

# **SALMON RIVER COMMUNITY RESTORATION PROGRAM ANNUAL WORK PLAN**

**2020**



# SALMON RIVER COMMUNITY RESTORATION PROGRAM ANNUAL WORK PLAN

## TABLE OF CONTENTS

I) Organizational Background of the SRRC	
A) Formation.....	p. 3
B) Vision Statement.....	p. 4
C) Mission Statement.....	p. 4
D) Long Term Goals.....	p. 4
II) Watershed Background – Natural and Human Processes	
A) Geography.....	p. 5
B) Geology.....	p. 5
C) Botany and Zoology.....	p. 6
D) Fisheries.....	p. 7
III) SRRC Community Restoration Program – Annual Work Plan	
A) Fisheries and Water Monitoring Program.....	p. 9
a) Fisheries.....	p. 9
b) Water Monitoring.....	p. 13
B) Invasive Species Program.....	p. 15
C) Fire, Fuels and Forestry Program.....	p. 19
D) Habitat Restoration Program.....	p. 22
E) Watershed Education Program.....	p. 24
F) Community Restoration Program .....	p. 26
IV) Conclusion.....	p. 28
V) Appendices	
A) Three Year Funding Strategy	
B) Annual Program Calendars	

## Watershed and Organizational Background

# **I. Organizational Background of SRRC**

## **A) Formation**

In 1992, a group of Salmon River community members received support from the Klamath River Fisheries Task Force through the Klamath Forest Alliance to host a series of cooperative workshops with the fisheries managers and community leaders for the local communities in the Salmon River subbasin. These workshops were aimed at increasing local awareness to help protect and restore the dwindling populations of spring Chinook salmon in the Salmon River. The local community response was overwhelmingly positive and illegal harvest of these species was subsequently reduced by an estimated 85%.

In response to the local community's desire to protect and restore the Salmon River anadromous fisheries, the Salmon River Community Restoration Program was created in 1993. The Program enlisted support by:

1. Increasing community member's awareness and ability to contribute to restoration
2. Stimulating the development of a local Salmon River watershed restoration group (the Salmon River Restoration Council)
3. Developing cooperative restoration plans. Implementing short-term and long-term protection and restoration projects.

Through the vehicle of the Community Restoration Program, local involvement and broadened volunteer efforts increased and led to the formation of the Salmon River Restoration Council, which became a 501 (c)(3) non-profit corporation in 1995.

To date the SRRC has sponsored more than 2,098 restoration-related workshops, workdays, and field trips. Community members, staff, technical specialists, and others have contributed over 107,607 volunteer hours to watershed restoration activities. These activities have helped to increase coordination and cooperation between diverse stakeholders.

The SRRC is guided by a nine-member volunteer board of directors who serve one year terms. The Board meets triannually with staff to approve the Annual Work Plan and Budget and to provide guidance for SRRC's work. The SRRC Board of Directors attempts to represent a broad spectrum of economic and social interests, and includes tribal representation as well.

SRRC is the primary promoter of cooperative watershed restoration actions within the local community and among the stakeholders of the Salmon River, and is the largest employer in the watershed. Through cooperative management activities, the SRRC addresses the distinct needs of the Salmon River watershed that arise due to the impacts of catastrophic fires and fire management, timber harvest, road construction, mining, grazing, floods, residential and recreational use.

Currently there are 10 staff members that work at SRRC's Watershed Center in Sawyers Bar. Other community members and specialists are also contracted, employed, and/or volunteer for

the organization as needed. The SRRC develops and implements its projects in coordination with various agency, tribal and academic personnel.

The SRRC has operated the Salmon River Watershed Center since 1996. This large multi-purpose facility is open to the public and serves as a location for restoration meetings, a library and watershed information center, a community computer center, and an office for SRRC staff. The Watershed Center provides a space for many of the educational outreach and training events facilitated by the SRRC or its partners.

## **B) Vision Statement**

The Vision statement came about as a result of SRRC's 2013 strategic planning process.

*We envision a sustainable Salmon River watershed that has healthy forests and streams, with natural fire regimes and abundant native fish and wildlife populations that allow for a harvestable surplus of resources, managed using best land practices and traditional cultural knowledge.*

*We envision a well-informed Salmon River community that draws its sustenance from and lives in harmony with the environment, respects its own diversity, values the complexity of the natural world, and accepts responsibility for the social, economic, and ecological well-being of present and future generations through individual and collective action.*

*We seek to encourage and enhance the exchange of knowledge among all community members in order to achieve this vision.*

## **C) Mission Statement**

The mission statement was first drafted during the creation of the SRRC as part of the Salmon River Community Restoration Program.

*“The mission of the Salmon River Restoration Council is to assess, protect, restore and maintain the Salmon River ecosystems with the active participation of the local community, focusing on restoration of the anadromous fisheries resources and the development of a sustainable economy. We provide assistance and education to the general public and cooperating agencies by facilitating communication and cooperation between the local communities, managing agencies, Native American Tribes, and other stakeholders.”*

## **D) Long Term Goals**

- Enlist community members in a cooperative approach to protect and restore the Salmon River aquatic and terrestrial ecosystems, emphasizing the anadromous fisheries and biologically unique features.
- Develop and implement effective education, communication and outreach programs as a tool to increase public awareness and encourage our community to become effective stewards of the watershed.

- Promote economic stability in the community by diversifying job opportunities based on restoration, conservation, and management of the Salmon River aquatic and terrestrial ecosystems.
- Develop collaborative approaches and partnerships among agencies and stakeholders that emphasize cooperation and shared effort needed for the protection, restoration, and enhancement of the Salmon River.
- Assist in filling in the resource management gaps left by traditional large governmental agencies, such as the Forest Service, who have a difficult time with small or non-traditional projects – both in terms of conception and implementation.
- Work to increase ecosystem resiliency in a changing environment through the implementation of program specific goals.

## **II. Introduction to the Watershed**

### **A) Geography**

The Salmon River watershed is a major tributary to the Klamath River, whose confluence is approximately 60 miles from the Pacific Ocean. This watershed is located in the Klamath Mountains of far Northwestern California. The sub-ranges of the Trinity Alps, Russians, Marble Mountains, and the Salmon Mountains form rugged topography that is deeply incised by the river and its tributaries. Nearly the entire watershed is forested.

Almost 99% of the watershed is public land and is managed by the Klamath and Six Rivers National Forests. The larger region, known as the Klamath-Siskiyou Bioregion, shares a distinct and rich assemblage of geological and ecological characteristics.

By water volume, the Salmon River is the second largest tributary of the much larger Klamath River system. There are no dams, diversions, or significant irrigation withdrawals in the Salmon River watershed other than for domestic uses. There are no dams between the Salmon River and the ocean, providing unimpeded access to anadromous fish.

The watershed occupies 751 square miles in the southwestern corner of Siskiyou County. The watershed's southern divide adjoins Trinity County and Humboldt County. Elevations in the watershed range from 456 feet at its mouth to 8,560 feet at Caribou Mountain in the Trinity Alps.

### **B) Geology**

The Salmon River watershed has a complex geologic history. It is situated within the Klamath Mountains, and includes three distinct rock belts. These are the Western Paleozoic and Triassic Belt, the Central Metamorphic Belt, and minor portions of the Eastern Klamath and Western Jurassic Belts. The belts consist primarily of metasedimentary rock.

The Salmon River watershed has experienced at least four major glacial periods within the past two million years, the most recent of which ended about 13,000 years ago. These repeated glacial

events carved signature U-shaped glacial valleys and left behind the multitude of glacial lakes and moraines we find in the high country today. The last remaining glacier in the Klamath Mountains is on Thompson Peak in the Trinity Alps, just over the divide in the Trinity River watershed. Caribou Mountain, the highest peak in the Salmon River watershed has perennial ice fields.

The Salmon River system displays a dendritic drainage pattern. The river itself carries a high bedload of coarse (gravel to boulder-sized) material and, except in periods of flood, a low suspended load. The result is a boulder-lined channel and banks in areas of low gradient, bedrock channel and banks in high gradient reaches, and translucent water quality. Landsliding is the dominant land forming process in the Salmon River subbasin and large earthflow deposits occur in the area.

By area, the Salmon River is the smallest of the four major tributary watersheds in the Klamath basin. Even so, the annual runoff from the Salmon River is twice that of the Scott River and 10 times as great as that of the Shasta River. High runoff reflects the steep slopes and high annual precipitation (45 in) of the watershed. Runoff in the basin is dominated by a winter pulse associated with high rainfall and a spring snowmelt pulse from April through June. During summer and late fall, low-flow conditions predominate, particularly in smaller tributaries.

### **C) Botany and Zoology**

The Salmon River provides large core areas for species diversity and lies at an important biological corridor connecting the interior Basin and Range biomes with the Pacific Coast. Many plants and animals find the combination of geology, climate and biology to be ideal habitat and make the Salmon River watershed their home. Others use the Salmon River watershed as a prime migration corridor and move through the area to spread their populations to other points or on their way to or from their seasonal homes to the north, south, east, and west. The Salmon River lies between the coastal and interior routes of the Pacific Flyway and is a transitory home for dozens of varieties of migrating birds.

