

Salmon River Restoration Council
COMMUNITY RESTORATION PLAN
(August, 2000 Version)

I. OVERVIEW

The Salmon River may be one of the highest potential areas to restore due to its comparatively intact biological functions, strong stakeholder commitment, and large federal ownership that offer a high potential for consistent management across the watershed. The 751 square mile Salmon River watershed is currently inhabited by an estimated 300 people with 98.7% of the land being in federal ownership, 1.3% in private and 67% is in the Karuk Tribes Ancestral Territory. The area in the vicinity of the Salmon and Klamath River confluence is regarded by the Karuk Tribe as the "Center of the World" known as Katamin.

In response to recent changes in resource management on federal lands and from community residents being forced to move from their homes on federal mining claims, the local population has dropped off severely during the last decade. Even though there has been severe hardship to this "at risk" isolated forest community, the people have demonstrated their commitment to this spectacular area by aggressively participating in organized watershed restoration and resource protection activities. The health of these aquatic and terrestrial ecosystems are the single most important factor in determining the ecological and economic well being of our rural riverine community.

Through the Salmon River Restoration Council's (Council) Community Restoration Program created in 1993, a series of Ecosystem Awareness Workshops, Field Trips and Volunteer Training Workdays has been planned and held annually to increase stakeholder cooperation and support. Using education as the vanguard, the SRRC has sponsored over 250 of these events and has enlisted over 5,500 volunteer person days from staff, community members and friends to learn and understand natural processes and provide assistance in restoring the subbasin, highlighting the native anadromous fisheries. The Council has brought in countless resource specialists who have shared key resource information to increase the capacity of the local residents to actively participate in stewarding the private and public lands. The Klamath River Fisheries Task Force recognizes that in the Salmon River subbasin, the Council has taken the lead roll in heightening local community awareness and enlisting support to rehabilitate the anadromous fisheries and related resources

Increased awareness and participation has taken place through the Council's Watershed Education Program in the three elementary schools and through the Council's annual series of Ecosystem Awareness Workshops/Fieldtrips and Volunteer Training Restoration Workdays. Some of the key areas where the Council has directed its attention include: subbasin restoration planning; fire and fuels management; fisheries assessment, protection, and enhancement; roads assessment and management; vegetation

management - native plant propagation, noxious weed management, and forest vegetation assessment; watershed and restoration monitoring; and more recently recycling and toxics management. Activities related to many of these focus areas incorporates: cooperation; education; planning; assessment; protection and restoration; monitoring; and fundraising. Promoting economic stability based on restoration is of key concern to the Council.

In response to the recent devastating wildfires which have burned an estimated 30% of the Salmon River subbasin and several homes since the early '70s, the SRRC has reduced excessive fuels at numerous private residences, prioritizing those owned by the elderly or disabled, and initiated shaded fuel breaks around the towns and key neighborhoods. This has been accomplished through both volunteer efforts and paid projects mostly funded by the U.S. Fish and Wildlife administered Jobs-in-the Woods Program. Roads assessment and the development of neighborhood stewardship road care is an on-going activity for participants whose goal is to maintain safe roads for people and the environment. The Council has been manually managing various noxious weeds in an organized effort since 1994 and is currently developing a non-chemical model for eliminating an outbreak of Spotted Knapweed in isolated areas on over 30 miles of the river corridor. The Council is providing technical assistance to community members in the development of an Ecosystem (Land) and Resource Management Plan for their properties and surrounding area. Fire has been identified as the greatest threat to the landowners. A Fuels Management Plan is being developed that protects structures and safe critical access routes as well as the natural environment. The Council has utilized the Klamath Resource Information System (KRIS) as a central repository of information that displays several restoration and monitoring activities within the Salmon River watershed. This education and monitoring tool is available on CD, and can be found on the SRRC computers.

