnings Octagon in Briceland. For information regarding the Redwood Creek Water Conservation Project, please email Sara Schremmer at water@calsalmon.org.
How Are California’s Existing Water Management Issues Impacted by Climate Change?

Ben Chou, Natural Resources Defense Council

Like many states in the western U.S., California struggles with a problem balancing water supplies and demands and climate change is exacerbating these pressures. Almost three-quarters of the state’s available water supply originates in the northern third of the state while 80 percent of water demand is located in the southern two-thirds. The state’s Mediterranean climate with wet winters and dry summers also intensifies this water imbalance.

To address the geographic and seasonal disparities over water availability, the state has a complex network of water storage and transport facilities. The two largest, the State Water Project and Central Valley Project, carry a quarter of the state’s total developed water supply (the state’s other major imported water supplies come from the Colorado River).

At the heart of the state’s water supply network is the Bay Delta, where the Sacramento and San Joaquin Rivers converge before making their way to San Francisco Bay. About 30 percent of Southern California’s water supply is transported through the Bay Delta region, helping to provide water supplies for more than 25 million people and millions of acres of farmland.

However, excessive water withdrawals historically have led to the degradation of the Bay Delta ecosystem, resulting in severe damage to the state’s salmon fisheries, which once were abundant but have been declining—though some progress in restoring salmon populations has been made as of late.

As if the degraded ecosystem wasn’t bad enough, an aging patchwork of levees that protects the Bay Delta from flooding is at increasing risk of failure. Approximately $69 billion of assets, including water supply infrastructure, highways, agricultural land, and natural ecosystems, are protected by this vulnerable levee system, which is the region’s primary defense from riverine and coastal flooding.

Climate change is likely to exacerbate these vulnerabilities as increased storm surge, sea level rise, and potentially higher river flows increase the risk of levee failures, which could jeopardize critical water supplies, agriculture, wildlife habitats, and infrastructure.

In addition to those particular vulnerabilities in the Bay Delta, warmer temperatures from climate change are jeopardizing the effectiveness of California’s entire water supply system. Changes in the timing of runoff and amount of snowpack in the Sierra Nevada, effectively the state’s largest surface water reservoir, are already occurring and are likely to become more pronounced with increased warming.

Not only will municipal, industrial, agricultural, and environmental uses be impacted by the diminishing snowpack, but earlier snowmelt and more precipitation falling as rain instead of as snow will result in tradeoffs between managing reservoirs effectively for water supply and for flood control.

To address these problems in the Bay Delta and Central Valley, the state has been working to complete the Bay Delta Conservation Plan (BDCP) and implement the Central Valley Flood Protection Plan (CVFPP). The BDCP is an attempt to restore the Delta’s fragile ecosystem while ensuring a more reliable supply of water for people. Several months ago, NRDC and a coalition of other environmental groups, water agencies, and business leaders proposed a portfolio-based conceptual alternative to the BDCP’s current narrow focus.

This alternative proposes increasing water recycling, cleaning up groundwater supplies, capturing urban stormwater, and increasing urban and agricultural water conservation, among other strategies, to reduce reliance on water from the Bay Delta ecosystem. And the adoption of the CVFPP last July is a good start to addressing critical flood management issues in the region by supporting the use of cost-effective management tools such as floodwater bypasses and development of other climate change preparedness strategies.

Local water utilities also are making efforts to reduce reliance on imported water supplies from the Bay Delta and the Colorado River. A few weeks ago, we released an analysis of what five urban water agencies are planning to reduce or eliminate the use of imported water in favor of sustainable, local water supplies.

By 2035, these agencies hope to reduce dependence on imported water supplies between 35 percent and 100 percent through investments in water conservation, recycling, rainwater and stormwater harvesting, and better management of groundwater resources. NRDC developed a website where Californians can find out what their water agency is doing to plan for the future.

These forward-thinking water management strategies along with other innovative approaches to address climate change risks are included in our recent Getting Climate Smart report, which lays out a straightforward six-step process for climate preparedness. Many states and communities already have taken these steps to protect public health, livelihoods, and the well-being of our communities. But there are still many more that need to take action to prepare for the climate impacts already here and those on their way.
Salmonid Restoration Federation recently hosted the 31st Annual Salmonid Restoration Conference at the River Lodge in Fortuna, California on March 13-16. The theme of this year’s conference was “Innovative Approaches to Fisheries Restoration” and the conference agenda highlighted pioneering techniques, methodologies, and practices to restore and recover salmonids. The conference agenda explored the theories, philosophies, and science informing the development of restoration practices that mimic natural processes.