The watershed is a land of biodiversity superlatives and is one of the key areas of biodiversity in the Pacific Northwest. The forests are home to one of the greatest diversities of coniferous tree species in the world, with 20 species of conifers growing in the watershed. There is a convergence of tree species found in both Alaska and Mexico, a wide variety of *Ceanothus* species, and astoundingly diverse butterfly and forest-type mollusk populations (FEMAT 1994). The world's largest diameter incense cedar grows high in the Little North Fork drainage within the Marble Mountain Wilderness Area.

Part of the explanation for this extraordinary biodiversity lies in the geologic history of the Klamath Mountains. During the Wisconsin Glaciation from about 25,000 to 13,000 years ago, this area escaped the burden of continental ice coverage and served as a biologic refugia for plant and animal species not adapted to glacial climates. After the glaciers retreated from areas to the north, these species remained in the cool, high elevations of the Klamath Mountains where they can still be found. Some species, such as the Brewer Spruce, Port Orford Cedar, and Sadler Oak no longer exist anywhere else.

The Klamath-Siskiyou Bioregion, in which the Salmon River flows, is a global center of biodiversity and has been designated as a UNESCO World Heritage Site, a UNESCO Biosphere Reserve, and an Area of Global Botanical Significance by the World Conservation Union.

Invasive species are present in the Salmon River watershed. Although the Salmon River has fewer invasive species than most watersheds in California and in the West, there are still numerous non-native plant species present in the riverine and mountain habitats. In addition to non-native vegetation, other invasive species currently found in the Salmon River watershed include, but are not limited to: trees, birds, fish, mollusks, amphibians (bullfrogs), and others.

## **D) Fisheries**

The Salmon River has no polluting industries, agriculture, or municipal centers in the watershed, making it one of the more biologically intact wildland tributaries in the 16,000 mi<sup>2</sup> Klamath River system.

The Salmon River provides abundant amounts of clean, cool water into the Klamath River system. In late summer, this cool water is crucial to the survival of migrating salmon. The Salmon River has long been renowned for its exceptionally high quality waters. The Klamath National Forest identifies the Salmon River as the watershed with the best anadromous fisheries habitat in the Klamath National Forest. The basin provides habitat for the largest wild run of spring Chinook salmon in the entire Klamath River system.

The Salmon River hosts the most native anadromous fish runs present in any Klamath River tributary. The species present in the Salmon River are spring Chinook, fall Chinook, coho, steelhead, green sturgeon, and Pacific lamprey. Non-anadromous species include Klamath speckled dace, Klamath small scale sucker, and marbled sculpins. Non-native species of fish present are German brown trout and American chad. Unlike all other major tributaries to the Klamath there are currently no hatchery fish in the Salmon River. Some introduction of fish species and small scale hatchery projects have occurred in the past. Stocking has occurred in ponds with small mouth bass, perch and sunfish while high mountain lakes have been stocked mainly with rainbow trout, German brown trout, and eastern brook trout.

All runs retain a rich wild character and compared with many other stocks in the Klamath River and its tributaries are more genetically intact, making the Salmon River a repository of anadromous fish genetics that can be used to help restore fish runs in the rest of the Klamath watershed. The Salmon River spring Chinook genetics could potentially be used to produce fish for reintroduction above the Klamath River dams to restore their historic range.

Despite this, the fishery of the Salmon River is a remnant of what it once was. Several species of the river's fish are at risk of extinction in the Klamath watershed including the summer run of wild Klamath Mountains Province Steelhead, spring Chinook salmon, and coho salmon. Recent fish counts indicate alarmingly low fish populations some years – especially for Spring Chinook – and only small to modest populations in better years.

Spring Chinook salmon were once the most abundant salmonid in the Klamath River system, with annual runs estimated as large as 1,000,000 fish. Historically, the Shasta, Scott, Salmon, and Trinity rivers all supported large runs. Currently, wild spring Chinook runs face the possibility of extinction in the Klamath River watershed. Today, only the Salmon River and the South Fork Trinity River host viable runs of wild spring Chinook. Recently technological advances in genetic research have offered the possibility of re-igniting public awareness of the importance of saving the Klamath Basin's wild spring salmon.

Other runs of particular concern on the Salmon River include Summer Steelhead and Green Sturgeon. Summer Steelhead numbers are consistently very low. Green Sturgeon are listed as a Species of Concern by the National Marine Fisheries Service. The only spawning populations of green sturgeon remaining in California are in the Sacramento and Klamath River systems. They have been documented spawning in the Salmon River.

The deterioration of fisheries began in the 1850's when large scale hydraulic mining and related activities greatly altered the river channel, tributaries, and riparian areas. The naturally translucent green river probably flowed rich with brown, redd-choking sediment for several decades. River temperatures have likely increased due to reduced shade cover. The fishery suffered immensely, but due to a lack of any reliable record keeping it is difficult to determine the historical population size of salmon and steelhead in the Salmon River. However, fish numbers were sufficient to supply the primary subsistence food, and be the basis for the economy of the indigenous people prior to the mid-1800s. By the mid-1930s it was reported that anadromous fish populations within the Klamath Basin were already significantly jeopardized (Taft and Shapovalov, 1935).

Logging, road-building, wildfire, and over-fishing at sea have also substantially compromised the fishery. Compromised water quality and high summer water temperatures in the Klamath River – caused primarily by a series of dams and reservoirs far upriver – affect both in and out-migrating fish from the Salmon River. A 2003 National Research Council report states that, “Factors outside the basin – including ocean or estuary conditions, harvest, and conditions on the Klamath main stem – may have reduced adult populations of salmonids in the Salmon River. Overall, however, it is likely that land-use activities in the Salmon River watershed have had the largest adverse effects on production of salmon and steelhead in the Salmon River basin.”

### **III. SRRC 2020 Community Restoration Program Annual Work Plan**

Our annual work plan is based primarily upon the tasks identified in our current grant agreements. In addition, unfunded tasks which are central to our organizations goals are included and identified in *italics*. The Work Plan is organized by program area, each of which has a list of tasks which will be completed in the upcoming year. See the attached 3 year funding strategy for more detailed information on funding sources and availability for program tasks. Also attached are the annual program calendars, which lay out timelines for tasks.

Coordinators for each Program are identified. In addition to project specific duties, each project coordinator is responsible for the following tasks:

- Develop and implement an annual work plan and annual program report.
- Interface with Watershed Center. Attend staff meetings, be aware of general SRRC requirements, policies, and reporting and administrative details.
- Identify and build a project team. Develop staffing for activities. Oversee program staff. Coordinate with partners, resource managers and regulators, and regional, state and national entities.
- Keep outreach products up to date and distribute educational materials to the community and our partners at local and regional forums.
- Organize community education activities, workshops, workdays, field-trips and training for project.
- Be familiar with your grant agreements, and take responsibility for completing your grant tasks and reporting.
- Develop and secure funding to support program.

#### **A) Fisheries and Water Monitoring Program**

##### **a) Fisheries**

Since 1992, the SRRC Fisheries Program has worked to assess, maintain, and restore the fishery and aquatic ecosystems of the Salmon River. We perform detailed cooperative fish population and habitat surveys, participate in multi-agency fish kill monitoring, work to prevent fish poaching and fishing regulation violations, and assist academic research projects in our area. Fishery surveys are planned and coordinated with state and federal agencies and local tribes. Seasonal juvenile out-migrant trapping in the lower Salmon River and in the Klamath River at Big Bar provides valuable information to determine species presence, run timing, trends, and fish health. We are looking forward to participating in additional research projects to better understand fish life histories and stock identification methods.

##### **Limiting Factors**

The Klamath River Fisheries Task Force identified high water temperatures and excessive sediment production as key limiting factors for the anadromous fisheries resource of the Salmon River subbasin (Klamath River Basin Fisheries Restoration Plan, 1991; Salmon River Subbasin

Restoration Strategy, 2002). The Forest Service has identified catastrophic fires as a major contributor of sediment to the Salmon River. Increased sediment run-off from roads, in riparian areas, and from upslope areas, has filled in pools (De la Fuente 1994). System and non-system Forest Service roads are responsible for the majority of the sediment input to the Salmon River (Salmon River Subbasin Restoration Strategy, 2002).

Summer refugia and winter rearing habitat have been identified as key limiting factors in the successful life history of returning salmon within the watershed and the Klamath River Basin. The SONCC Coho Recovery Plan (NMFS 2014), states that the highest priority for recovery of coho on the Salmon River should be, "improving the quality and extent of rearing habitat and refugia...For winter rearing, improving connectivity to existing off-channel habitat, and increasing the extent and quality of winter rearing areas will be essential. This habitat ...should be restored or re-created wherever possible..." Although the Salmon River is historically limited in floodplain and off-channel habitat, large-scale historical mining appears to have drastically reduced this critical channel diversity, greatly limiting the river's ability to rear juvenile salmonids. Road decommissioning and rehabilitation have slowed the effects of sediment in the Salmon River subbasin, and manual fish passage improvement efforts have sought to increase connectivity of coldwater habitats for salmon seeking refugia from warm water temperatures. Further efforts are needed to restore the function of floodplains, riparian areas and related in-stream habitats. The SRRC is conducting monitoring to better understand the life history of juvenile salmon in the basin, in order to best approach the habitat needs for increased survival and ultimately successful life histories.