The SRRC believes that strong community partnerships based on compatible socio-economic processes are essential to the recovery of the natural environment. Due to the Salmon River subbasin's remoteness and access problems, managing agencies must have the cooperation and support of the communities to recover the fisheries resources associated with the Salmon River. This cooperative effort is even more important due to the Forest Service's reduction in specialist coverage due to personnel cut backs and current management direction. Local citizen efforts, like the Council's, are one of the best vehicles to achieve watershed/fisheries recovery with minimal dislocation of existing economic and social structures.

The Council's Board of Directors represents a broad spectrum of economic and social interests, including a designated representative from the Karuk Tribe. The Council maintains the Salmon River Watershed Center in Sawyers Bar. Currently there are 9 staff members (part pay and part volunteer) that work at the center. Other employees work on specific projects as developed by the Council. The Council serves as a conduit for work for several community members and businesses through cooperative agreements and contracts from numerous funding sources.

We are involved in several cooperative planning activities, most notably a "Salmon River Restoration Strategy: An Approach to Aquatic Ecosystem Recovery". The Council is

working with the Forest Service and others in taking a scientific and cultural approach to prioritizing areas to treat and types of prescriptions for restoration and protection. This plan will be referenced by managers in the West as a model for planning restoration in other watersheds. Our group is known throughout the region for its ability to create both a cooperative and innovative community based restoration program. Since 1994 the SRRC has developed and updated annually a Community Restoration Plan to define our goals and objectives and to provide general direction to staff and project leaders.

II. MISSION STATEMENT

Our mission is to assess, protect, restore and maintain the Salmon River aquatic, terrestrial, and human ecosystem, highlighting the recovery of the anadromous fisheries resources through the active participation of the local community and other stakeholders. We will diversify the local economic base, focusing on restoration and will improve communication and cooperation between the stakeholders, including the local community, the managing agencies, Native American tribes, resource users, public interest organizations and the general public.

III. GOALS

1) LONG TERM

- A) 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.
- B) Promote economic stability in the community by diversifying job opportunities based on restoration, conservation, and management of the Salmon River aquatic and terrestrial ecosystems, emphasizing the anadromous fisheries resource.
- C) Promote cooperative planning, education, assessment, restoration monitoring, and management efforts between the agencies, the local tribes, resource users, the community and others for the protection and restoration of the Salmon River ecosystem.
- D) 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. This could include activities, such as: stewardship; feasibility studies; adaptive management projects; research; inventory and survey; and monitoring.

2) SHORT TERM

- A) Increase "stakeholder" support for ecosystem management through planned educational and cooperative activities. Accomplish this via the "Community Restoration Program's" (CRP) planned volunteer Ecosystem Awareness Workshops and Restoration Training Workdays and other instructive events hosted locally, regionally and nationally.

Utilize the CRP format to identify old and new resource areas of interest, conflict and/or of concern. Bring together varying interests and viewpoints to explore common understandings and solutions. Develop "stakeholder" collaborative efforts in areas of work where common ground exists.

B) Identify and prioritize key resource problems and restoration opportunities on public and private lands. Use existing information and planning tools, such as the Forest Service's Ecosystem (Watershed) Assessments and the Salmon River Subbasin Restoration Strategy, and this Plan to identify appropriate projects to accomplish on federal and private lands. Provide technical and administrative assistance and volunteer labor to community members, schools, agencies, tribes, etc. for development, funding, and implementation of prioritized restoration projects. Develop additional planning and assessment tools as necessary. Update the planning tools when needed.

C) Identify and fill in key data gaps and upgrade existing data bases associated with ecosystem assessment on prioritized private and public lands in the subbasin. Utilize Geographic Information System (GIS) and Global Positioning (GPS) equipment to accomplish this goal. Provide this information to all interested parties, emphasizing needed GIS products identified by the SRRC, local schools, volunteer fire and rescue departments, and tribes as well as involved organizations, agencies, tribes, etc. Incorporate this data in the Klamath Resource Information System (KRIS).

D) Reduce the potential for the recurrence of large, high severity wildfires so as to minimize further significant impacts to the watershed, affecting the fisheries resources. Develop a Coordinated Fire Management Strategy involving all stakeholders that emphasizes the identification and protection of the highest values at risk. Prioritize fuels management activities. Promote the development of local fire fighting forces to address federal and private strategic fuels reduction and wildfire management needs. Promote the protection of people and their residences/ businesses and their associated critical access routes as the highest priority in the fuels reduction and fire management. Identify and protect prioritized natural resource values at the subbasin level.

