



**Salmon River Restoration Council
Annual Report**



2018

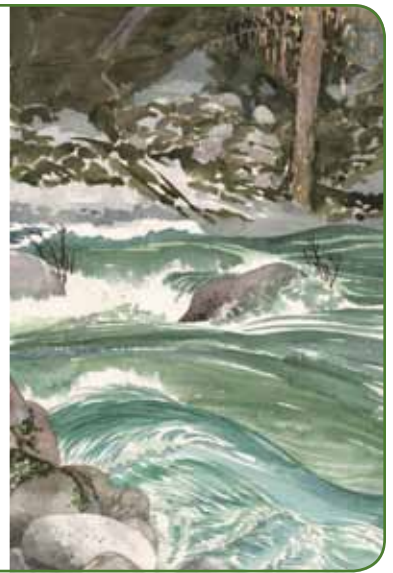


News from the Watershed Center

2018 has been a quiet year at the Watershed Center. Thankfully we didn't have any wildfires that evacuated Sawyers Bar, or landslides that cut off our ability to commute around the watershed. We only had one major change in staffing this past year. We were sad to say goodbye to our Noxious Weeds Program Coordinator Emily Ferrell in the fall, but are excited to welcome Deja Malone-Persha to the position. Deja has been a member of the AmeriCorp Watershed Stewards Program the past couple of years, and brings a diverse skill set to the job.

The Watershed Center finally got a new roof this winter! With the help of our newer wood stove and the pile of firewood both bought and donated (Thank You George & Sharon!), we should have a warmer and dryer building in the year to come.

The Watershed Center serves as a valuable community hub, hosting meetings, providing computer/internet access and other resources to the community, and offering watershed information for travelers. We've been occupying the old school in Sawyers Bar for over 16 years now. Our membership and fund raising drives contribute significantly towards our ability to operate the Watershed Center, and your contributions are much appreciated.



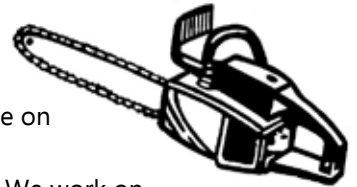
Some of this past year's accomplishments we'd like to tell you about:



SRRC is beginning work on several large projects aimed at creating and enhancing fish habitat. We plan to provide young salmon and steelhead refuge from winter floods and summer droughts. We will be implementing our first floodplain restoration project in summer 2019, and have several more planned for coming years.



SRRC completed fuels reduction work on 60+ acres in our ongoing effort to make our community more fire-safe. We're creating more fuel breaks to protect neighborhoods from wildfire. We're also thinning more brush to create a fire-resilient forest with an eye on restoring wildlife habitat.



SRRC continued controlling 17 species of invasive weeds without using any herbicides. We work on more than 550 weed-infested sites spread across the entire watershed. 2018 saw the population of oblong spurge reduced by 68%, proof that this hard work pays off.



Dylan Sullivan burning piles near a residence as part of our Bear Country Neighborhood Fuels Reduction Project

Cover photos starting upper left, clockwise - Noxious Weed crew, school kids and community volunteers doing a great job holding back the Italian thistle in Forks of Salmon; Klamath and Salmon River youth getting a fisheries field lesson by a Karuk DNR biologist; examples of the pearlshell mussels that can be found on the Salmon River; a Pacific giant salamander photographed in Methodist Creek; our new Weed Program Coordinator taking a turn at getting data from fall Chinook carcasses; a foothill yellow-legged frog

Thank you to the SRRC staff and Board members who contribute the great photos and art used in our publications!