The 2003 National Research Council report states that, "Degradation of the Salmon River is primarily physical, and is associated with inadequate forest management leading to catastrophic fires and logging practices, especially road construction and maintenance, that lead to high levels of erosion. In addition, there are some flow barriers on the Salmon River."

### **Program Recommendations**

- Facilitate the update of the Salmon River Spring Chinook Limiting Factors Analysis
- Conduct head-of-run and end-of-run spring Chinook surveys
- Expand our annual Spring Chinook Cooperative Dive Survey to include more educational activities
- Continue coho monitoring efforts, expand winter adult spawning surveys
- Incorporate CDFW monitoring and data storage protocol (Aquatics Surveys Program Database)
- Incorporate information gathered and data analysis into an annual or bi-annual Salmon River Fisheries synthesis report
- Initiate a cooperative radio tagging project with the Karuk Tribe that will identify movement patterns of spring Chinook and coho salmon
- Continue integration with other program areas and coordinators of these programs (Habitat Restoration, Water Monitoring and Watershed Education Programs)

### **Program Coordination**

Coordinator, Amy Fingerle

**Program Tasks** – The SRRC Fisheries Program has several grant agreements: *Screw Trap*, *Spring and Fall Spawning Surveys*, and *Fish Passage/Off Channel Enhancement*. All tasks shall be completed based on availability of funding and volunteer capacity.

The goals of the screw trap project are to: identify species presence, identify life history, identify disease conditions of fish throughout trapping season, and support research and monitoring efforts on Salmon River and Klamath River Basin fish species.

The goals of the Spring and Fall Chinook Spawning Surveys are to: quantify Chinook escapement in the Salmon River for harvest prediction model, collect spawning data for spawning habitat assessment, collect samples to support research and monitoring projects associated with Spring and Fall Chinook life history, stock identification, genetic variances, and increase awareness and support for fisheries management and the restoration program.

The goals of the Fish Passage/Off Channel Enhancement projects are to restore and maintain habitat connectivity by removing and manipulating blockages to juvenile and adult salmon migration, and to increase high-quality rearing and refugia habitat by adding in-stream cover within prioritized off-channel pools and cold water tributaries.

Additionally, the Fisheries Program Coordinator works closely with the Habitat Restoration Program Coordinator to complete aquatics resource reports as part of the NEPA (National Environmental Policy Act) planning process for habitat restoration projects within the watershed and to conduct restoration monitoring.

#### Task 1) Coordination –

- a) Coordinate survey crews
- b) Attend Mid-Klamath Spawning and Juvenile Survey coordination group meetings
- c) Coordinate fisheries data collection and transfer between SRRC, Karuk Tribe, USFWS, CDFW, USFS, MKWC, etc.
- d) Provide materials, equipment, tools, permits, license & transportation for fisheries work
- e) Coordinate fisheries assessments and studies as needed

#### Task 2) Planning –

- a) Attend planning meetings to develop survey schedule and protocol
- b) Update CRP and annual work plan
- c) Assist in the development of Salmon River in-stream restoration projects
- d) Participate in the NEPA planning process for habitat restoration projects

#### Task 3) Outreach and Education –

- a) Coordinate and participate in Spring and Fall Chinook Spawning Survey Trainings for schools, community and cooperators

- b) Train personnel in juvenile fish identification and field assessment techniques using the CA Salmonid Stream Habitat Restoration Manual.
- c) Utilize the services of seasoned technicians to train novice or first time divers/surveyors
- d) Coordinate fisheries-related field trips with local schools, communities, and cooperators
- e) Enlist involvement and support for program activities from fishing community, local residents and landowners, businesses, and resource users
- f) Provide educational information about the Salmon River fishery and SRRC Fisheries Program in SRRC outreach products and events
- g) Develop annual Spring Chinook Dive invitation with cooperators
- h) Develop activities that supplement the Spring Chinook Dives for participants to learn about and enjoy the Salmon River
- i) Create and post fish health advisories during high risk times

Task 4) Groundwork and Implementation –

- a) Spawning Surveys – Gather data on spawner abundance by species, enumerate salmonid redds and document distribution. Mark all sampled fall Chinook carcasses for potential subsequent recapture according to survey protocol
- b) Spawning Surveys – Collect scale, tissue and otolith samples from salmonid carcasses for research project needs
- c) Screw Trap – Assist with deployment and positioning of screw trap
- d) Screw Trap – Operate and maintain Salmon River and Big Bar traps two days a week
- e) Fish Passage – Enhance Juvenile and Adult fish Passage at Salmon River tributary confluences
- f) Habitat Enhancement – Improve cold water refugia and winter rearing habitat
- g) Habitat Enhancement – Increase in-stream cover through propagation and recruitment of woody debris and creation of woody debris structures

Task 5) Cooperation –

- a) Enlist cooperation, support and involvement of local landowners/residents and resource managers and users
- b) Enlist volunteer support from the pool of community members, local fisheries program staff, and agency staff some of whom are active supporters of SRRC and who have had experience in these types of surveys
- c) Act as local restoration communications liaison with the Karuk Tribe, CDFW, USFS, USFWS, and other responsible agencies and organizations
- d) Continue to promote stakeholder partnerships in the Salmon River that focus on watershed and fisheries restoration planning, implementation and monitoring

Task 6) Monitoring –

- a) Screw Trap – Collect all adipose clipped Chinook for coded wire tag retrieval, provide fish health sample to AC/NV Fish Health Center upon request, identify species present, contribute to life history assessments for various fish species, monitor disease presence and abundance

- b) Fish Passage and Habitat Enhancement – Survey for juvenile and adult salmonids within selected habitats
- c) Fish Passage and Habitat Enhancement – Conduct pre- and post-implementation effectiveness monitoring
- d) Spring Chinook Dive – Coordinate Cooperative Spring Chinook and Summer Steelhead dives in mid-summer
- e) Spring Chinook Dive – Continue to monitor the presence of Columnaris lesions in Salmon River through carcass surveys and ongoing fish mortality enumeration
- f) Juvenile Salmonid Monitoring – Monitor presence/absence of juvenile salmonids, their distribution and habitat use
- g) Contribute to life history assessments for various fish species
- h) Incorporate Salmon River fisheries data into CDFW’s Aquatic Surveys Program

Task 7) Funding –

- a) Secure funding annually for projects
- b) Enlist volunteer and in-kind stakeholder contribution

Task 8) Reporting –

- a) Provide Progress, Annual and Final Reports as specified in grant agreements
- b) Provide data to fisheries and water managers
- c) Spawning Surveys – share spring Chinook survey data with USFS at end of season; submit fall Chinook survey data sheets and biological samples to CDFW after each survey
- d) Fulfill reporting requirements for CDFW Scientific Collecting Permit for collection of biological samples from Chinook carcasses encountered during spawning surveys

**b) Water Monitoring**

The SRRC and its cooperators have been monitoring water quality on the Salmon River since 1992. Our monitoring program establishes baseline water quality data, supports the Clean Water Act's TMDL process, correlates river temperatures with fish behavior, characterizes fisheries refugia conditions, identifies opportunities for habitat improvement, assesses restoration effectiveness, and establishes community participation in the monitoring process.

**Limiting Factors**

Not enough information exists on the water flow regimes of the Salmon River. This information is needed to better understand the fisheries conditions of the Salmon River. While there is a flow gauge operating near the mouth of the Mainstem Salmon River, other flow information is limited. The North and South Forks of the Salmon River, as well as several tributaries feeding these forks and the main stem, need flow gauges. Although the Salmon River is generally considered to be a nutrient limited system, there is a likelihood of localized nutrient impacts due to fires and the use of fire retardant, marijuana grows and other use of fertilizers, leaky septic tanks, etc. Funding is needed to determine presence and effects of nutrients. A comprehensive

plan needs to be developed concerning water quality and quantity conditions related to restoration project implementation and response. A Salmon River Monitoring Plan is also needed to assess changes to the river system through time and general watershed conditions. Some of the attributes to look at are: temperatures, sediment, turbidity, flows, channel morphology, pH, dissolved oxygen, algae blooms and nutrient loading.

