

SALMON RIVER COMMUNITY RESTORATION PROGRAM ANNUAL WORK PLAN

2024



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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 2,270 restoration-related workshops, workdays, and field trips. Community members, staff, technical specialists, and others have contributed over 118,604 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 13 permanent 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, 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. It was revised during the 2022 strategic planning process.

"The mission of the Salmon River Restoration Council is to protect and restore the Salmon River watershed with the active participation of the local community, focusing on fisheries restoration and the development of a sustainable economy."

D) Long Term Goals

- Engage 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 be 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 partnerships 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.
- Build lasting relationships and trust with indigenous communities.
- Cultivate community vitality and well-being through community infrastructure projects, skill-building and mutual aid.

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. Over 45% is federally-designated wilderness area. 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 8,920 feet at Caesar Cap Peak 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. The Salmon Glacier under Caesar Cap Peak went extinct in 2015.

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 mi² 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 shad. There are currently no fish hatcheries 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 native fish 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.

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.”

E) Human Communities

Indigenous peoples have lived in the Salmon River watershed for several thousand years. The Salmon River remains culturally significant to the Shasta and Karuk people, many of whom continue to reside on the river. Sixty-seven percent of the watershed is in the Karuk Tribe's Ancestral Territory and the remainder is within the ancestral territory of the Shasta and Konomihu tribes.

We acknowledge that the Salmon River watershed is in the ancestral and unceded homelands of the Karuk, Shasta and Konomihu peoples, who have stewarded this land for generations. Despite a devastating history of attempted extirpation and disempowerment by western settlers, vibrant indigenous communities continue to inhabit and steward the Salmon and Klamath rivers, and will continue to do so long into the future. We live and work within their territories and we strive to be respectful and meaningful partners in their efforts to bring traditional ecological knowledge back to the forefront of the management of this land and this river.

Beginning in 1850, the discovery of gold triggered a substantial Euro-American emigration to the Salmon River. Towns were established at Forks of Salmon, Cecilville, Sawyers Bar, Somes Bar and numerous other more dispersed locations. At one time the mining population of the Salmon River Watershed numbered several thousand. This early period of Euro-American settlement was devastating to indigenous populations, who were displaced from their homelands, sickened by new diseases, and killed by settlers.

By the 1920s, mining had declined substantially and rural life was reduced to a core of established families. Communities saw a small resurgence during the Great Depression when mining activities increased temporarily. Mining continued to influence the local economy into the 1990's when the last commercial gold mines closed. Most mining activity today is pursued at a part-time or hobby level by individuals.

Commercial logging of the federal lands in the watershed didn't begin until after World War II. The vast majority of logging took place between the mid-1970's and the early 1990's, fueling a local economic boom while simultaneously compromising the watershed's ecosystem and creating high fuel loads that have contributed to numerous large wildfires.

In the late 1960's and early 1970's another small population boom occurred as "back to the land hippies" moved to the Salmon River looking for a simpler, communal way of life. Many of those families made permanent homes in the Salmon River communities and continue to live here today.

The Salmon River watershed is currently inhabited by an estimated 250 people with areas of population clustered around Somes Bar, Forks of Salmon, Cecilville, Sawyers Bar, and Big Flat. Watershed restoration and management employs the largest number of residents.

III. SRRC 2024 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. Also attached are the annual program calendars, which lay out timelines for tasks.

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

- Develop grant proposals and secure funding to support the program.
- Develop and implement an annual work plan.
- Develop quarterly and annual program reports.
- Interface with the Watershed Center. Attend staff meetings and be aware of general SRRC requirements, policies, and reporting and administrative details.
- Work collaboratively with other SRRC programs where programs and projects overlap or align.
- Develop and oversee any additional staffing necessary for program activities.
- Keep program outreach products up to date, contribute to annual newsletter, and distribute educational materials at local and regional forums.
- Organize community education activities, workshops, workdays, field trips and trainings appropriate for the program.
- Be familiar with grant agreements and take responsibility for completing grant tasks, including reporting.
- Contribute to the upkeep and operation of SRRC's off-grid Watershed Center (this includes operating power system, starting fires/splitting wood, office cleaning tasks, etc.).