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SRRC 2018 Staff and Field Crews

Karuna Greenberg, Restoration Director
Lyra Cressey, Associate Director
Kathy McBroom, Office Manager
Melissa Van Scoyoc, Habitat Restoration Program Coordinator
Scott Harding, Fire, Fuels & Forestry Program Coordinator
Amy Fingerle, Fisheries Program Coordinator
Bonnie Bennett, Monitoring Program Coordinator & Program Staff
Emily Ferrell, outgoing Noxious Weeds Program Coordinator
Deja Malone-Persha, incoming Noxious Weeds Program Coordinator
Stefan Dosch, Watershed Education Coordinator
Sarah Hugdahl, Program Staff
Brendan Twieg, Program Staff
Brenda Hurlimann, Bookkeeper
Jaime Scepkowski, Watershed Center Janitor
Steve Adams, Watershed Center Maintenance
2018 Field Crews - Bonnie Bennett, Lino Darling, Eric Fieberg, Sarah Hugdahl, Fabien Kassaris, Jordan Lambert, Deja Malone-Persha, Dylan Sullivan and Todd Whitmore



Large wood structures placed in Methodist Creek in 2017 are catching wood for future fish habitat

SRRC's 2018 Program Updates

Fish over-summering in the Salmon River this past year were confronted with low water flows and high water temperatures comparable to the worst drought years. Salmonids returning from the ocean in June encountered similarly unfavorable conditions that continued well into fall. As a result, the fisheries crew was as busy as ever with our annual restoration and monitoring activities.

Because we spend a lot of time in the river, we often come across sobering but hopeful reminders of the importance of our habitat enhancement work for the persistence of salmonids and other species in our watershed, especially during such challenging years. One of these reminders appeared in July when two fisheries crew members observed an adult spring Chinook nosed up into a bundle of brushy materials in the thermal refuge created by the cool water flowing into the river from Methodist Creek. With the warm water temperatures in the Salmon River this year, cool-water refuges provide crucial habitat to juvenile and adult salmonids alike. However, the lack of shelter in many of these areas means that fish risk predation to take advantage of the cooler water. Often, the brush bundles placed by our fisheries crew are the only shelter available to refuge-seeking fish, as is the case at Methodist Creek. With only 188 spring Chinook counted during this year's dive – making it the fourth year in a row with critically low population numbers – the fate of each individual fish is especially important.



In addition to our juvenile and adult salmonid population monitoring and habitat enhancement efforts, we routinely conducted pre- and post-implementation monitoring at our larger-scale habitat restoration sites. The goal of this monitoring is to understand how and why fish benefit from past and future projects, which include the addition of large woody debris to stream channels, creation of off-channel habitat, and barrier removal.



The SRRC worked alongside the Karuk Tribe, US Forest Service, CA Dept. of Fish & Wildlife, and other groups to conduct the annual spring and fall Chinook spawning surveys. This year, possibly due to low water flows, spring Chinook spawned lower in the watershed than usual, with most spawning activity observed in the lower North Fork. At the end of the year, we were able to conduct a few coho spawning surveys in key Salmon River tributaries, which is an effort we hope to expand in the future as funding allows. SRRC also continued our cooperation with the Karuk Tribe to operate the juvenile outmigration screw traps at the mouth of the Salmon River and at Big Bar on the Klamath River.

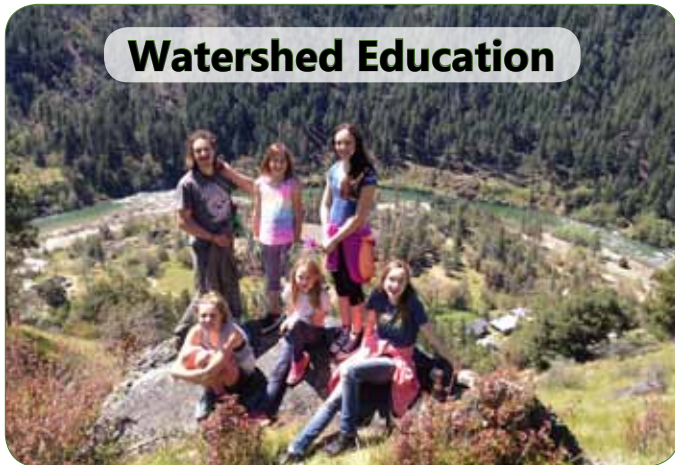
In 2019, the fisheries program will continue with habitat enhancement and population monitoring, particularly as we gear up for the implementation of the Kelly Bar Habitat Enhancement Project. We wish to sincerely thank the volunteers and cooperators who participated in this year's dive, as well as other volunteers who assist us in various and important ways throughout the season. We are grateful for your participation and continued support!