### **Program Recommendations**

- Develop long term monitoring plan for Salmon River
- Develop funding for increased water quality monitoring, including nutrients
- Increase monitoring efforts in association with proposed habitat restoration projects
- Increase monitoring associated with wildfire effects
- Begin monitoring ground water temperatures at springs
- Investigate community interest and feasibility of assisting in cleaning up illegal trespass marijuana plantation sites on federal lands

### **Program Coordination**

Coordinator, Bonnie Bennett

### **Program Tasks**

Task 1) Coordinate Program –

Task 2) Planning –

- a) Update CRP and annual work plan

Task 3) Outreach & Education –

- a) Provide information about Salmon River water monitoring and water quality in SRRC outreach products
- b) Train local community members to assist in monitoring activities

Task 4) Groundwork & Implementation – N/A

Task 5) Cooperation –

- a) Participate in Klamath Basin Monitoring Program
- b) *Enlist cooperation and support from local landowners and residents, particularly when monitoring areas are in close proximity.*
- c) Involve local schools in monitoring activities

Task 6) Monitoring –

- a) Maintain hobo temps at +/- 45 locations during summer months
- b) *Collect flow measurements at +/- 20 sites once a month during summer months*

- c) Conduct monitoring activities to support implementation of the TMDL in partnership with the USFS
- d) Monitor habitat enhancement projects
- e) Monitor restoration effectiveness in various types of restoration in the Salmon River

Task 7) Funding –

- a) Seek funding for water monitoring program
- b) Develop funding and/or expand partnerships for flow and nutrient monitoring in the Salmon River and select tributaries

Task 8) Reporting –

- a) Complete project reports as specified in grant agreements
- b) Provide data to USFS and other collaborators
- c) Update SRRC database annually

## **B) Invasive Species Program**

### **a) Salmon River Cooperative Noxious Weed Program (CNWP)**

The Salmon River Restoration Council has been actively involved in noxious weed management since the early 1990's. Through an aggressive response by the local community, the noxious weed program attempts to protect anadromous fish species and water quality from negative impacts caused in the aquatic, riparian and upslope habitats by invasive plant species, using methods that minimize impacts to people and the environment. The CNWP promotes manual removal (digging and pulling), mulching, burning, mechanical removal and other non-chemical methods of invasive plant control of nearly a dozen species throughout the watershed. The SRRC coordinates with several partners including the local residents and landowners, local schools, county, state, federal and tribal managers to promote a cooperative, comprehensive and effective approach that is community based and does not rely on chemical herbicides.

The goal of the program is to maintain a healthy river and forest ecosystem in the Salmon River, which includes a native plant community that is biologically functional and meets desired conditions for terrestrial and aquatic habitats to maintain biodiversity.

The objectives are to: promote a cooperative program involving the local community in a strategic approach to effectively control prioritized noxious weed species and populations; to develop and implement a comprehensive integrated program to effectively manage prioritized noxious weed species throughout the Salmon River without using chemical herbicides; and to develop and apply adaptive techniques and effective tools to achieve control.

The success of the program relies on a strong community volunteer component and a commitment to the application of the CNWP techniques and methods, emphasizing landowner

and residential involvement. Resource users and managers are also enlisted into the CNWP. Our community-based effort is recognized as a model for effective watershed scale noxious weed control regionally and nationally.

### **Limiting Factors**

Funding for management of noxious weeds on federal lands is limited. Trailheads, trails, river access, rock pits, water sources, stock feeding, fire camps, restoration, and recreation areas are locations that promote the spread of noxious weeds. Managing agencies have performed a limited amount of detailed planning to develop a comprehensive and effective strategy that is acceptable to the local community and leads to effective control of prioritized noxious weeds. Vast wilderness and roadless areas in the Salmon River make effective detection and response difficult on public lands.

Of great concern to the community is the possibility that chemical approaches to noxious weed management will lead to the reintroduction of broad applications of herbicides throughout the subbasin. The Klamath National Forest and the Siskiyou Department of Agriculture have identified herbicides as their preferred tool to attempt to eradicate noxious weeds species, as identified in the proposed management of spotted knapweed, a Class A weed. Many of the targeted invasive species populations are located within the floodplain of the Salmon River.

Movement of people and non-native weeds in and out of the Salmon River subbasin has sharply increased the potential for spread of these plants. Importing equipment for various management activities (fire fighting, road work, logging, mining, etc.) is of concern because many equipment source areas (Nevada, Montana, Idaho, etc.) are heavily infested with various species of noxious weeds. Earth-moving equipment has a particularly high incidence of exposure and transport. The SRRC's mitigation plan for river restoration projects includes project design features to combat the introduction and spread of noxious weeds, including: washing of heavy equipment before and after leaving the site; use of certified weed free seed and straw; and thorough surveys for and removal of pre-seeded weeds at the site prior to project implementation. We also do increased pre- and post-implementation surveys and treatments at all restoration project sites.

The increase in wildfire occurrence, intensity, and size, coupled with fire management activities, have increased the spread of invasive plant species in the Salmon River.

Access to private and tribal lands is dependent on landowner buy-in and is therefore an additional limiting factor for weed management. The US Fish & Wildlife Service's (USFWS) Partners for Fish & Wildlife program has provided funding to manage weeds on seven separate properties over the next three years.

Key threats posed by invasive species include the following:

- Invasive species threaten to disrupt functional ecosystem processes and displace native plants and their communities

- Resource management and resource use also involves activities which both disturb the soil and vegetation, and potentially spread invasive species. This has significantly increased the opportunities for noxious weeds to spread
- Fires and fire suppression activities are major vectors for the spread of noxious weeds into hard to reach locations
- Global climate change will promote the invasion and presence of noxious weeds in the Salmon River and surrounding areas
- Noxious weeds managers too often rely on herbicide use as the only way to control noxious weeds and do not adequately integrate non-chemical control

### **Program Recommendations**

- Work toward development of peer reviewed research on effectiveness of manual treatment methods
- Write articles outlining the success of the Salmon River CNWP
- Develop a mountain meadows assessment and restoration plan
- Increase community involvement in noxious weed control to help deal with new populations of oblong spurge, spotted knapweed, and Italian thistle
- Develop and distribute spring invasive species prevention letter to increase awareness, volunteerism, and landowner in-kind

### **Program Coordination**

Coordinator – Deja Malone-Persha

### **Program Tasks**

Task 1) Coordinate Program – Participate in coordination activities, meetings, workshops, conferences, and activities associated with:

- a) Salmon River Coordination Group (Klamath and Six Rivers National Forest, US Fish and Wildlife Service, Siskiyou County Department of Food and Agriculture and Roads Department, Mid-Klamath Watershed Council, the Karuk Tribe, local landowners and residents, and others)
- b) Scott River Watershed Council
- c) Siskiyou Weed Management Area
- d) California Invasive Plant Pest Council
- e) Local schools, colleges and universities

Task 2) Planning –

- a) Update CRP and annual work plan
- b) Update the Cooperative Noxious Weed Management Strategy

Task 3) Outreach and Education –

- a) Educate stakeholders and managers to prevent and/or detect infestations
- b) Enlist stakeholders and managers in CNWP

- c) Disseminate information through newsletters, brochures, e-newsletters, and SRRC website
- d) Develop and disseminate a Salmon River Invasive Species Prevention Letter and in-kind log to raise awareness, participation and track in-kind weeding efforts performed by private landowners

Task 4) Groundwork and Implementation –

- a) Control prioritized noxious weeds and promote functioning riparian habitat and native plants on public and private lands throughout the Salmon River without the use of chemical herbicides
- b) Target restoration sites and adjacent areas for thorough surveys and treatment of noxious weeds both before and after project implementation
- c) Survey and intensely manage burned areas vulnerable to invasion by noxious weeds in the short-term (1 year after fire) and midterm (until understory has returned) periods

Task 5) Cooperation –

- a) Continue to maintain and improve working relationships with the USFS, Karuk Tribe, local schools, local landowners/residents, Siskiyou County Weeds Management Area, California and Siskiyou Co. Departments of Agriculture, Siskiyou County Road Department, and resource user groups
- b) Provide comments for any proposed noxious weed eradication in cooperation with other stakeholders and managers
- c) Continue and improve coordination with other organizations within the region focusing on invasive species

Task 6) Monitoring –

- a) Maintain an inventory and maps of priority noxious weeds species present and managed in the Salmon River watershed
- b) Track and record daily activities of the SRRC in the Treatment Data Base and on the SRRC daily treatment and personnel tracking forms
- c) Conduct a thorough survey of the Salmon River corridor and areas surrounding known infestation sites every two years in order to update inventory and maps
- d) Make certain that weed-prevention design features are performed during active restoration and monitor restoration sites for noxious weeds in perpetuity
- e) Evaluate effectiveness

Task 7) Funding –

- a) Develop and secure diverse program funding
- b) Promote volunteerism and participation from landowners, residents and other stakeholders, including resource managers and users

Task 8) Reporting – Provide Progress and Final Reports as specified in grant agreements

## C) **Fire, Fuels and Forestry Program**

Uncharacteristically intense wildfire is the greatest single threat to fisheries, ecosystem health, and biodiversity in the Salmon River watershed.

The SRRC initiated a Fire Planning and Fuels Reduction Program in 1994 to help reduce the likelihood of uncharacteristically intense wildfire and diminish the risks that they pose for the watershed and local communities. The program includes the coordination of the Salmon River Fire Safe Council, the development and implementation of a Community Wildfire Protection Plan and detailed neighborhood fire safe plans, prioritized fuel reduction and prescribed fire treatments, coordination of the Salmon River Community Liaison Program during wildfire events, and planning of landscape level fire resilience projects via the Western Klamath Restoration Partnership.

We believe this program has stimulated the community, as well as agency personnel, to have a better understanding of fire's role in the watershed and what we can all do to reduce the risk of fire damage to our properties and the public lands surrounding them. Since we started our fuels reduction program, there has been a visible improvement of fuels conditions and fire preparedness on Salmon River private lands. Awareness of fire risk, fuel loading, and what can be done about it has seeped into the consciousness of the community. Even those who haven't participated directly in our Fire, Fuels and Forestry program make an effort to reduce fuels on their property as a part of basic property maintenance.