A) Fisheries Program

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 surveys, participate in multi-agency fish health monitoring, work to improve fish access to thermal refugia and quality rearing habitat, and monitor the effectiveness of restoration activities in the watershed. Fisheries surveys are planned and coordinated with state and federal agencies and local tribes. Seasonal juvenile out-migrant trapping in the Salmon River and in the Klamath River at Big Bar provides valuable information to determine species presence, run timing, trends, and fish health. We recently initiated a juvenile spring Chinook distribution and habitat use assessment in partnership with the Karuk Tribe, and look 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

- Provide information to support the Spring Chinook Working Group and spring Chinook recovery
- Conduct a spring Chinook spawning habitat assessment
- Expand coho spawning ground surveys
- Expand steelhead spawning ground surveys
- Incorporate information gathered and data analysis into an annual or bi-annual Salmon River Fisheries synthesis report
- Initiate a cooperative PIT tagging or acoustic telemetry project with the Karuk Tribe that will identify movement patterns of spring Chinook and coho salmon and aid habitat restoration project monitoring
- Contribute to the development and implementation of a comprehensive restoration effectiveness monitoring scheme

Fisheries Program Assistant

Miranda Velarde

Program Tasks – The SRRC Fisheries Program has several grant agreements, including *Screw Trap, Chinook Spawning Ground Surveys, Fish Passage Improvement, Rearing Habitat Enhancement, Lamprey Distribution Assessment, and Spring Chinook Life Cycle Monitoring* (spawning ground surveys, annual dive, and juvenile surveys). All tasks shall be completed based on availability of time and funding.

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 Fall Chinook Spawning Ground Surveys are to: determine in-river run size, monitor spawning distribution, improve accuracy of ocean stock abundance estimates and pre-season projections for harvest allocations.

The goals of the Fish Passage Improvement and Rearing Habitat 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 to prioritized coldwater tributaries and confluences, and directing cold water into off-channel pools.

The goal of the Spring Chinook Life Cycle Monitoring Project is to: achieve an improved understanding of spring Chinook distribution, habitat use, and population trends by life stage, to support well informed management decisions and restoration actions, as well as to engage the local community in conservation activities. Objectives include monitoring spring Chinook population trends at the adult life stage, monitoring adult spawning, and monitoring juvenile distribution.

The goals of the Lamprey Distribution Assessment are to: achieve an improved understanding of lamprey distribution, habitat use, and population trends by inventorying and mapping potential lamprey habitat and conducting electrofishing surveys to determine population and distribution of larval lamprey (ammocoetes).

The Fisheries Program Assistant also works closely with the Habitat Restoration Program Manager to complete fisheries monitoring of instream habitat restoration projects, and 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 field crews
- b) Attend coordination group meetings
- c) Coordinate fisheries data collection and transfer between SRRC, Karuk Tribe, USFWS, CDFW, USFS, MKWC, etc.
- d) Provide materials, equipment, and tools for fisheries projects
- e) Acquire and maintain permits for fisheries work

- f) Coordinate with Habitat Restoration program to manage fisheries restoration effectiveness monitoring
- g) Coordinate fisheries assessments and studies as needed

Task 2) Planning –

- a) Coordinate and attend planning meetings
- b) Develop schedules and protocols
- c) Update CRP and annual work plan
- d) Assist in the development of Salmon River in-stream restoration projects
- e) 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 ground survey trainings for schools, community and cooperators
- b) Train personnel in fish identification and field protocols
- c) Coordinate fisheries-related field trips with local schools, communities, and cooperators
- d) Encourage involvement and support for program activities from fishing community, local residents and landowners, businesses, and resource users
- e) Provide educational information about the Salmon River fishery and SRRC Fisheries Program in SRRC outreach products and events
- f) Develop annual Spring Chinook Dive invitation and training materials with cooperators
- g) Create and post fish health advisories during high risk times

Task 4) Groundwork and Implementation –

- a) Spawning Surveys – Gather data on spring and fall Chinook spawner abundance by species, enumerate salmonid redds and document distribution. Mark all sampled fall Chinook carcasses for potential subsequent recapture according to survey protocol. Collect scale, tissue and otolith samples from carcasses for research project needs
- b) Screw Trap – Operate and maintain Salmon River and Big Bar traps
- c) Fish Passage Improvement – Enhance juvenile and adult fish passage at tributary confluences
- d) Habitat Enhancement – Improve cold water refugia and summer rearing habitat through installation of brush bundles and woody debris, and redirection of coldwater
- e) Cooperative spring Chinook and Summer Steelhead Dive – conduct annual population census
- f) Juvenile Spring Chinook surveys – Conduct snorkel surveys, take habitat measurements, and assist with capturing and tissue sampling juvenile Chinook
- g) Restoration Effectiveness Monitoring – Conduct pre- and post-implementation fisheries monitoring at restoration sites
- h) Lamprey Distribution Assessment – Conduct electrofishing studies