E) Control Spotted Knapweed and other prioritized noxious weeds in the Salmon River subbasin through a cooperative Noxious Weed Program. Coordinate local, regional, and national support for this Program through education and outreach. Develop various approaches to noxious weed management that includes: prevention measures, education, stakeholder support, inventory, planning, monitoring, and fundraising. Use non-chemical groundwork methods for controlling these invasive weeds. Develop an annual Coordinated Noxious Weed Management Plan that addresses short and long-term needs. Create a model for communities in similar ecosystems for controlling noxious weeds at a watershed level without chemical pesticides/herbicides. Develop sufficient funding to maintain the Program.

F) The SRRC should develop, maintain, and administer a Fisheries Working Group, that includes the local fishing interests, agencies, tribes, organizations, the community and general public to address prioritized needs and problems associated with the runs of

chinook and coho salmon, steelhead, and resident trout in the Salmon River and Klamath River. Create an annual Work Plan to identify and prioritize actions. Include this group in planning and develop associated products. The SRRC should explore and initiate the review and amend, as needed, the "Salmon River Spring Chinook Recovery Plan" (1991) The SRRC should develop support and funding for coordinating these effort.

G) The SRRC should insure that fisheries surveys are completed annually. Juvenile surveys are needed in addition to adult population and spawning surveys. Absence and presence surveys need to be expanded into unknown areas. Species to monitor for include: Native-Winter and Summer Steelhead; Spring & Fall chinook Salmon; Coho Salmon; Introduced-German brown trout, eastern brook trout, shad and others. Identify, monitor, and reduce impacts to the Salmon River anadromous fisheries that occur outside the subbasin. Develop support and seek adequate funding.

H) Increase education activities for the Salmon River ecosystem by maintaining and expanding our Watershed Education Program. In addition to the 3 School's Curriculum and related activities, develop education opportunities that increase the integration of universities, colleges, and other higher learning facilities. Explore the creation of a field station or educational center that provides opportunities for community members and the education community to increase their knowledge and increase scientific information on the natural and human processes in the Salmon River.

I) Develop feasibility studies and pilot projects to address resource problems created by land use, such as in: forestry, roads, grazing, mining, etc.. Develop new and adaptive methods for maintaining traditional uses by utilizing non-traditional products and methods to help pay for the work. Also develop projects that utilize the resource users and resource neighbors to achieve a desired condition.

J) Develop and implement a short and long term monitoring strategy.

IV. ORGANIZATIONAL BACKGROUND

In Fiscal Year 1992 the Salmon River Concerned Citizens, utilizing the fiscal structure of the Klamath Forest Alliance, were funded by the Klamath River Fisheries Task Force through the United States Fish and Wildlife Service to enlist community members to host a series of cooperative workshops for the communities in the Salmon River subbasin. These well-attended workshops were aimed at increasing local awareness to help protect and restore the dwindling populations of spring chinook salmon and summer steelhead in the Salmon River. The community response was overwhelmingly positive and illegal harvest of these species was noticeably reduced.

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

1) Increasing local awareness and ability to contribute to restoration.

2) Stimulating the development of a local Salmon River watershed restoration group (Salmon River Restoration Council).

3) Developing cooperative restoration plans.

4) Implementing short-term and long-term protection and restoration measures/projects.

Increased local involvement and broadened volunteer efforts led to the formation of the Salmon River Restoration Council. Since 1995 the SRRC has been an autonomous non-profit organization with 501 (c)(3) status. The Council has entered into various agreements and collaborative partnerships with the managing and regulating agencies, tribes, local organizations, and others. There are currently several sources that fund the SRRC's work. There are various collaborative mechanisms in which the SRRC participates with other stakeholders.