### **Limiting Factors**

The Salmon River watershed is one of the highest fire risk areas within the Klamath National Forest due to its frequency of lightning, fuels conditions, fire history, and difficult access. The disruption of the natural fire regime by fire suppression has contributed to high fuel loading and dense forest stands that have an increased likelihood of experiencing uncharacteristically frequent and/or extensive stand-replacing wildfires. Over sixty percent of the Salmon River watershed has burned since 2000. High-intensity fires have denuded riparian and upslope areas, contributing to erosion, stream sedimentation, and increased water temperatures. The Salmon Subbasin Sediment Analysis (De la Fuente 1994) indicated that the denudation of steep, granitic slopes has drastically increased the amount of sediment entering the streams and rivers below.

At present, fuel loading is at an unnaturally high level in many areas of the watershed, largely due to the combination of fire suppression and forestry management practices. Fires burning in the current fuel regime threaten to severely damage the more biologically intact and/or recovering landscapes in the watershed (USFS Watershed Analyses).

### **Program Recommendations**

- Fully re-develop Salmon River CWPP to meet current guidelines, incorporate shifts in program strategies and pre-attack planning, update all maps and underlying data, utilize fire modeling tools, and develop the plan to be useful for tactical operations. Make CWPP and maps, layers, and data digitally available in modern formats and platforms

ready for rapid deployment and sharing. Update CWPP frequently so that it remains current and reflective of the changing fire situation in the watershed.

- Complete residential risk assessments for residences and businesses, and incorporate them into Neighborhood Fire Preparation and Response Plans. Increase ability to utilize prescribed fire treatments during appropriate burn windows including the development of a flexible winter/spring burn window element. Develop relationships with local and regional entities and contractors to assist with burn planning and implementation. Expand local prescribed fire capacity with staff and volunteer training and by expanding the local equipment cache.
- Encourage Salmon/Scott River Ranger District to participate in a cohesive and coordinated Salmon River Fire Planning process involving multiple stakeholders.
- Further develop Salmon River WKRP subgroup, increase stakeholder participation, and secure funding for future program of work.
- Work with USFS to create agreement and find funding for SRRC's program to work in WUI zones on USFS-managed land – i.e. around private property and emergency access/egress.
- Evaluate on-the-ground fuels reduction and prescribed fire program effectiveness during and after wildfire events in areas that have been treated by SRRC.
- Develop strategy for obtaining programmatic environmental compliance for private lands fuels reduction projects funded by federal and state funds (NEPA & CEQA compliance).

### **Program Coordination**

Coordinator, Brendan Twieg

### **Program Tasks**

Task 1) Coordinate Program – including fuels reduction and prescribed burning, Fire Safe Council, Multi Party Monitoring, Western Klamath Restoration Partnership, review of USFS projects, etc.

Task 2) Planning –

- a) Update CRP and annual work plan
- b) Locate residences/structures and improvements, emergency access routes, engine fill-sites, helicopter landings, etc.
- c) Use plans to prioritize actions to be taken by crews, volunteers, and landowners
- d) Participate in Western Klamath Restoration Partnership
  - a. *Facilitate WKRP landscape planning process with Salmon/Scott River Ranger District and involve SRFSC and community in this process.*

Task 3) Outreach and Education –

- a) Provide community with information regarding fire-safe practices
- b) *Build community support for activities and projects that will aid in allowing natural wildfire and prescribed fire to be returned to the landscape*
- c) Integrate educational activities with the local schools

- d) Create and distribute educational materials and articles highlighting program
- e) Promote neighborhood coordination and preparedness through the Community Liaison Program
- f) Hold Annual Fire Awareness Week and on-going volunteer activities

Task 4) Groundwork and Implementation –

- a) Implement fuels reduction projects: cut and hand pile fuels and burn piles when safe, permitted, and efficient
- b) Prepare prescribed burn units
- c) Participate in 2020 Klamath River TREX to implement prescribed fire on private properties on the Salmon River if appropriate
- d) Initiate program work to conduct future prescribed burning in winter/spring burn window where appropriate

Task 5) Cooperation –

- a) Coordinate Salmon River Fire Safe Council
- b) Prepare in advance and activate and coordinate the Community Liaison Program during wildfire events
- c) *Increase preparedness at various scales – landowner/resident, neighborhoods, towns, and watershed*
- d) *Promote and facilitate stakeholder cooperation in assessing and reviewing USFS fuels and forestry projects*

Task 6) Monitoring –

- a) Establish fuels reduction photo points and take pre- and post-project photos
- b) Develop multiyear monitoring photo points
- c) GPS fuels and prescribed burn locations
- d) Hold Multi Party Monitoring meetings

Task 7) Funding –

- a) Seek program funding
- b) Investigate funding opportunities that allow work on federal lands Look for equipment and fire preparedness funding sources:

Task 8) Reporting –

- a) Provide Progress and Final Reports as specified in grant agreements

## **D) Habitat Restoration Program**

The SRRC has been doing habitat restoration in the Salmon River watershed since 1992. Our restoration program includes projects to increase stream shading, creek mouth enhancement, fish barrier removal and floodplain restoration. The goal of the program is to maintain and restore the fishery and aquatic habitat by rehabilitating and enhancing roads, creek mouths, and mine tailings and restoring the function of floodplains and related instream habitat. As the current large-scale assessments and prioritization processes are completed, this program is set to continue to grow with projects outlined for many years to come.

### **Limiting Factors**

Floodplain/Riparian Restoration – legacy impacts from extensive hydraulic and placer dredge gold mining within the Salmon River watershed continue to degrade habitat conditions primarily due to mine tailings within the floodplain and riparian corridor that prevent floodplain inundation and riparian plant succession. This creates a significant heating effect rather than the cooling effect of a functioning floodplain that contains riparian forests and complex hyporheic and groundwater interactions. Additionally, these legacy impacts have reduced channel complexity in the Salmon River, greatly reducing the amount and function of floodplains, side channels, and off-channel habitat critical for salmonid rearing. Lack of juvenile rearing habitat is currently thought to be one of the most limiting factors to salmonid recovery in the watershed, and the Klamath Basin as a whole.

Roads – are an on-going source of sediment to the river by surface erosion and landslides. In 1944, there were about 188 miles of roads in the Salmon River. By 1989 the miles of road on federal lands had increased to 762 miles, or 3,639 acres. It is estimated that more than 90% of the human caused sediment is associated with roads (USFS 1993). Higher road densities associated with lands sensitive to accelerated erosion from mass wasting are of particular concern due to elevated risk of sediment production. Additionally, roads can create barriers to fish passage, limiting the dispersal of fish species and access to important habitat and refugia.

### **Program Recommendations**

- Participate in update of Salmon River Subbasin Restoration Strategy
- Complete Salmon River In-stream and Floodplain Restoration Action Plan, including project and/or reach prioritization
- Work with managing agencies to begin development of programmatic NEPA for floodplain and mine tailing restoration projects
- Improve communication and collaboration with Salmon/Scott District employees to increase opportunities for habitat restoration on the Salmon River
- Continue collaboration and field exchange with other groups implementing habitat restoration in the region to gain important insight, share ideas and resources, and move effective restoration forward

## **Program Coordination**

Coordinator, Mel Van Scoyoc

## **Program Tasks**

This program encompasses riparian and floodplain restoration, fisheries habitat restoration and mine tailing rehabilitation.

### Task 1) Coordinate Program –

- a) Coordinate overall program, including project reporting, supervision, managing contacts with cooperators, as well as creating contracts and agreements
  - a. Coordinate the Kelly Bar, Nordheimer Creek, Red Bank, Windler Bar and Hotelling Barrier projects

### Task 2) Planning –

- a) Select additional high priority sites that will be feasible to restore, and coordinate the development of engineered plans for implementation at each prioritized site
- b) Coordinate development of NEPA/CEQA and permitting for Red Bank Habitat Enhancement project and other future restoration activities
- c) Coordinate the design of the Windler Bar Habitat Enhancement project
- d) Coordinate programmatic NEPA/CEQA for long-term planning of instream restoration projects
- e) Update CRP and annual work plan

### Task 3) Outreach and Education

- a) Develop brochures, newsletter and website articles, and utilize the SRRC monthly e-news to provide landowners and residents with information and training on habitat restoration and protection
- b) Invite landowners, residents, schools and others to learn about the program and to participate in training and implementation activities
- c) Hold community information sessions to familiarize the community with floodplain restoration needs and effects, and to seek public input
- d) Develop relationship and skills with contractors for project specific implementation

### Task 4) Groundwork and Implementation –

- a) Initiate implementation of the Hotelling Gulch Aquatic Restoration Project

### Task 5) Cooperation –

- a) Cooperate with USFS, NCRWQCB, CDFW, USFWS, Karuk Tribe, Stillwater Sciences, Pacific Watershed Associates, Michael Love and Associates, McBain Associates, Fiori

GeoSciences, MKWC, and others on planning, assessment and implementation of projects

- b) Facilitate Salmon River Collaborative In-stream Restoration Working Group
- c) Participate in regional field tours of instream restoration projects

Task 6) Monitoring –

- a) Maintain a scheduled monitoring plan to assess conditions before, during and after significant restoration actions are performed

Task 7) Funding –

- a) Seek program funding
- b) Seek funding for additional studies and assessments to fill data gaps and lead to long term restoration
- c) Work with partners to seek funding for specific habitat restoration projects.