Task 5) Cooperation –

- a) Work with cooperating partner organizations on collaborative projects
- b) Encourage cooperation, support and involvement of local community and resource managers
- c) Facilitate volunteer participation in fisheries activities
- d) Act as local fisheries communications liaison with the Karuk Tribe, CDFW, USFS, USFWS, and other responsible agencies and organizations
- e) Continue to promote partnerships in the Salmon River that focus on fisheries restoration and monitoring
- f) Participate in the Spring Chinook Working Group
- g) Maintain regular communication with the Klamath Fish Health Assessment Team (KFHAT) throughout the high risk period
- h) Participate in the Klamath Basin Monitoring Program (KBMP)
- i) Participate in the Klamath Basin Fisheries Collaborative
- j) Contribute to Klamath Basin Integrated Fisheries Restoration and Monitoring Plan (IFRMP)

Task 6) Monitoring –

- a) Screw Trap – Identify species present, contribute to life history assessments for various fish species, monitor disease presence and abundance
- b) Fish Passage Improvement and Habitat Enhancement – Survey for juvenile and adult salmonids within selected habitats, and conduct pre- and post-implementation effectiveness monitoring
- c) Spawning Ground Surveys – Enumerate and record location of redds, document live fish, and process carcasses for mark-recapture
- d) Spring Chinook Dive – Coordinate annual spring Chinook and summer steelhead population census in mid-summer
- e) Restoration Monitoring – Conduct year-round fisheries surveys at instream restoration sites for effectiveness and validation monitoring
- f) Fish health surveys as needed – Survey for dead and diseased fish as part of KFHAT response plan if alerted
- g) Water Monitoring – Maintain hobo temps at +/- 45 locations during summer months
- h) Water Monitoring – Collect flow measurements at +/- 20 sites once a month during summer months

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) Process data and provide to fisheries and water managers
- c) Fulfill reporting requirements for all state and federal permits.

B) Plants Program

Plants Program Manager:

Jenell Jackson

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 over 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. 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. Importing equipment for various management activities (firefighting, 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 conduct thorough pre- and post-implementation surveys and treatments at all restoration project sites.

Global climate change will promote the invasion and presence of noxious weeds in the Salmon River and surrounding areas. 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. Fires and fire suppression activities are major vectors for the spread of noxious weeds into hard-to-reach locations. Furthermore, high severity wildfires create conditions in which noxious weeds can thrive and outcompete recovering native vegetation.

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 a number of individual private parcels over a three-year timeframe ending in 2024. After this, additional funds will need to be acquired to continue management of weeds on private lands.

In the past SRRC has relied on a robust volunteer workforce to aid in noxious weeds management throughout the watershed. As the community has aged and became more disconnected during the pandemic in 2020, volunteerism has declined immensely. This leaves management of weeds to be completed by SRRC's crew of two to three technicians. Tackling large infestations with this small crew can be a challenge due to time and budget constraints.

Key threats posed by invasive species include the following:

- Invasive species threaten to disrupt functional ecosystem processes and displace native plants and their communities
- 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
- Increase community involvement in noxious weed control to help deal with new populations of oblong spurge, spotted knapweed, Italian thistle, and other high-priority top-rated species
- Increase the use of native plant revegetation as a part of noxious weed management strategies.
- Work with KDNR to involve indigenous people in noxious weeds management or other stewardship on their ancestral lands.
- Seek diverse funding sources to allow for an extension of the weeds treatment season.

Noxious Weeds Project Coordinator

Michael O'Neil

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) Klamath Alliance for Regional Invasive Species Management (Klamath and Six Rivers National Forests, Mid Klamath Watershed Council, Karuk, Hoopa and Yurok Tribes, Quartz Valley Indian Reservation, Scott River Watershed Council, Siskiyou RCD, and others)
- 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, social media 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
- e) Host monthly volunteer workdays during spring and summer months.

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) Train and support field crew members in a safe and inclusive work environment

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
- d) Coordinate with KDNR to increase tribal involvement in noxious weeds management on Karuk ancestral lands.

Task 6) Monitoring –

- a) Maintain an inventory and maps of priority noxious weeds species present and managed in the Salmon River watershed using a unified database in coordination with the KARISM partners
- 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 implemented 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 –

- a) Provide Progress and Final Reports as specified in grant agreements
- b) Develop annual program report

b) Native Plant Materials

The SRRC has pursued native plant materials collection and procurement since 1995 in order to restore habitat while preserving species diversity. The Salmon River watershed falls within the Klamath-Siskiyou Bioregion, an area recognized as a global hotspot for biodiversity. The region's geography, climate, ecology, pyrodiversity, and complex underlying geology combined have resulted in a unique mosaic of ecosystems with a high species richness and rates of endemism. SRRC first engaged in native plant material collection in 1995 through a Cost Share Agreement with the Salmon River District of the Klamath National Forest to develop a seed bank for rehabilitating disturbed areas. The following year SRRC completed a feasibility study for the development of a riparian nursery for restoration purposes. In the years following, noxious weed sites of concern and restoration sites received active revegetation treatments with locally sourced native plants.