Since 1996 the Salmon River Watershed Center has been maintained in Sawyers Bar at the old Forest Service office through a special-use rental agreement. This facility serves as a community center for restoration as well as providing the Council with an office. A need for more space for the Council's activities has been identified. A web page has been on line since 1997. The Council has utilized other educational tools, including: newsletters, brochures, posters, displays, handouts and other updates for outreach and educational purposes.

The Council has acted as the catalyst for resolving resource conflict and promoting stakeholder cooperation. Through a pro-active educational approach, many of the resource user groups are participating in reducing negative impacts from resource use activities, such as: mining, logging, fishing, recreation, etc.. The SRRC has helped form and maintain stakeholder working groups, such as the Salmon Learning and Understanding Group (SLUG), which was formed in 1997. The SLUG includes participation from the US Forest Service, Karuk Tribe, Klamath Forest Alliance, Siskiyou County Roads Department, and others to focus on restoring the Salmon River. The Council initiated and helps maintain the Mid-Klamath/Salmon Fishermen and Guides Association to work on the development of better fishing practices and management. In 1997 the SRRC and the USFS entered into a Memorandum of Understanding (MOU) that promotes healthier ecosystems and mutually benefits both entities. Through this MOU there are several examples of how collaboration has helped streamline some administrative and political processes to accomplish needed projects. Since 1998, the Council is also engaged in a MOU with over 20 agencies in Siskiyou County to control noxious weeds of which the SRRC is very active member. The Council has helped to form a Salmon River Fish Working Group in 1999 to address the needs of fisheries. The Council is currently promoting the formalization of a Fire Management Planning Group for the Salmon River to address a strategy to reduce strategic fuels to reduce the severity of wildfires. The Council works on projects with the California Departments of Fish and Game and the California Department of Forestry and Fire Protection. The Lower South Fork Watershed Analysis (USFS) identifies the SRRC as playing an important role to

help bring landowners into cooperation and support for restoration in the subbasin. There is a more complete list of Accomplishments.

V. SOCIAL CONDITIONS

There are an estimated 300 people currently living within the Salmon River watershed. The Salmon River Restoration Council is made up of members of the Salmon River community who come from a variety of economic backgrounds, such as: logging, fishing, agriculture, mining, the public school system, county road crews, the US Forest Service, small cottage industries and others. There are a number of Karuk Indians inhabiting the subbasin, several of whom participate in SRRC's activities. Many residents of the Salmon River community rely directly on the natural resources for commercial, recreational, and subsistence uses. Loss of residences, mostly due to Forest Service policy changes, and lack of employment have led to a severe decline in students to attend the local schools. Some of these schools are facing closure. More recently it has become significantly difficult to retain young families.

VI. ECONOMIC CONDITIONS

Historically, the economy of the Salmon River has been derived predominantly from resource extraction activities. Mining, logging, fishing and the US Forest Service have been the main income sources along with support industries such as local stores, the public school system and county road crews. Most of the resource extraction income opportunities have sharply decreased due to increased regulation for environmental protection.

After the recent catastrophic fires and subsequent logging operations ended, jobs on the river have been minimal. The Forest Service moved out of the basin in the early 80's. These employment gaps have seriously impacted support industries as well. The local stores have either closed or are on the verge of closing, and the public schools are threatened with closure. Although recreation, particularly boating, seems to be on the rise it offers limited opportunity. Since adoption of the Northwest Forest Plan the focus of federal land management has begun to shift from resource extraction to protection and restoration diversifying job opportunities.

More technical jobs, such as: internet and e-mail associated opportunities, research, and education are new sources of income. Increased computer skills in clerical, surveying, editing, bookkeeping, etc. have surfaced in restoration as being a new source of employment for community members. Fuels Management, Road Assessments, Fisheries surveys, Noxious Weed Control, Native Plant collection and propagation, Watershed Education and other forms of work have provided restoration jobs locally. Developing a market for alternative products to help off-set the cost of management needs (ie.- plantations) has been identified as a new potential source of income. One challenge for ecosystem management in the Salmon River is that there are a limited number of people to perform the work outlined by the Council.

The SRRC has increased the community's ability to handle restoration stewardship.