Task 8) Reporting –

- a) Complete project reports as specified in grant agreements

## **E) Watershed Education Program**

The SRRC believes that informed, caring citizen communities are the most effective stewards of the ecosystem. Our community is essential to the restoration of our watershed. To help facilitate the development our local restoration community, we run a Watershed Education Program in local schools and in the community as a whole.

Our program operates in two local elementary schools to teach natural resource sciences, ecosystem management, and watershed stewardship. Students at Forks of Salmon Elementary School and Junction Elementary School learn scientific methods and gain valuable watershed knowledge through experiential teaching. We coordinate with the Karuk Tribe Department of Natural Resources and the Mid-Klamath Watershed Council Education programs to provide diverse lessons that connect students with current events, cultural management techniques, history and revival.

### **Limiting Factor**

The extremely low student population in local schools threatens more school closures. Rural communities in general have a difficult time meeting state education standards, due to a lack of economic and material resources, among other things. The political climate also threatens to limit funding for programs that include youth based objectives and climate science.

### **Program Coordination**

Coordinator, Stefan Dosch

## **Program Recommendations**

- Rethink program format to better fit limited funding and current needs
- Focus activities less on in-classroom lessons and more on bringing students into the outdoors
- Increase mentorship opportunities
- Continue to develop summer opportunities for youth
- Develop new funding sources
- Increase number and breadth of Community Education Workshops and fieldtrips

## **Program Tasks**

### Task 1) Coordination –

- a) Coordinate overall program
- b) Facilitate standards based watershed education and restoration activities for students and community members at Salmon River elementary schools
- c) Involve students, teachers, and parents in watershed restoration activities

### Task 2) Planning –

- a) Update CRP and annual work plan
- b) *Provide support for school teachers and their natural resource partners in the development of their annual watershed education curriculum*
- c) Coordinate a schedule with teachers and natural resource professionals to develop lessons

### Task 3) Outreach and Education –

- a) Develop program related outreach products such as newsletter and e-news articles
- b) Provide watershed education lessons and field trips to local elementary school students
- c) Coordinate quarterly Community Education Workshops
  - a. i.e. mushroom workshop, wildflower id walk, geology weekend, reptile talk...
- d) Coordinate the annual Watershed Fair

### Task 4) Groundwork and Implementation –

- a) Teach students and teachers technical skills and the use of equipment used in watershed restoration activities
- b) Apply restoration techniques and use appropriate equipment
- c) Provide field trips to specific adopted waterways to apply knowledge in the field

### Task 5) Cooperation –

- a) Continue to broaden the awareness and commitment of the Salmon River community to protect and restore the subbasin's fisheries and watershed resource
- b) Continue work with the Karuk DNR and MKWC education programs to integrate cultural and ecological curriculums

Task 6) Monitoring –

- a) Include students in real world monitoring of the Salmon River ecosystem. Practice monitoring techniques in a field setting

Task 7) Funding –

- a) Seek project funding
- b) Develop new funding sources

Task 8) Reporting –

- a) Complete project reports as specified in grant agreements

**F) Community Restoration Program -  
Watershed Center, Outreach, Training and Planning**

The SRRC maintains our office, meeting and training space, and community services at the Salmon River Watershed Center in Sawyers Bar. We implement an annual series of workshops, workdays, field trips, training, and presentations to engage stakeholders. We provide outreach information and training opportunities to increase awareness and involvement in watershed and fisheries restoration and protection. The SRRC performs various activities to increase the capacity for the local community to engage in watershed/fisheries restoration, as well as assist in related programs being conducted by our partners and others. We also focus some attention on identifying and reducing problems associated with resource use related to watershed and fisheries resources in the Salmon River.

**Program Recommendations:**

- Develop an internship and research program
- Develop Human Communities program – to assist with disaster preparedness, emergency communications, and food and energy security at the local level – outreach to other local and regional organizations to assist in this
- Develop a Wildlife Program

**Program Tasks**

Task 1) Coordinate Program –

- a) *Coordinate with various activities and efforts in the Klamath River Basin which affect the anadromous fisheries and other resources of the Salmon River and the SRRC with a focus on science, policy, management, and community health*
- b) Coordinate with USFS, Karuk Tribe and other stakeholders all restoration efforts in the Salmon River

Task 2) Planning –

- a) Update the Community Restoration Plan and develop annual SRRC Work Plan
- b) Participate in key planning efforts that affect the Salmon River, emphasizing anadromous fish species and runs and the SRRC
- c) *Foster the development and use of planning tools that affect the Salmon River including: Klamath Basin Restoration, Reintroduction and Monitoring Plans, Western Klamath Restoration Partnership, Basin Wide planning efforts, all subbasin planning efforts, and others*

Task 3) Outreach and Education –

- a) Provide outreach tools such as newsletters, website, brochures, reports, posters, and other information
- b) Publish one printed newsletter and 12 e-newsletters per year
- c) Post informational posters on bulletin boards throughout the watershed
- d) Develop an SRRC annual schedule of activities
- e) Update the online Klamath Basin Restoration Related Activities Calendar

Task 4) Groundwork and Implementation –

- a) Implement volunteer workdays associated with new and existing programs on the Salmon River
- b) Develop, schedule and implement an annual series of workshops, workdays, field trips, training, and presentations to engage stakeholders and community members
- c) Maintain SRRC adopt-a-highway section of Salmon River Road
- d) Hold at least one additional River/Roads Cleanup per year encompassing alternating sections of the watershed

Task 5) Cooperation –

- a) Facilitate stakeholder cooperation
- b) Participate in programs, forums, conferences, meetings and activities associated with SRRC mission and goals in the Salmon and Klamath Rivers and beyond
- c) Coordinate and network with all cooperators to enlist their support and develop actions needed to assist in the recovery of the Salmon River and its anadromous fisheries, emphasizing SRRC's role

Task 6) Monitoring –

- a) Track all of SRRC activities, attendants and volunteerism
- b) Track use of the watershed center and find ways to increase it
- c) *Develop and perform monitoring activities needed in the Salmon River that are not included in other SRRC programs (such as mining, grazing, etc.)*

Task 7) Funding – Seek funding to support Community Restoration Program activities

#### Task 8) Reporting –

- a) Develop Annual Report each year and distribute to Board, members, and key funders
- b) Provide Board of Directors with updates
- c) Provide reports to funders and cooperators, as needed

## **IV. Conclusion**

Citizen efforts such as the Salmon River Restoration Council are the best vehicle to achieve watershed/fisheries recovery, causing minimal dislocation to existing economic and social activities. Each year the Council has expanded its program to provide remedial actions to prevent decline and restore the resources of the Salmon River, emphasizing anadromous fish recovery. To date we have brought in over ten million dollars' worth of improved ecosystem health to the Salmon River. An additional three and a half million dollars' worth of in-kind participation in restoration activities is evidence that there is strong community commitment to the protection and restoration of the Salmon River ecosystem, highlighting recovery of the anadromous fisheries. Without the support of the watershed residents and various stakeholders, the recovery and maintenance of the watershed and fisheries is not possible, due to the Salmon River subbasin's remoteness and access problems. Managing agencies must have the cooperation and support of a well-informed community.

In order to maintain and expand upon our community restoration program, we have created this annual work plan to guide our efforts. Our Program seeks to enlist cooperation and support from the US Forest Service and other federal agencies, the State of California, the Karuk Tribe, other restoration groups, resource user groups, the environmental community, recreation users and others to accomplish our goals.







## SRRC Fire, Fuels, Forestry Program Events Calendar and Work Summary 2020

Task:	Cooperators	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Program Coordination	KTDNR, USFS, CALFIRE, USFWS, NRCS	X	X	X	X	X	X	X	X	X	X	X	X
<b>Outreach and Education</b>													
Fire Awareness Week	USFS, CALFIRE, USFWS					X							
<b>Fuels Reduction and Prescribed Fire</b>													
Fuels Reduction and Rx Fire Layout, Planning, & Contracting	USFS, CALFIRE, USFWS, MKWC	X	X	X	X					X	X	X	
Fuels Reduction Implementation	USFS, USFWS	X		X	X	X					X	X	X
Klamath River Prescribed Fire TREX	TNC, USFS, CALFIRE, MKWC, Karuk Tribe									X	X		
<b>Fire Safe Council</b>													
Fire Safe Council	SRVFR, USFS, Community, KTDNR, CALFIRE, USFWS		X			X			X			X	
Liaison Team	KTDNR, USFS, MKWC, CALFIRE, FAC LN, Community						X	X	X	X			
<b>Forestry Collaboration and Fire Planning</b>													
Western Klamath Restoration Partnership	MKWC, SRRC, KTNDR, SRFSC, OSFSC, TNC FLN, USFS, CALFIRE, NRCS, Industry, KFA, EPIC, Community	X	X	X	X	X	X	X	X	X	X	X	X
Multi-Party Monitoring	USFS, USFWS, KFA				X					X			