The Fisheries Program was funded this year by the Karuk Tribe, CA Department of Fish & Wildlife, National Fish & Wildlife Foundation – Coho Enhancement Fund, and the US Fish & Wildlife Service.

above, Counting spring Chinook during the annual Dive Survey

left, Applying an identifying jaw tag to a fall Chinook salmon during spawning surveys

Watershed Education



Watershed Ed weeding field trip includes amazing views!

The theme of our 2018 Watershed Education Program was “Life Connected”. This past year, collaboration with the Mid Klamath Watershed Council (MKWC) and Karuk Tribe education programs provided a consistent, three pillared teaching approach and opened up field trips and class discussions to a refreshing diversity of teachers, guests and teaching methods. Spring monitoring field trips were followed up by stream restoration visits to Dillon and Nordheimer Creeks and a series of four Salmon River invasive weed removal days. During the spring months, weekly classes at the schools were focused on food webs and keystone species as students prepared their beautiful Watershed Fair projects. We were fortunate to be visited by Klamath Forest Alliance member Kimberly Baker who spoke with students about wolf history and reintroduction. The topic was further researched by two Forks Students for the Fair.

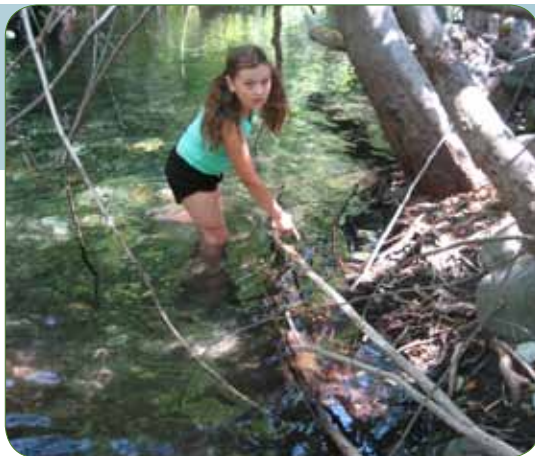
The Fair itself was definitely a highlight for the Watershed Ed Program. Thirteen natural resource professionals attended, representing the Karuk Tribe, US Forest Service, AmeriCorp, MKWC, SRRC, and the CA Department of Fish & Wildlife. The event was opened with a prayer and

speech by Leaf and Lisa Hillman. There were many impressive projects featuring media mentorship, cultural interviews, and a wide range of water quality analysis covering five local waterbodies.

This summer the Watershed Education program hosted the week-long Klamath Siskiyou Outdoor Camp. Local youth enjoyed a full week of science and swimming with visits from local and tribal educators and natural resource professionals, culminating in a restoration rafting trip with MKWC. Spending the week outdoors learning about the river was a highlight of the summer.

After summer break we packed the fall months with field trips, including visiting the Klamath River TRES, harvesting and planting willow cuttings at a restoration site, birdwatching and storytelling with Brian Tripp, searching for aquatic insects in Butler Creek and participating in the Fall Chinook Spawning Surveys. Back in the classroom, our curriculum has been focused on fish and general water quality factors. SRRC’s coordinator continues to work with Karuk Tribe and MKWC education staff to source funding for the 2019 program and figure out how to keep up the cooperative energy.

The Watershed Education Program was funded by the Ford Family Foundation and US Fish & Wildlife Service, and would not have been nearly as fun or educational without the assistance of the Karuk Tribe, MKWC, and numerous community volunteers.