There are both larger projects that use a more concentrated work force and cash layout and smaller projects that are promoted to enlist community members in an every day stewardship approach that provide various benefits. The economic benefits of larger projects are that they offer part time employment to community members and protect the value of the resources. Some of the smaller everyday stewardship projects, such as the road stewards, make roads safer for the environment and for human use. This saves money for community members by creating less accidents, flat tires and vehicle damage let alone helps to prevent road failure.

The SRRC is conducting a Community Action Planning process in the Salmon River. One goal of this activity is to identify economic opportunities that will increase community stability.

VII. ENVIRONMENTAL CONDITIONS

The Salmon River is recognized as one of the most biologically intact ecosystems in the world. It is the largest cold water producing subbasin in the Klamath River Basin. Over three quarters of a million acres of designated federal wilderness surrounds the river corridor. Headwaters of this riverine jewel flow predominantly from the Marble Mountain, the Trinity Alps and the Russian Wilderness areas. Most of the river corridor is designated as Wild and Scenic due to its high fisheries values. In particular, this subbasin is noted for having one of the largest population of spring chinook salmon in California. There are both summer and winter runs of native Klamath Province Steelhead. A smaller run of coho salmon is also present. Resident trout are located throughout the subbasin. Wooley Creek, the major watershed in the Marble Mountains, offers a significant cool water contribution to the main stem Salmon River, and is identified by experts as being one of the major refugia for spring Chinook Salmon on the West Coast. The Salmon River has long been known for its exceptionally high quality waters as well as boasting one of the richest regions of species diversity in the temperate zones. For example, the Russian Wilderness area is the home to 17 different species of conifers in the Horse Range Lakes, known to be the highest number of different conifer species in the world. One of the largest incense cedars on the planet is located in the Little North Fork tributary of the Marble Mountain Wilderness. In general, the Salmon River is characterized by coniferous tree associations that change with elevations. The major forest types have various understory elements that characterize them specifically, depending on soil type and exposure.

The Salmon River region is a geologically complex area that includes three distinctive rock belts, primarily of meta-sedimentary rock, with many granitic intrusions. At elevations below 4000 feet, the granitic rock is deeply weathered and the terrain highly dissected. These steep slopes are prone to shallow rapid landslides. Landsliding is the dominant land forming process in the subbasin and large earthflow deposits occur in the area. Humboldt State University graduate student Kelly Duncan has identified the lower

section of the Little North Fork as being one of the most heavily scoured drainages in the Salmon River subbasin.

The Salmon River watershed is one of the highest fire risk areas on the Klamath National Forest. It has a high natural frequency of lightning occurrence. In recent years the Offield Fire (1973) burned the area near the river confluence. The Hog Fire (1977) burned extensively in the lower North and South Fork watershed and in Nordheimer and Crapo Creeks on the main stem. The total area burned was about 55,000 acres. In 1987, wildfires burned 90,900 acres in four separate areas, covering much of the Salmon River subbasin. In 1994, the Specimen fire burned approximately 7,500 acres in the Specimen and Little North Fork drainages of the North Fork. It is estimated that over 30% of the Salmon River subbasin has burned since the early '70s. These fires have resulted in the large-scale conversion from conifer forests to brushfields (Thornburg 1997).

In the winter of 1995-1996, we experienced an unusually heavy snow, combined with wind, which created a tremendous number of downed and broken trees and other damage to woody vegetation. This has exacerbated the already problematic wildfire problem. In response, the FS planned several salvage sales hoping to reduce fuel loading in the project areas. Some projects sold and some didn't. Most projects in mixed conifer types did not have pre treatment prescribed. Adequate monitoring to test this hypothesis is needed and was not provided for.

In the summer/fall of 1999 over a 100,000 acres burned in the New River subbasin located to the West of the Salmon River. This fire threatened to come into the Salmon River several times. A small fire named the Stein Fire burned several hundred acres in the Marble Mountain Wilderness in 1999, and three man-made fires occurred along the main Salmon River road.