Following a brief hiatus the SRRC has resumed in-house collection and procurement of native plant materials. Through the Habitat Restoration Program, the SRRC is actively planning and implementing in-stream restoration at river reach scale. Recent projects have incorporated revegetation plans into their design using cuttings, container plants, and direct seeding to promote the recovery of native plants in areas of disturbance. At this time the SRRC partners with regional nurseries to procure native container plants, while willow and black cottonwood cuttings are sourced from within the watershed. Looking ahead, the SRRC is motivated to provide propagules to nurseries to enhance plant establishment and preserve the emergent genetic diversity from within the watershed.

The SRRC is actively expanding its native plant materials programming in conjunction with the CNWP. Noxious weed sites of high priority have been selected for experimental revegetation efforts. Native species have been selected to match reference habitats that characterize the priority noxious weed sites. Effectiveness monitoring will be an important process in the evaluation of the methodology.

Limiting Factors

Seed collection site information is sparse within the Salmon/Scott District of the Klamath National Forest. The SRRC is currently developing a native seed collection site database, although it is time and resource-intensive. High environmental heterogeneity on the Salmon River leads to reduced native plant population size throughout a species' distribution. Crews must visit numerous sites in order to collect significant seed amounts. The extent of funding opportunities in this realm is still unknown, though funding through Federal and State programs for habitat restoration projects has reliably supported the procurement of native plants from regional nurseries.

If providing stream cover, there are limitations on the collection of plants growing within the riparian corridor on public lands. At this time there are few appropriate collection sources for willow species on public lands (outside of the riparian zone). Live stakes and baffles composed of willow cuttings are key features in floodplain restoration projects. Collections have occurred on private lands adjacent to waterways in order to secure materials locally. Ideally restoration sites that have integrated willow in their design will become a regenerative source for materials available for future restoration.

Program Recommendations

- Develop and refine prioritization criteria to identify noxious weed sites selected to receive revegetation treatments
- Monitor effectiveness and share findings with regional partners
- Strategize and collaborate with local nurseries and interested community members to increase the availability of regionally specific species, genotypes, and plants grown within the conditions present on the Salmon River
- Investigate the limitations and possibilities of operating an in-house nursery or seed farm or engaging interested stakeholders in the concept

Program Manager

Jenell Jackson

Program Tasks

Task 1) Coordinate Projects – in cooperation with the Cooperative Noxious Weed Program and Habitat Restoration Program

Task 2) Planning –

- a) Update CRP and annual work plan
- b) Determine annual native plant needs across programs; develop the funding and capacity to meet these needs ahead of time
- c) Begin planning a meadow restoration project

Task 3) Outreach and Education –

- a) Educate stakeholders and community members in the identification, ecological value, and collection, and planting of native plants
- b) Disseminate information through newsletters, brochures, e-newsletters, and SRRC website

Task 4) Groundwork and Implementation –

- a) Continue to develop and update a geospatial database of plant material collection sites
- b) Assess target habitats for species composition, directly informing the native plants materials identified for collection or sourcing from regional nurseries

- c) Promote the recovery of native plant communities at prioritized noxious weed sites and at sites of habitat restoration on public and private lands throughout the Salmon River
- d) Participate in the Klamath Meadows Partnership

Task 5) Cooperation –

- a) Integrate native plant materials discussions into existing working relationships with regional partners including 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) Continue and improve coordination with other organizations within the region focusing on native plant materials and revegetation strategies

Task 6) Monitoring –

- a) Maintain an inventory list of noxious weed sites and habitat restoration sites treated using revegetation methods
- b) Track and record plant materials collection data in the Annual Native Plant Collection Database
- c) Survey throughout the Salmon River for potential collection sites, map and revisit when funding and timing allows
- d) Evaluate effectiveness

Task 7) Funding –

- c) Develop and secure diverse program funding
- d) 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) Meadows Restoration

The SRRC is excited to be a part of a regionwide, newly formed partnership, called the Klamath Meadows Partnership (KMP), which is aimed at addressing and tackling meadow restoration needs in the Klamath Region, and was awarded a grant from the Wildlife Conservation Board (WCB) to beginning cataloging, assessing, and planning meadow restoration projects in our area.