A student assisting with water monitoring

Water Monitoring



Late summer algae bloom monitoring

As SRRC’s Habitat Restoration Program grows our monitoring program is increasing in scope and scale to monitor these projects from design through implementation and beyond. Each project location has different goals so the data gathered is site specific. This data provides support for hydraulic modeling efforts by using field observations and pictures to document changing river conditions. Floodplains and river channels are being analyzed for potential cold water refugia with an emphasis on locating potential year-round rearing habitat. Strategically placed wells monitor groundwater levels, temperature and dissolved oxygen at potential restoration sites. Survey posts in floodplain areas are also used to topographically reference the river levels at varying water stages.

During the summer months SRRC continues to monitor air and water temperature at around 50 sites throughout the watershed, and collects flow measurements for at least 15 locations. This data is added into the long term dataset we have been compiling for over 20 years. With the help of Riverbend Sciences, our long term temperature dataset has been incorporated into a region-wide database called NorWeST with the purpose of processing long term trends and correlations. This model can interpret changes on the Salmon River due to climate change along with other factors influencing the overall health of the river. Riverbend Sciences has also analyzed our Salmon River dataset for long term temperature trends as well as localized effects of fire and smoke on the region. This paper is in the review stage and will be available to the public soon.

August 2018 showed a change in river water quality as the lower North Fork and Mainstem of the Salmon River exhibited an algae bloom of larger proportions than previously observed. A few samples were analyzed and found to be non-toxic and typically expected forms of algae. The increases could be from low flow and warm temperatures, a change in nutrient loads, effects of recent fires, or some other combination of factors. The range and extent of summer algae blooms may become a component of future monitoring if blooms show increased activity and range annually.

The overall goals of monitoring and research are presently to assist climate change research, understand water temperature trends, and measure changes in salmonid spawning and rearing habitat. All of the programs at SRRC are working together to assist in any way needed to help the Salmon River increase its overall health basin wide.

The Water Monitoring program was funded through the US Forest Service, and CA Dept. of Fish & Wildlife.

Following last winter's rains, the warmth of spring saw the emergence of non-native plants in the Salmon River watershed. Once again the most threatening weeds were managed using manual removal techniques designed to target each species. Our commitment to controlling weeds in the watershed without the use of chemical herbicides has been a continued success, focusing on priority species that include oblong spurge, spotted knapweed, and Italian thistle.

Our tremendous success with spotted knapweed over the years has been due to timely response, persistent attention, and continuous monitoring and treatment. In 2019 SRRC will break ground at Kelly Bar to restore habitat for salmon. The weeds crew has been preparing for this exciting venture with pre-implementation surveys and the forecast looks good. This year knapweed plants at Kelly Bar and the surrounding area were in the single digits! It is our hope that with restoration any dormant seeds will germinate and we can find some closure by weeding the last remnants of what was once a site with tens of thousands of plants. We must always remain vigilant however; a recently discovered site up the Little North Fork had more knapweed than all the rest of our over 275 other sites combined. With the help of the savvy Youth Environmental Summer Studies crew from Scott Valley, we removed over 3000 plants from the site in one day! This was by far our largest site in 2018, with the majority of existing sites yielding few to no knapweed plants at all.

Populations of Italian thistle around Forks of Salmon have been declining thanks in large part to our youngest volunteers. Elementary students, community members, and the crew scaled to great heights to help bring Italian thistle down 40% from the previous season. Our volunteers have been integral in treating oblong spurge as well, a species we have a good chance of eradicating. As for new arrivals on the scene we are still keeping an eye on sulfur cinquefoil, treating satellite populations, and documenting its extent with the help of the US Forest Service. In response to the Wallow Fire in August of 2017, we were a part of the Burn Area Emergency Response effort. While native vegetation in the watershed is well adapted to fire, many noxious weed species thrive in disturbed soil. Our surveys focused on roadways, trails, and fire lines where we were concerned about the potential for the spread of vigorous invaders.

The progress that we have made this year would not be possible without the help of our partners at MKWC, local river school children, and groups of dedicated volunteers. We are grateful to landowners for volunteering their time to address weeds on their properties.