## SRRC Watershed Education Program Events Calendar and Work Summary 2020

Task:	Cooperators	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Coordination	SRRC, FSES, JES	X	X	X	X	X	X	X	X	X	X	X	X
Watershed Fair	CDFG, FSES, JES					X							
Water Quality Units - Hobo Temp	SRRC, FSES, JES					X				X			
Native Plants, Noxious Weeds Units	SRRC, FSES, JES				X	X	X			X			
Youth Fire Field Trip	SRRC, FSES, JES, MKWC, Karuk										X		
Fall Chinook Carcass Surveys	SRRC, CDFW, FSES, JES										X	X	
Summer Planning with Teachers	SRRC, MKWC, KTDNR, FSES, JES								X				
Community Ed Workshops	SRRC, CDFW, FWS, MKWC				X		X					X	

**Salmon River Restoration Council  
Three Year Work Plan**

PROJECT NAME	Task #	2020					2021					2022					PROJECT SUMMARY/OBJECTIVES
		Project Status (Ongoing, Planning, Implementing, Future)	Funding Status (Funded, Partial, Unfunded, Proposed)	Cost	Funding Source	Feasibility (Low, medium, high)	Project Status (Ongoing, Planning, Implementing, Future)	Funding Status (Funded, Partial, Unfunded, Proposed)	Cost	Funding Source	Feasibility (Low, medium, high)	Project Status (Ongoing, Planning, Implementing, Future)	Funding Status (Funded, Partial, Unfunded, Proposed)	Cost	Funding Source	Feasibility (Low, medium, high)	
<b>1. FISHERIES</b>																	
Coordinate Program	1	Ongoing	Partial Funding	15K	USFWS, CDFW	H	Ongoing	Partial Funding	15K	USFWS, CDFW, TBD	H	Ongoing	Unfunded	15K	TBD	H	Coordinate the Fisheries Program.
Juvenile Rearing Habitat Enhancement	4	Implement	Partial Funding	10K	CDFW	H	Ongoing	Unfunded	10K	TBD	H	Ongoing	Unfunded	10K	TBD	M	Enhance existing rearing habitat utilizing brush bundles, etc.
Manual Fish Passage Improvement	4	Ongoing	Funded	12K	CDFW,	H	Ongoing	Proposed	12K	CDFW, TBD		Ongoing	Proposed	12K	CDFW, TBD		Assess, prioritize and perform habitat improvements and increase fish passage into tributaries and at swimmer's dams.
Spring Chinook Summer Steelhead Population Dives, and Educational week	6	Ongoing	Partial Funding	4K	Karuk Tribe, VOL	H	Ongoing	Unfunded	4K	TBD, VOL	H	Ongoing	Unfunded	4K	TBD, VOL	H	Coordinate Cooperative Spring Chinook and Summer Steelhead Dives. Increase public awareness on the plight of Salmon and Klamath River populations of Spring Chinook
Juvenile Outmigration Screw Trap	6	Ongoing	Partial Funding	10K	Karuk Tribe	M	Ongoing	Unfunded	10K	Karuk Tribe		Ongoing	Unfunded	10K	Karuk Tribe		Operate Salmon River and Big Bar traps to determine species presence, abundance, run timing, life history patterns. Coordinate with Karuk Tribe
Fall Chinook Carcass and Redd Surveys	6	Ongoing	Proposed	18K	USFWS	H	Ongoing	Unfunded	18K	USFWS	H	Ongoing	Unfunded	18K	USFWS	H	Participate in cooperative Fall Chinook spawning surveys and provide survey data to agencies.
Spring Chinook Spawning Surveys	6	Ongoing	Proposed	10K	USFWS	H	Ongoing	Unfunded	10K	TBD, VOL	M	Ongoing	Unfunded	10K	TBD, VOL	M	Coordinate and participate in cooperative spring Chinook spawning surveys and provide survey data and biological samples to agencies and researchers.
Steelhead Spawning Surveys	6	Future	Unfunded			L											Enumerate summer and winter Steelhead redds, identify fish passage barriers in the Salmon River
Coho Spawning Surveys	6	Future	Unfunded			M											Enumerate Coho redds and carcasses in the Salmon River. Identify and monitor key Coho spawning grounds.
Juvenile Presence/Absence Surveys	6	Implement	Partial Funding	8K	CDFW,	H	Implement	Proposed	8K	CDFW, TBD	H	Implement	Proposed	8K	CDFW, TBD	H	Conduct juvenile presence/absence surveys in Salmon River and Tribes. Survey for all salmonid species, with focus on coho.
Fish Health Assessment	6	Ongoing	Unfunded		Vol	M	Ongoing	Unfunded	2K	Vol	M	Ongoing	Unfunded	2K	Vol	M	Monitor for fish disease/fish kill in coordination with KFHat
<b>Total Program Cost</b>				<b>87K</b>													
<b>2. NOXIOUS WEEDS</b>																	
Coordinate Cooperative Noxious Weeds Program	1	Ongoing	Partial Funding	15K	USFWS, USFS, Clif Bar	H	Ongoing	Partial Funding	15K	TBD, USFWS	M	Ongoing	Unfunded	15K	USFWS, TBD	M	Coordinate the CNWP Program. Perform Planning, Groundwork, Tracking, Monitoring, Outreach and Education activities to engage the local community, schools, managers, resource users, academic. Address needs associated with ground disturbance related to management and restoration on public, private, and tribal lands.

**Salmon River Restoration Council  
Three Year Work Plan**

PROJECT NAME	Task #	2020					2021					2022					PROJECT SUMMARY/OBJECTIVES
		Project Status (Ongoing, Planning, Implementing, Future)	Funding Status (Funded, Partial, Unfunded, Proposed)	Cost	Funding Source	Feasibility (Low, medium, high)	Project Status (Ongoing, Planning, Implementing, Future)	Funding Status (Funded, Partial, Unfunded, Proposed)	Cost	Funding Source	Feasibility (Low, medium, high)	Project Status (Ongoing, Planning, Implementing, Future)	Funding Status (Funded, Partial, Unfunded, Proposed)	Cost	Funding Source	Feasibility (Low, medium, high)	
Prevent Invasive Weed Infestations through education and outreach	3	Ongoing	Partial Funding	3K	USFWS, Clif Bar	H	Ongoing	Unfunded	2K	TBD, USFWS	H	Ongoing	Unfunded	2K	TBD	H	Develop and provide materials to educate stakeholders about noxious weed issues and how they can assist in prevention efforts. Publish outreach materials, attend conferences, hold workshops, demonstrate effective techniques used by the SRRC and partners in the CNWP.
Noxious Weeds Assessment and Tracking	6	Ongoing	Partial Funding	2K	USFWS, USFS,	M	Ongoing	Partial Funding	5K	USFWS, TBD,		Ongoing	Unfunded	5K	TBD		Survey, monitor, and map various weed species
Noxious Weeds Control on Public Land in Salmon River	4	Ongoing	Partial Funding	20K	USFS, VOL	H	Ongoing	Unfunded	20K	TBD, USFS,	M	Ongoing	Unfunded	20K	TBD, VOL		Conduct surveys and control priority noxious weed species on private lands throughout the Salmon River, highlighting control of Italian Thistle and other class "A" species. Enlist the participation of the private landowners and residents.
Noxious Weeds Control on Private Land in Salmon River	4	Ongoing	Partial Funding	10K	USFWS	H	Ongoing	Partial Funding	10K	USFWS, TBD,	H	Ongoing	Partial Funding	10K	USFWS, TBD		Conduct surveys and control priority noxious weed species on private lands throughout the Salmon River, highlighting control of Italian Thistle, Knapweeds, and other class "A" species. Enlist the participation of the private landowners and residents.
<b>Total Program Cost</b>				<b>50K</b>													
<b>3. FIRE, FUELS &amp; FORESTRY</b>																	
Coordinate Program	1	Ongoing	Funded	15K	USFS, USFWS	H	Ongoing	Partial Funding	15K	USFS, TBD	H	Ongoing	Unfunded	15K	TBD	H	Coordinate the Fire, Fuels & Forestry Program.
Salmon River Community Wildfire Protection Plan (CWPP)	2	Implement	Funded	50K	CAFSC, CALFIRE	H											Continue to develop and update CWPP to reduce catastrophic fire potential that addresses private/federal/tribal land needs.
Fuels Reduction and Fire Safety Work on private land	4	Ongoing	Funded	100K	USFWS, USFS	H	Ongoing	Partial Funding	100K	USFS, USFWS		Ongoing	Unfunded	100K	USFWS		Protect private land and critical access routes for residents and fire fighters by performing prescribed fuels reduction treatments.
Prescribed Burning	4	Planning	Partial Funding	20K	MKWC	M	Planning	Unfunded	30K	TBD	M	Ongoing	Unfunded	30K	TBD	M	Implement broadcast burns on private lands, through TRES program and independently.
Community Fire Liaison Program	5	Ongoing	Unfunded	5K	TBD	M	Ongoing	Unfunded	5K	VOL	M	Ongoing	Unfunded	VOL		M	Develop Community Fire Liaison Program as a model for the region; implement CLP during wildfire and landscape level Rx fire events on the Salmon River.
Salmon River Fire Safe Council	5	Ongoing	Partial Funding	5K	USFWS, CALFIRE	H	Ongoing	Unfunded	5K	USFWS, USFS	H	Ongoing	Unfunded	5K	TBD		Coordinate multiple stakeholders to focus on identifying fire and fuels management needs on private/public lands.
Fire Week	3	Ongoing	Unfunded		VOL	M	Ongoing	Unfunded	1K	TBD	H	Ongoing	Unfunded	1K	TBD	H	Coordinate annual fire week, including volunteer community fuel reduction days and educational/training events
Western Klamath Restoration Partnership and Collaborative Landscape Fire Planning	2, 5	Ongoing	Partial Funding	10K	Karuk Tribe, MKWC	H	Ongoing	Unfunded	45K	TBD, USFS?	H	Ongoing	Unfunded	40K	TBD		Participate in WKRP for entire partnership scope; detailed planning with Salmon/Scott District and other partners.