Meadows in the Klamath make up a smaller portion of the landscape, yet play an imperative role in water retention, wildlife habitat, cultural importance, cold water storage, fire resilience, carbon storage, and refugia for rare and endemic plant species. In the Klamath Region, these systems are crucial for cold water discharge throughout the summer and early fall, which serves as a refugia for at-risk salmonids. The loss of meadows in our regions has been attributed to livestock grazing, high-intensity wildfire, trail building and climate change. Livestock reduce vegetation, are a vector for invasive species, and disturb the highly sensitive hydrology of montane wetlands, leading to increases in channelization and increased evapotranspiration from

exposed subsoils. Trail building has similar “de-watering” effect to the flow of ground water. High intensity wildfire dries meadows, and similar to climate change, leaves them vulnerable to being invaded by woody vegetation and non-native weeds, further “de-watering” the meadow.

The SRRC, Mid-Klamath Watershed Council, Karuk Tribe, and USFS began discussing potential meadows restoration efforts in 2019 and have continued to collaborate and expand on an internal strategy for addressing meadow restoration needs with our smaller localized group, with the goal of starting to plan a pilot restoration project in the summer of 2024. We will also be supporting the overall goals of the partnership, to catalog our current or “lost meadows” by participation in a group effort to predict the current/”lost meadows” at the landscape level, ground truth those predictions, and identify and prioritize meadows restoration efforts.

This will include working closely with our partners to address sensitive plants and habitats, identify priority areas for invasive weeds management, and collaborating on best practices and the development of regional protocols to standardize how we characterize and think about priority areas within our region.

Limiting Factors

The SRRC was awarded a sub-award to work within the KMP to help develop a Meadows Restoration Strategy for our area within the greater Klamath sub region. These funds have a limited timeline and SRRC will need to continue to work with our partners to continue funding meadows restoration implementation projects beyond our grant window.

The majority of our meadows occur in the high alpine environment, largely concentrated in the Marble Mountain Wilderness. Working in wilderness can limit the type of potential implementation projects, as no electric or power tools are allowed in these areas. Restoration efforts in these areas are require working in the backcountry, making well informed decision regarding materials placement and removal, trail rerouting, and overall backcountry navigation and wildness survival skills. SRRC staff will participate in education and training to increase our meadows restoration knowledge and skills.

Program Recommendations

- Develop and refine prioritization criteria for identifying, classifying, and prioritizing meadow restoration projects
- Coordinate on-the-ground efforts with collaborators in our area to begin planning for a pilot meadows restoration projects
- Strategize and collaborate with Klamath Meadow Partners to perform an inventory and assessment of current and potentially “lost” meadows in our region
- Investigate opportunities to increase internal education and skills regarding meadows restoration implementation techniques

Program Manager

Jenell Jackson

Program Tasks

Task 1) Coordinate Projects – in cooperation with the Klamath Meadows Partnership collaborators and within a smaller working group consisting of Karuk DNR (KDNR, the Mid-Klamath Watershed Council (WKWC, and the USFS.

Task 2) Planning –

- a) Develop pilot project in coordination with KDNR and MKWC
- b) Begin planning a meadow restoration project

Task 3) Outreach and Education –

- a) Participate in training events across the sub-region to achieve a cohesive standard of practice
- b) Disseminate information through newsletters, brochures, e-newsletters, and SRRC website

Task 4) “Lost Meadows” Inventory –

- a) Work with KMP to develop protocols for ground trothing “lost meadow” model predictions
- b) Assess target areas with respect to formed protocol
- c) Collaborate with KDNR and MKWC regarding strategizing and planning the assessment of current and “lost meadows” in our area

Task 5) Cooperation –

- a) Integrate meadows restoration discussions into existing working relationships with regional partners including 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) Continue and improve coordination with other organizations within the region focusing on restoration techniques and increased education.

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**

High intensity wildfire is the greatest single threat to fisheries, ecosystem health, and biodiversity in the Salmon River watershed. Over 100 years of fire suppression and the resulting lack of frequent, low and mixed severity fire within this fire adapted landscape is the main cause for this threat.

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, participation in regional prescribed fire efforts such as Klamath TREX and associated All Hands All Lands program, coordination of the Salmon River Community Liaison Program during wildfire events, planning of landscape level fire resilience projects via the Western Klamath Restoration Partnership, and coordination with USFS on Salmon River forestry projects.