The Noxious Weeds program was funded this year through the CA Dept. of Food & Agriculture's State and Private Forestry Funds, US Fish & Wildlife Service, US Forest Service, National Forest Foundation, and the Clif Bar Family Foundation.

Noxious Weeds



Community weeds day in Sawyers Bar; we start our weeds volunteers young!

Even with some delays in implementation, this has been a full and rewarding year for our Habitat Restoration Program. Though we are focused on the long-term benefits of our projects, so far the two projects that we implemented in 2017 have been a success. At our Taylor Creek fish barrier removal project, juvenile trout were found both above and below the barrier site indicating that removing the barrier to fish migration successfully allowed fish to move throughout the creek. Forks of Salmon students planted coyote willow cuttings at the Taylor Creek project site to accelerate its natural recovery. The kids were excellent revegetation specialists and got a chance to learn about riparian restoration and fish habitat on the project site.

In Methodist and Knownothing Creeks the multiple large woody debris structures that we placed in 2017 are working their magic. The logs have started creating small scour pools in the tributaries which will be further enhanced by upcoming winter and spring flows. Salmonid juveniles were observed in both creeks where the structures have been placed taking advantage of the habitat we have built for them.

Our floodplain and fisheries habitat restoration project at Kelly Bar is ready to be implemented in 2019, which will create much needed winter and summer rearing and spawning habitat for salmonids. SRRC led the effort to complete all the environmental compliance necessary to implement the project, so we are ready to hit the ground running next summer. In coordination with the Forest Service, we held an on-site public field trip in July, giving interested individuals a venue to talk with specialists involved in the project and get a tour of our proposed activities. In late November we put a fence around the project site which will protect the trees and shrubs we plant from cattle and horse grazing.

We continue to move forward with the watershed-wide planning effort to restore floodplains and mine tailings. Early in the year we completed a Technical Memo, developed by Stillwater Sciences, which explains the process and analysis to date. This memo and continuing analysis is being used to plan and evaluate restoration sites as we move through the environmental compliance process. The Hotelling Gulch project has now been fully designed, with plans to remove a fish barrier, replace it with a bridge, and restore the lower section of the gulch. We also completed a year of monitoring at Nordheimer Creek, which included aerial drone surveys; this data is being used to develop a restoration plan for the creek.

Funding sources for this program include, CA Dept. of Fish & Wildlife, US Fish & Wildlife Service, and US Forest Service.

Habitat Restoration



above, Design team monitoring Nordheimer Creek; bottom, Forks student collecting willow for planting at Taylor Creek

Fire, Fuels, & Forestry



Fuels reduction crew working in the Bear Country area

In 2018, the Fire, Fuels, & Forestry Program focused on the implementation of its four fuels reduction projects in the watershed. We completed the transition to using contract crews as our local workforce has significantly decreased in size and costs have risen. With this change, our costs decreased significantly and we were able to complete additional on-the-ground work.

Our Habitat Restoration through Fuels Reduction Project is now complete. In June, we treated 30 acres of upslope private land with mechanical mastication, connecting natural meadows and previous SRRC fuels reduction units to 120 acres of recent mastication work on adjacent National Forest land. The work went well with impressive precision for a mechanical treatment, leaving behind a mosaic of shrub habitat within an oak-dominated forest while reducing brush significantly. In October, our contracted crew completed 28 acres of manual cut-and-pile treatments on a different upslope property, working in thick brush and hardwood-dominated forest. Pile burning will be completed in 2019. The reduced expense of contracting work allowed us to complete 38 additional acres above what we had been funded for. In total, this project implemented 58 acres of fuels treatments and 30 acres of prescribed broadcast burning on four different properties.