**Salmon River Restoration Council  
Three Year Work Plan**

PROJECT NAME	Task #	2020					2021					2022					PROJECT SUMMARY/OBJECTIVES
		Project Status (Ongoing, Planning, Implementing, Future)	Funding Status (Funded, Partial, Unfunded, Proposed)	Cost	Funding Source	Feasibility (Low, medium, high)	Project Status (Ongoing, Planning, Implementing, Future)	Funding Status (Funded, Partial, Unfunded, Proposed)	Cost	Funding Source	Feasibility (Low, medium, high)	Project Status (Ongoing, Planning, Implementing, Future)	Funding Status (Funded, Partial, Unfunded, Proposed)	Cost	Funding Source	Feasibility (Low, medium, high)	
Multi-Party Monitoring and Forestry Monitoring and Oversight	5	Ongoing	Unfunded	5K	TBD	L	Ongoing	Unfunded	2K	TBD	L	Ongoing	Unfunded	2K	TBD	Convene quarterly MPM meetings concerning Salmon River projects; monitor and comment on USFS Forestry Projects	
<b>Total Program Cost</b>				<b>210K</b>													
<b>4. WATER MONITORING</b>																	
Coordinate Program	1	Ongoing	Partial Funding	5K	USFS, Vol	H	Ongoing	Unfunded	5K	USFS, TBD		Ongoing	Unfunded	5K	USFS, TBD	Coordinate water monitoring program	
Klamath Basin WQ Monitoring Coordination Group	1	Ongoing	Unfunded	1K	TBD	M	Ongoing	Unfunded	1K	TBD		Ongoing	Unfunded	1K	TBD	Participate in KBMP Meetings and group coordination	
Restoration Monitoring	6	Ongoing	Funded	5K	CDFW	H	Ongoing	Partial	5K	CDFW	H	Ongoing	Partial	5K	CDFW	This project will assist restoration data collection for project areas to be used in hydrologic design analysis for large scale restoration areas on the Salmon River.	
Perform Water Monitoring Activities	6	Ongoing	Partial Funding	5K	USFS, Vol	H	Ongoing	Unfunded	6K	USFS, TBD	H	Ongoing	Unfunded	8K	USFS, TBD	Continue to monitor water temp, flows, and other TMDL factors	
<b>Total Program Cost</b>				<b>16K</b>													
<b>5. WATERSHED EDUCATION</b>																	
Coordinate Program	1	Ongoing	Partial Funding	10K	USFWS, Patagonia	H	Ongoing	Unfunded	10K	TBD		Ongoing	Unfunded	10K	TBD	Coordinate Watershed Education Program in schools and community	
In-class watershed ed - Forks of Salmon and Junction Elementary Schools	3	Ongoing	Partial Funding	5K	USFWS, Patagonia	H	Ongoing	Unfunded	7K	TBD	M	Ongoing	Unfunded	7K	TBD	Provide ongoing watershed education coordination and support for students and community in local schools.	
Field-based watershed ed - Forks and Junction Schools	3	Ongoing	Partial Funding	2K	USFWS, Patagonia	H	Ongoing	Unfunded	5K	TBD	M	Ongoing	Unfunded	5K	TBD	Provide ongoing watershed education field trips and field studies for students and community in local schools.	
Watershed Fair	3	Ongoing	Partial Funding	1K	USFWS, Patagonia	H	Ongoing	Unfunded	3K		M	Ongoing	Unfunded	3K		Coordinate annual Watershed Fair with Junction and Forks schools	
Klamath Salmon Outdoor School and Day Camp	3	Future	Unfunded		TBD	L	Ongoing	Unfunded	15K	Private	M	Ongoing	Unfunded	15K	Private	Co-coordinate the KSOS with MKWC	
Community Learning Workshops	3	Ongoing	Funded	2K	USFWS, Trees	H	Ongoing	Unfunded	4K	TBD	M	Ongoing	Unfunded	4K	TBD	Coordinate quarterly community education workshops	
<b>Total Program Cost</b>				<b>20K</b>													
<b>6. HABITAT RESTORATION</b>																	
Coordinate Program	1	Ongoing	Funded	20K	CDFW, USFWS,	H	Ongoing	Funded	20K	CDFW	M	Ongoing	Funded	20K	CDFW	Coordinate Habitat Restoration Program	

**Salmon River Restoration Council  
Three Year Work Plan**

PROJECT NAME	Task #	2020					2021					2022					PROJECT SUMMARY/OBJECTIVES
		Project Status (Ongoing, Planning, Implementing, Future)	Funding Status (Funded, Partial, Unfunded, Proposed)	Cost	Funding Source	Feasibility (Low, medium, high)	Project Status (Ongoing, Planning, Implementing, Future)	Funding Status (Funded, Partial, Unfunded, Proposed)	Cost	Funding Source	Feasibility (Low, medium, high)	Project Status (Ongoing, Planning, Implementing, Future)	Funding Status (Funded, Partial, Unfunded, Proposed)	Cost	Funding Source	Feasibility (Low, medium, high)	
Off-channel and Riparian Habitat Enhancement	4	Planning	Partially Funded	200K	CDFW, SCC	H	Planning	Partially Funded	100K	CDFW, SCC	H	Planning	Partially Funded	100K	CDFW, SCC	H	Create and enhance side channels, off-channel alcoves, and riparian shade for increased fisheries rearing habitat. Windler Bar design and Red Bank environmental compliance/ reveg planning are funded.
Tributary Enhancement	4	Planning	Partial Funding	50K	CDFW	H	Planning	Unfunded	40K	CDFW	H	Completed	NA	NA	NA	NA	Design for augmentation of large woody debris in Nordheimer. Post-restoration effectiveness monitoring in Knownothing and Methodist Creeks.
Floodplain Restoration Assessment	2, 3, 4, 6	Ongoing	Partial Funding	100K	CDFW	H	Ongoing	Unfunded	100K	TBD	M	Ongoing	Unfunded		TBD	M	Assess restoration opportunities and constraints, as well as conceptual restoration designs for floodplain reaches, initiate project area-wide permitting and environmental compliance and site-by-site restoration implementation based on a prioritized ranking.
Fish Passage	4	Implement	Funded	1M	CDFW	M	Planning	Unfunded	100K	CDFW	H	Planning	Unfunded	100K	CDFW	H	Remove and monitor prioritized fish barriers on private and public lands that offer access to essential fish habitat. Hotelling Gulch)
Salmon River Instream Restoration Work Group	5	Complete	Unfunded	5K	TBD	M										H	Convene collaborative fisheries specialist group to prioritize habitat restoration activities on the Salmon and update the subbasin restoration strategy.
<b>Total Program Cost</b>				<b>1.3M</b>													
<b>9. SRRC CRP</b>																	
Salmon River Community Restoration Plan	2	Ongoing	Funded	1K	USFWS, Private	H	Ongoing	Unfunded	1K	USFWS, Private		Ongoing	Unfunded	1K	USFWS, Private		Update CRP/Annual Work Plan annually to provide a general overview and guide activities.
Watershed Center	3	Ongoing	Partial Funding	30K	USFWS, Private	H	Ongoing	Unfunded	30K	USFWS, Private		Ongoing	Unfunded	30K	USFWS, Private		Maintain centralized location for staff, library, and equipment. Provide public access to restoration information and SRRC activities. Provide meeting and conference space.
Outreach	3	Ongoing	Partial Funding	10K	USFWS, CDFW, Private	H	Ongoing	Partial Funding	10K	USFWS, CDFW, Private		Ongoing	Unfunded	10K	USFWS, Private		Produce newsletters/brochures, monthly calendar, maintain website, attend conferences
Restoration Workshops, Training, Education, Presentations, Networking	4	Ongoing	Partial Funding	15K	USFWS, CDFW Private	H	Ongoing	Partial Funding	15K	USFWS, CDFW Private		Ongoing	Unfunded	15K	USFWS, Private		Develop and implement an annual schedule of workshops and trainings associated with all aspects of watershed restoration and protection.
Stakeholder Coordination	5	Ongoing	Partial Funding	2.5K	USFWS, Private		Ongoing	Partial Unfunded	5K	USFWS, Private		Ongoing	Unfunded	5K	USFWS, Private		Participate in stakeholder advisory partnerships in the Salmon River sub-basin.
<b>Total Program Cost</b>				<b>58.5k</b>													
<b>10. OTHER PROJECTS</b>																	
Expanded History Project	3	Future	Unfunded		None	L											Examine historical conditions to help determine watershed capacity.
Initiate Wildlife Program	2, 3	Future	Unfunded		None	M											Examine historical conditions to help determine watershed capacity. Coordinate to determine focal areas and species. Initiate community engagement.