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 seventy-five percent of the Salmon River watershed has burned since 2000. High-severity fires have denuded riparian and upslope areas, contributing to erosion, poor revegetation, 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 and tree stem density 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). Climate change in recent years has exacerbated the situation with increasing weather extremes, intense droughts, heatwaves, reduced snow pack and increasing spring rains.

Program Recommendations

- 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.
- 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).
- Develop agreement with TREX program to do pile burning for SRRC fuels reduction projects.
- Facilitate WKRP landscape planning process with Salmon/Scott River Ranger District and involve SRFSC and community in this process.

Program Co-Managers

Alex Varner
Briona Fries

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; assess fire hazards for individual properties where possible
- c) Use plans to prioritize actions to be taken by crews, volunteers, and landowners
- d) Plan fuels and prescribed fire projects on the Salmon River with landowners and partners
- e) Complete 201 update to Salmon River CWPP
- f) Work with Habitat Restoration Program to help plan for acquiring LWD and slash for instream projects (coordinate with USFS and SRRC fuels projects where appropriate)
- g) Participate in Western Klamath Restoration Partnership
 - a. Participate in WKRP project planning and appropriate working groups

Task 3) Outreach and Education –

- a) Provide community with information regarding fire-safe practices
- b) Provide periodic trainings to help the community be safe, efficient, and cost-effective in fire-safing their own properties.
- c) Build community support for activities and projects that will aid in allowing natural wildfire and prescribed fire to be returned to the landscape
- d) Create and distribute educational materials and articles highlighting program
- e) Create and distribute community questionnaire to gather information about landowner fuels reduction needs
- f) Promote neighborhood coordination and preparedness through the Community Liaison Program and CWPP process
- g) Hold a Salmon River Firewise Event

Task 4) Groundwork and Implementation –

- a) Oversee implementation of fuels reduction projects: hazard tree removal, cut and hand pile fuels, and burn piles when safe, permitted, and efficient
- b) Prepare prescribed burn units
- c) Participate in and help to plan Klamath River TREX to implement prescribed fire on private properties on the Salmon River if appropriate and with partners in neighboring watersheds
- d) Participate in and help to plan 2024 All Hands All Lands efforts to implement prescribed fire on private and public lands on the Salmon River if appropriate and with partners within the region
- e) Initiate program work to conduct future prescribed burning on the Salmon River during appropriate burn windows, especially in winter/spring burn window where appropriate
- f) Host community chipping days using SRVFR chipper
- g) Work with SRRC Plants Program to integrate post-treatment native plantings after fuels reduction and/or prescribed burn activities
- h) Work with Habitat Restoration Program to integrate forest restoration as a part of instream projects and assist with acquisition of large wood and slash for projects

Task 5) Cooperation –

- a) Coordinate Salmon River Fire Safe Council
- b) Coordinate with Salmon River Volunteer Fire and Rescue
- c) Prepare in advance and activate and coordinate the Community Liaison Program during wildfire events
- d) Promote and facilitate stakeholder cooperation in assessing and reviewing USFS fuels and forestry projects
- e) Provide input and public comments on USFS Forest Management Projects as appropriate.

Task 6) Monitoring –

- a) Establish fuels reduction photo points and take pre- and post-project photos

- b) Develop multiyear monitoring photo points
- c) Develop basic vegetation and fuels data measurement protocols for multiyear monitoring
- d) GPS fuels and prescribed burn locations
- e) Hold Multi Party Monitoring meetings

Task 7) Funding –

- a) Seek program funding
- b) Investigate funding opportunities that allow work on federal lands.
- c) Look for equipment and fire preparedness funding sources, such as Cal FIRE Fire Prevention funding.

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, riparian, and aquatic habitat by rehabilitating and enhancing roads, tributaries, 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

- 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 Manager

TBD

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, Knownothing Creek Barrier, Matthews Creek, Red Bank, Windler Bar Salmon River Tributaries, 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 Matthews, Salmon River Tributaries and Windler Habitat Enhancement projects and other future restoration activities
- c) Complete the design of the Windler Bar Habitat Enhancement project
- d) Coordinate the design of the Knownothing Barrier Removal, Matthews Floodplain, and Salmon River Tributaries Enhancement projects
- e) Coordinate programmatic environmental compliance plans for long-term planning of instream restoration projects
- f) 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) Implement Phase 2 of the Red Bank Habitat Enhancement project.
- b) Implement groundwater monitoring well placement for the Salmon River Tributaries project.