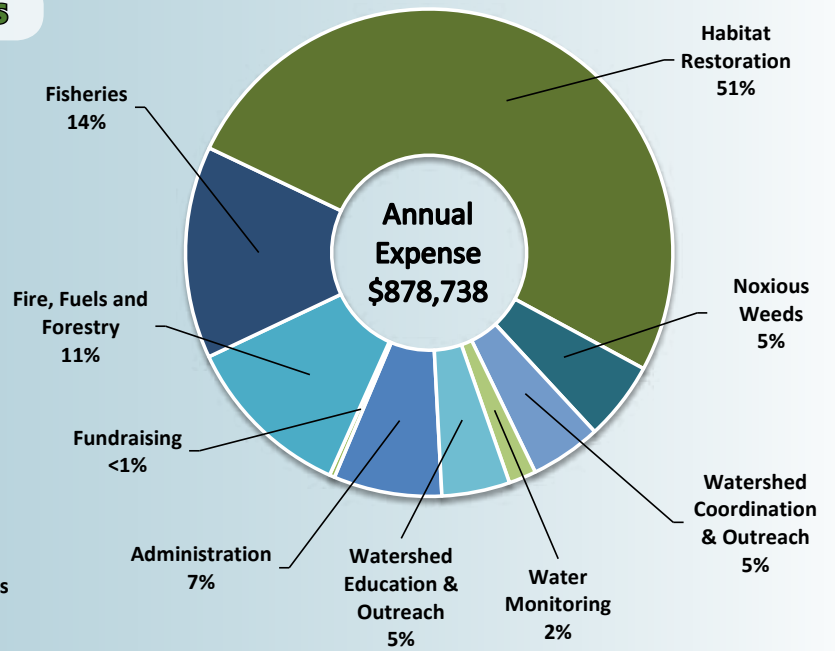
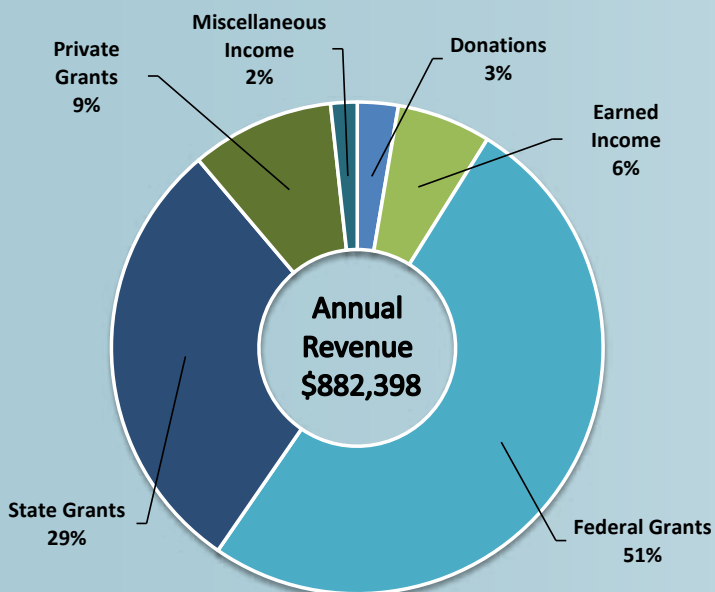
The Bear Country Neighborhood Prioritized Fuels Reduction Project is nearly complete. With a small in-house crew, we completed four acres of cut/pile/burn treatment within the burn footprint of a prescribed fire from the 2014 TRES program. We also treated another four acres nearby, finishing work on a half-mile long fuel break across six adjoining high fire risk residential properties. In total, this project treated fuels on seven upslope properties and was guided by our recent Bear Country Neighborhood Fire Plan.

Two other fuels treatment projects are in environmental compliance stages. The 120-acre Upper North Fork Fuels Reduction Project is moving forward now that we have contracted a biologist to help complete the required analysis for the northern spotted owl. We extended the geographic scope of this analysis to cover most private land within the watershed plus a 500-foot public land buffer around each property (totaling 11,125 acres) so that future fuels treatments won't be delayed by this step. On-the-ground work should begin in late 2019. The Butler Creek Habitat Improvement Project is nearly finished with its environmental compliance and planning phases. This project will treat at least 16 acres of private property, much of it impacted by the 2013 Butler Fire and a major snow storm in 2017 that downed hundreds of trees. This project will go out for contracting in summer 2020.