In July 1996, isolated thunderstorms caused extensive stream scouring in Poison Gulch in the Upper South Fork of the Salmon River and in Music Creek in the upper North Fork. These debris torrents that originated in the headwaters created slugs of mud that were noticeable at the mouth of the Klamath River at the Pacific Ocean. The Salmon River is prone to this type of summer thunderstorm event that causes stream scouring.

At the end of 1996 and beginning of 1997 a large flood event took place on the Salmon River and elsewhere in the region. Water temperatures were predicted to increase as a result of the 1997 New Year's high water event that stripped several areas of their riparian vegetation and caused extensive land sliding. This de-stabilization has taken place both in the riparian and upslope areas. Pool frequency and depth noticeably decreased, particularly in the South Fork of the Salmon River.

Various non-native invasive pests have shown up in recent years. Several noxious weeds are beginning to establish themselves in the watershed. Among these are star thistle, spotted and diffuse knapweed, Scotch and Spanish broom, sweet clover, Marlahan mustard, bull thistle, and others. Some believe that these aggressive plants will take over

the natural plant processes in various areas of the Salmon River area, retarding recovery of disturbed areas and displacing native plant communities.

The Council has been managing noxious weeds in an organized effort since 1994. As identified earlier we are working as a partner in the Siskiyou County Noxious Weeds Management Area Group and bring to this group a non-pesticide approach to controlling noxious weeds. One of the greatest concerns the community has for noxious weed management is that they will lead to the reintroduction of the manager's broad application of herbicides throughout the subbasin. Unknown to the community until recently, Siskiyou County Department of Agriculture has been spraying toxic chemicals (some unregistered for use on federal lands and/or near water) for over a decade in areas such as: wildfire areas, campgrounds, roadsides, and stream and river access. To improve cooperation and to protect the environment in a manner that is consistent with the principles of Integrated Pest Management, the SRRC has developed a strategy for eliminating spotted knapweed (State rated Class "A" pest) that does not depend on chemical herbicides. Control may not be attainable without the reduction of the spread of these invasives. Land management and resource use has been identified as an activity that increased the spread of various invasive plants. Noxious weeds are related to disturbance. Restoration is closely associated with disturbance. Various restoration efforts may be hampered by noxious weeds. To control many of these noxious weeds a comprehensive management scheme that addresses disturbance may be necessary.

Aside from significant impacts from wildfire, there have been extensive habitat alterations caused by human related activities that have taken place in the past such as: historic hydraulic mining activities, road building, logging and other land uses. There are similar impacts that have occurred throughout the region that have provided inviting conditions for the introduction and proliferation of noxious weeds.

VIII. KEY RESOURCE PROBLEMS AND LIMITING FACTORS

The Klamath River Fisheries Task Force has identified high water temperatures and excessive sediment production as being the key limiting factors for the anadromous fisheries resource in the Salmon River subbasin. The Forest Service has identified the recent catastrophic fires as a major contributor of sediment to the Salmon River and that fire has eliminated significant areas of riparian cover in the subbasin (Salmon River Sediment Analysis - USFS, 1994). Since the Hog fire in 1977, Salmon River water temperatures have exceeded 77 degrees Fahrenheit (West, et al 1991). The recent wildfires have increased sediment run-off from roads, in riparian areas, and from upslope areas.

At present, fuel loading is at an unnaturally high hazard level in many areas of the watershed, due to fire suppression and logging practices causing unnatural conditions. This current fuel loading threatens to severely damage the more biologically intact and/or recovering landscapes in the subbasin (USFS Watershed Analyses). Several Late Successional Reserves (LSR) in the subbasin have a high fire potential (USFS North Fork, Eddy, Carter Meadow/Taylor LSR Assessments - 1995&1996). The Karuk Tribe

of California has presented information pointing to the fact that "Fifty years of fire suppression has resulted in an ecosystem with accumulations of flammable debris capable of fueling future catastrophic fires within the watershed" (Karuk Tribal Module for the Main Stem Salmon River Watershed Analysis, Draft, June 25th, 1996). Without critical fuels management, one can easily predict that catastrophic wildfires will return more frequently in the Salmon River. The fire history and fire potential of this subbasin establish increased catastrophic wildfire occurrence as the number one long-term threat to fisheries and general ecosystem health and diversity. A Strategic Fire Management Plan that addresses subbasin-wide fuels management activities does not exist to protect public and private values. Such a Plan is needed which identifies and prioritizes the protection of the highest values at risk. Protection of people and property should be used as a corner stone in fire planning. Having to protect people and property limits the ability of the fire management forces to deal with fire suppression during a wildfire and during pre-suppression controlled burns.