The annual Salmonid Restoration Conference has become the largest salmon restoration conference in California if not the world. SRF was thrilled to host the conference on the North Coast which is home to exemplary restoration projects and a strong habitat restoration economy. The conference focuses on improving salmon restoration practices and enhancing coho salmon recovery efforts.

This year’s conference agenda focused on pressing issues that are affecting the future of the salmonid restoration field, including diminishing funding, regulatory hurdles, climate change, water diversions, and balancing competing resources. SRF takes a solution-oriented approach when crafting the agenda and looking at the future of the habitat restoration field.

To this end this year’s workshops examined innovative and successful restoration practices and protocols including estuary and off-channel habitat restoration, restoring natural processes, calculating instream flows, salmon life-cycle monitoring, and navigating hurdles to create successful restoration projects. Field tours visited exemplary and cutting-edge projects on the North Coast including road decommissioning in Headwaters Forest, instream work in Redwoods State Park, bio-geomorphic approaches in the Lower Klamath, innovative projects in the Mattole headwaters, estuary restoration in Humboldt Bay Eel River watersheds, community forest management in Arcata, and aquatic restoration in the Mad River.

Concurrent sessions covered innovative approaches to fisheries and coho salmon restoration, landscape ecology of Pacific salmonids, water diversions, creating a sustainable restoration field, collaborative approaches in the Klamath basin, recovery plan implementation, rapid sea level rise, and spring-run Chinook salmon.

The Plenary session featured Assembly member Wesley Chesbro and Director of the California Department of Fish and Wildlife, Chuck Bonham, who discussed managing California’s salmonid populations in a changing climate. Tina Swanson, the Science Director for the National Resources Defense Council, gave a presentation entitled, Science as a Second Language: Translating Science to Action to Protect and Restore Salmon. Mike Belchik, Senior Scientist for the Yurok tribe, gave an inspiring talk called, Bringing it All Together: How People, Science, Policy, Law, Politics, Business, Language, and Culture Interact to Build Innovative Approaches to Fisheries Restoration. Larry Notheis, the North Coast Director of the California Conservation Corps, spoke about the importance of engaging youth and diversity in the restoration movement.

The 32nd Annual Salmonid Restoration Conference will be held on March 19-22, 2014, in Santa Barbara, CA.
Save the Date Announcements

South Coast Fish Passage Field School
January 14-16, 2014, Ventura, CA

Salmonid Restoration Federation with the support of the California Department of Fish & Wildlife will offer a South Coast Fish Passage Design and Engineering Field School in Ventura County, CA. Instructors include Engineers Michael Love and Kosmo Bates with Fisheries Biologist Ross Taylor. This intensive workshop will include two days in the classroom comprised of presentations, group exercises, and local case studies. The third day will feature field visits to local projects and a specialized half-day workshop targeted specifically for engineers to explore in more detail the calculations used to develop successful designs. The agenda will also highlight the “Fish Passage and Design Implementation” chapter of the California Salmonid Stream Habitat Restoration Manual that addresses fish passage at road-stream crossings, small dams, and other in-stream obstructions. It details contemporary design methods and provides guidance on implementation.

The registration for this course is open and we expect the course to sell out, so please register early to ensure a spot.

32nd Annual Salmonid Restoration Conference
March 19-22, 2014, Santa Barbara

SRF will host the 32nd Annual Salmonid Restoration Conference at the Santa Barbara Veteran’s Hall. If you are interested in chairing a session, field tour, or workshop, please email srf@calsalmon.org a brief proposal that will be considered in late July when we build the conference agenda. SRF will be posting the First Call for Abstracts in August.

Spring-run Chinook Salmon Symposium
July 22-23, 2013, Lodi, CA

The 7th Spring-run Chinook Symposium will focus on Exploring Chinook Recovery in the Sacramento-San Joaquin River Delta. Please visit www.calsalmon.org to see the agenda or register online. Please see full article inside!

16th Annual Coho Confab
August 9-11, 2013, on the Mattole River

SRF, in cooperation with Trees Foundation, the CA Department of Fish and Wildlife, Sanctuary Forest, the Mattole Restoration Council, and the Mattole Salmon Group, will offer tours of restoration projects from the headwaters of the Mattole to the estuary, and a Road Map To Recovery coho salmon workshop. Please see full article on cover!