In other areas of work, we are continuing to seek funding for an innovative new Salmon River Community Wildfire Protection Plan to guide and prioritize future work and assist in tactical response to wildfires. Thankfully, the Community Liaison Program was not activated during the 2018 fire season because we experienced no major wildfires in the watershed. Our Restoration Director continues to play an active role as a co-lead of the Western Klamath Restoration Partnership (WGRP), a large collaborative effort aimed at restoring healthy fire process, function, and resiliency across 1.2 million acres in the Klamath Mountains. WGRP will begin implementation of the Somes Bar Integrated Fire Management Project this year, a huge step for the partnership! SRRC has continued to facilitate the Salmon River Fire Safe Council; community and cooperator agency participation, however, is rather low.

The Fire, Fuels, & Forestry Program was funded in 2018 by the US Forest Service, US Fish & Wildlife Service – Partners for Fish & Wildlife Program, Karuk Tribe, and Mid Klamath Watershed Council.

2018 Organizational Financials





Thank You
Volunteers & crew!
We couldn't do it
without you.



Thank You Members, Donors & Funders!
New and Renewed Members and Donors in 2018: You keep the lights on!

Spring Chinook Donor Level - Frank Colver, Yewie & Meghan Ferrara, Larry Lestelle, Nick & Marilyn Letsos, Chris Love Electric, Tony Lunt, Chad Smith, Ed & Marcia Nute, and Nick Pence

Green Sturgeon Donor Level - Richard Bruce, Mary Ciavonne & John Ziegler, John Fingerle, Lee Greenberg, Michael Greenberg, Jon Grunbaum, Liz & Jody Pullen, Stillwater Science, and the Seeger & Else Family

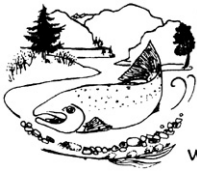
Coho Donor Level - Bill Ayers & Bernadine Dohrn, Denise & Bob Bearding, Harriet Beinfield, Autumn Beinhauer, John & Susan Brennan, Donna Brucker & David Jacques, Don Comstock, Dean & Karen Davis, Janjaap Dekker, Steven Durham & Patricia Girczyc, Elaine Dvorak, Jacquelyn Dyer, Don Elder, Elissa Englert, Carl & Marie Flarity, Aaron & Corey Gilroy, Dan Grunbaum, Ethan Guerra, Creek & Betty Ann Hanauer, Tesilya Hanauer & Brad Sanford, Les & Bobbi Harling, Michael Korejko & Barbara Rohr, Efrem Korngold, Robert Menzies, Ken Milller, Andy Pollack, the Rose Family, Kate Rowe, Sandy Bar Ranch, Smith River Alliance, Anna & Anthony Miles Smith, the Sobol Family, Jared & Wilson Strote, Mary Strote, Kristy & Peter Sturges, Dee Tolson, & Diane Wickstrom

Fall Chinook Donor Level - Jeye Aerenson, Eli Asarian, Nancy Bailey, Bob & Judy Beaver, Karen Bishop, Waylen Brucker, Susanne Cardiff, Clayton Creager, Susan Duncan, Don Flickinger & Jennifer Silveira, Fran Forim, Geba Greenberg & Petey Brucker, Karuna Greenberg, Jan & Ronn E. Harding, Will Harling, Jim & Suzanne Jennings, Bill Meadows, Jack Moore, Cathi Nelson, Rachel Neumann, Cedar & Mahaj Seeger, Steve & Lee Stefanki, Alan & Sala Steinbach, Erica Terence, Jud Ellinwood & Andrea Webb, Kathryn Wild, and Rajesh Westerberg

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Other Donors include - Sharon Hoppas & George Martin, Myeba Mindlin, Fred Mindlin, Eileen Kurtzman and Hope Woodward