Task 5) Cooperation –

- a) Cooperate with USFS, NCRWQCB, CDFW, USFWS, NOAA, Karuk Tribe, Stillwater Sciences, Pacific Watershed Associates, Michael Love & Associates, McBain Associates, Merkel and Associates, 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) Education and Outreach 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 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 Factors

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

Jessica Hanscom

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) Provide watershed education lessons and field trips to local elementary school students
- b) Coordinate the annual Watershed Fair
- c) Coordinate quarterly Community Education Workshops
 - a. i.e. mushroom workshop, wildflower id walk, geology weekend, reptile talk...
- d) Provide outreach tools such as newsletters, website, brochures, reports, posters, and other information
- e) Publish one printed newsletter and 12 e-newsletters per year
- f) Post informational posters on bulletin boards throughout the watershed
- g) Develop an SRRC annual schedule of activities
- h) Update the online Klamath Basin Restoration Related Activities Calendar
- i) Update SRRC website

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, 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 and perform monitoring activities needed in the Salmon River that are not included in other SRRC programs (such as mining, grazing, etc.)

Program Tasks

Task 1) Coordinate Program –

- a) 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) Update SRRC’s Strategic Plan based on 2022 strategic planning process
- c) Participate in key planning efforts that affect the Salmon River, emphasizing anadromous fish species and runs and the SRRC

Task 3) Outreach and Education –

- a) Provide educational opportunities and outreach products to the community through the Education and Outreach program.

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

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 twelve 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 Fisheries Program Events Calendar and Work Summary 2024 | | | | | | | | | | | | | |
|---|-----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Task: | Cooperators | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| Spring Chinook & Summer Steelhead Cooperative Dive | | | | | | | | | | | | | |
| Planning and coordination | SRRC USFS KTDNR | | | X | X | X | X | X | | | | | |
| Implementation/monitoring | SRRC USFS KTDNR | | | | | | | X | | | | | |
| Data processing and reporting | SRRC USFS KTDNR | | | | | | | X | X | | | | |
| Spring Chinook Spawning Ground Surveys | | | | | | | | | | | | | |
| Planning and coordination | SRRC KTDNR | | | | | | | X | X | X | | | |
| Implementation/monitoring | SRRC USFS KTDNR | | | | | | | | | X | X | | |
| Data processing and reporting | SRRC USFS KTDNR | | | | | | | | | | | X | X |
| Fall Chinook Spawning Ground Surveys | | | | | | | | | | | | | |
| Planning and coordination | CDFW USFS SRRC | | | | | | | | X | X | X | X | X |
| Implementation/monitoring | SRRC CDFW USFS MKWC KTDNR NCRC | | | | | | | | | | X | X | X |
| Data processing and reporting | CDFW USFS | X | | | | | | | | | | | |
| Fish Passage and Rearing Habitat Improvement | | | | | | | | | | | | | |
| Planning and coordination | SRRC MKWC | | | X | X | X | X | X | X | X | X | X | X |
| Implementation/monitoring | SRRC MKWC | | | | | X | X | X | X | X | | | |
| Outreach and education | SRRC MKWC | | | | | X | X | X | X | X | | | |
| Data processing and reporting | SRRC MKWC | X | X | | | | | | | | X | X | X |
| Restoration Effectiveness Monitoring | | | | | | | | | | | | | |
| Planning and coordination | SRRC | X | X | X | X | X | X | X | X | X | X | X | X |
| Implementation/monitoring | SRRC | X | X | X | X | X | X | X | X | X | X | X | X |
| Data processing and reporting | SRRC | X | X | X | X | X | X | X | X | X | X | X | X |
| Outmigrant Monitoring (rotary screw trap) | | | | | | | | | | | | | |
| Planning and coordination | SRRC KTDNR | X | X | X | X | X | X | X | X | X | X | | |
| Implementation/monitoring | SRRC KTDNR | | X | X | X | X | X | X | X | X | X | | |
| Data processing and reporting | SRRC KTDNR | | | | | | | | | | | | |
| Juvenile Spring Chinook Assessment | | | | | | | | | | | | | |
| Planning and coordination | SRRC KTDNR UC WSC | X | X | X | X | X | X | X | X | X | X | X | X |
| Implementation/monitoring | SRRC KTDNR | X | X | X | X | X | X | X | X | X | X | X | X |
| Data processing and reporting | SRRC KTDNR UC WSC | X | X | X | X | X | X | X | X | X | X | X | X |
| Water Monitoring | | | | | | | | | | | | | |
| Planning and coordination | SRRC USFS KTDNR | | | | X | X | X | X | X | X | X | X | X |
| Temperature Monitoring | SRRC USFS | | | | | X | X | X | X | X | X | | |
| Flow Monitoring | SRRC KTDNR | | | | | | X | X | X | X | | | |
| Lamprey Distribution Assessment | | | | | | | | | | | | | |
| Planning and coordination | SRRC USFS KTDNR | X | X | X | X | X | X | X | X | X | X | | |
| Implementation | SRRC USFS KTDNR | | | | | | X | X | X | X | X | | |
| Data Processing and Reporting | SRRC USFS KTDNR | | | | | | | | | | X | X | X |

SRRC Plants/Invasive Species Program Events Calendar and Work Summary 2024

| Task: | Cooperators | Jan | Feb | March | April | May | June | July | Aug | Sept | Oct | Nov | Dec |
|---|-----------------------------|-----|-----|-------|-------|-----|------|------|-----|------|-----|-----|-----|
| Cooperative Noxious Weeds Program | | | | | | | | | | | | | |
| Coordination | SRRC | X | X | X | X | X | X | X | X | X | X | X | X |
| Planning | USFS, MKWC, KDNR, KARISM | X | X | X | X | X | X | X | X | | | | |
| Outreach and Education | MKWC, KDNR, SRWC, Community | | | X | X | X | X | X | X | X | | | |
| Groundwork & Implementation | USFS, KDNR, MKWC | | X | X | X | X | X | X | X | X | X | X | |
| Monitoring & evaluation for implementation, effectiveness and adaptive management | USFS | | | X | X | X | X | X | X | X | | | |
| Native Plant Materials | | | | | | | | | | | | | |
| Collect Native Seeds/Cuttings | USFS, MKWC | | X | X | X | X | X | X | X | X | | | |
| Seed Cleaning | SRRC | | | | X | X | X | X | X | X | X | | |
| Planting Out/ Restoration | SRRC | X | X | X | | | | | | | X | X | X |
| Outreach and Education | Community | | X | X | X | X | X | X | X | X | X | X | |
| Meadows Restoration Program | | | | | | | | | | | | | |
| Coordination | KMP Partners, KDNR, MKWC | X | X | X | X | X | X | X | X | X | X | X | X |
| "Lost Meadows" Inventory | KMP Partners, KDNR, MKWC | | | | X | X | X | X | X | | | | |
| Planning | KMP Partners, KDNR, MKWC | | | | | | | | | X | X | X | X |
| Outreach and Education | KMP Partners, KDNR, MKWC | | X | X | | | | | | X | X | X | X |

SRRC Fire, Fuels, Forestry Program Events Calendar and Work Summary 2024

| Task: | Cooperators | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Program Coordination | KTDNR, MKWC, USFS, CALFIRE, USFWS, NRCS | X | X | X | X | X | X | X | X | X | X | X | X |
| Outreach and Education | | | | | | | | | | | | | |
| Fire Awareness Week | USFS, CALFIRE, USFWS, Community | | | | | X | | | | | | | |
| Community Trainings/Firewise Events | MKWC, SRFSC, OSFSC, Community, COCO | | | | X | X | X | | | | | | |
| Community Questionnaire | Community, COCO | | X | X | | | | | | | | | |
| Fuels Reduction and Prescribed Fire | | | | | | | | | | | | | |
| Fuels Reduction and Rx Fire Layout, Planning, & Contracting | USFS, CALFIRE, USFWS, MKWC | | X | X | X | | | | | X | X | | |
| Fuels Reduction Implementation | USFS, USFWS, CALFIRE, MKWC | | X | X | X | X | | | | | X | X | X |
| Klamath River Prescribed Fire TREN, AHAL | TNC, USFS, CALFIRE, MKWC, Karuk Tribe | | X | X | X | X | | | | | X | X | X |
| Hazard Tree Removal | COCO, SRVFR, Community | | | | X | X | X | | | X | X | X | |
| Community Chipping Days | COCO, SRVFR, Community | | | | | X | X | | | | | | |
| Fire Safe Council | | | | | | | | | | | | | |
| 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 | X | | |
| Forestry Collaboration and Fire Planning | | | | | | | | | | | | | |
| Western Klamath Restoration Partnership | MKWC, SRRR, KTND, 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 | | | | | X | | | |

SRRC Education and Outreach Program Events Calendar and Work Summary 2024

| 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 | | | | | | | |
| Klamath Salmon Outdoor Camp | SRRC, FFF, FSES, JES | | | | | | | X | | | | | |
| Water Quality Units - Hobo Temp | SRRC, FSES, JES | | | | | X | | | | X | | | |
| Native Plants, Noxious Weeds Units | SRRC, FSES, JES | | | | X | X | | | | 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 | |