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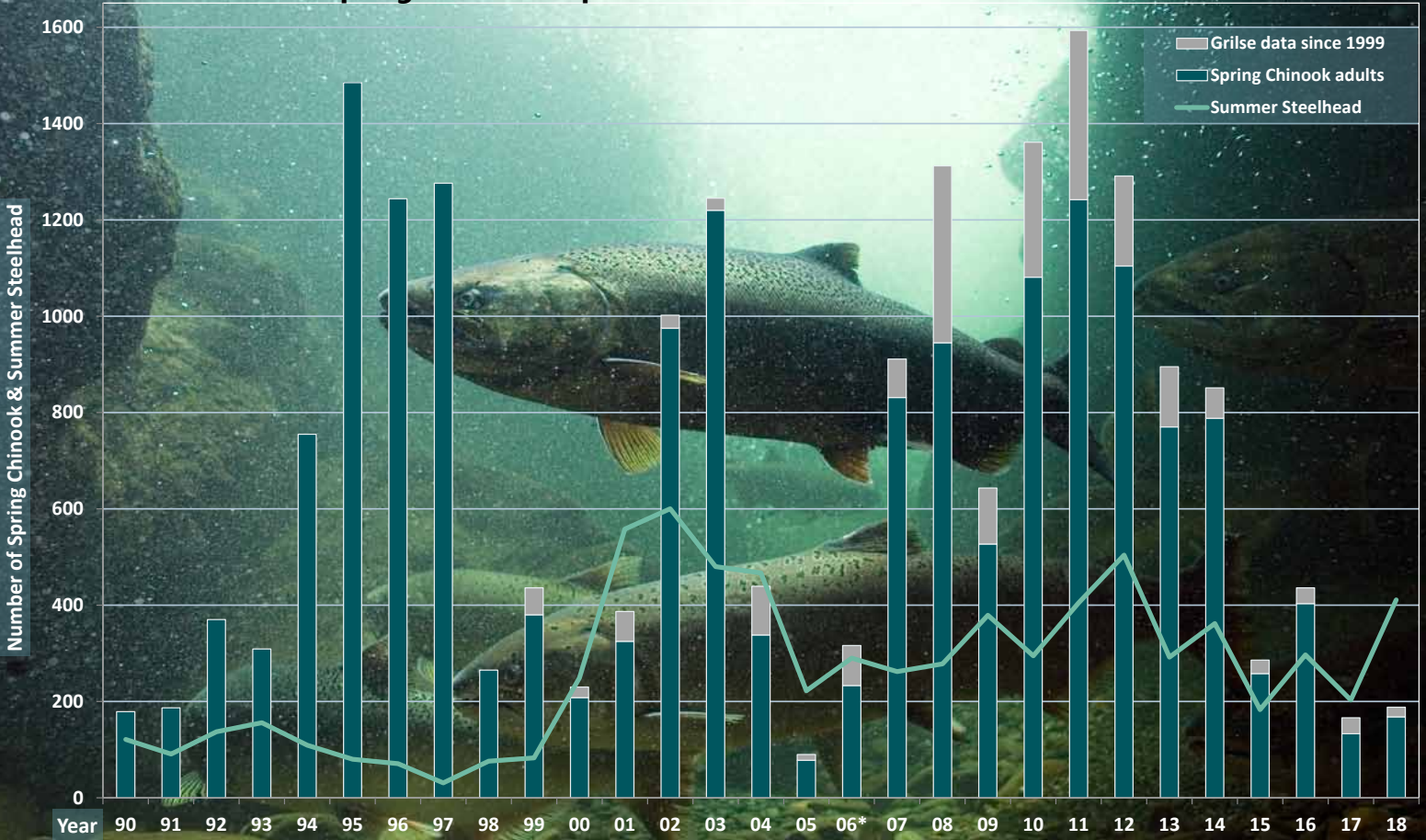
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Salmon River Spring Chinook Population Totals 1990-2018



* 2006 Estimated due to wildfire

Photo: Salmon River Spring Chinook by Michael Bravo