Large historic mine tailing piles in the river corridor are thought to add heat directly to the water through conduction. Information is lacking. Riparian vegetation is also lacking in the river corridor due to the poor growing conditions associated with these rock piles. A detailed assessment and plan to recovery key mining tailings is needed. The Council needs to focus the stakeholder's attention on this problem.

Most of the residents in the subbasin believe that the major problems associated with the decline of the anadromous fisheries native to the Salmon River, do not occur locally. The USFS has indicated that there is more spawning habitat than there are fish to utilize this habitat on the Salmon River. A key data gap is where do the Salmon River fish go, what impacts occur, and how can we reduce the out of subbasin impacts. More information is needed to identify specific impacts and protection measures needed for the Salmon River fish.

Information on the conditions and regulations associated with the watershed and fisheries is limited. As part of its' education program the Council distributes items such as the current fishing regulations. The Council has helped to improve communication between the managers and the fishing community through planned meetings and other events. More cooperative information needs to be developed and circulated that identifies the conditions and needs of the fish.

There are several activities occurring outside the subbasin that we know have a significant negative impact on the Salmon River fisheries. These include: poor ocean conditions, ocean harvest, poor water quality conditions in the Klamath River, Klamath River fishing, toxic agricultural run-off, and others. Aside from the over-harvest issue, water quantity and quality conditions in the Klamath River below the mouth of the Salmon River are a major limiting factor for both Salmon River anadromous fish that are either juveniles out-migrating and/or adults returning to spawn.

Lack of communication between managers, the community, tribes, academia, labor, and others has limited the success of the SRRC in its work.

The SRRC has limited room at the Watershed Center to operate. More room is needed to house the Council for its activities and equipment. The Council has identified several homes or structures on federal land as being potentially suitable for expansion needs. If not permitted, many of these structures may be destroyed instead.

Due largely to its remoteness and access difficulty, the Salmon River is an area which is basically unknown to the public, managers, and others. Many feel that this helps protect the environment, but it hampers the ability to seek the support needed to restore the Salmon River watershed. Involving several groups including: - funders, agencies, tribes, schools, resource support groups, legislators and others in restoration dialogue, education, planning, project development is key to the recovery of the Salmon River resources.

Access to the Salmon River may also be viewed as a limiting factor. Managing agencies have to drive two or more hours just to get to the main roads in the subbasin. There are two high summits to go over on the access routes. The main Salmon River road is mostly a one-lane road with turnouts carved into the steep cliffs of the river corridor. This makes management activities expensive and sometimes prohibitive. Monitoring for legal and illegal resource use activities has often been a difficult task to accomplish with any sort of effectiveness. We must also mention that the difficult access has been somewhat responsible for limiting development and investment by larger corporate resource-extraction industries.

Consistent federal land management has been hard to achieve. This has partly been from the Forest Service's downsizing, regulatory constraints, and budget cuts, reducing the Forest Service's ability to accomplish the amount of restoration and protection needed. Various restrictions and requirements, such as for: Survey and Manage species; Air Quality; Fire Training certification; and others stipulations have made management more difficult. Turnover in leadership and the removal of a central Forest Service office has also made management more difficult and disconnected from the local community.

Private and public ownership boundaries create limitations for consistent and adequate restoration and compatible resource use at the landscape and subbasin level. Many of the Council's projects try to reduce these limitations.

Another potential threat to the ecosystem is the influx of noxious weeds, some of which are invading the river bars and other disturbed areas. Comprehensive planning is an immediate need in order to understand and guide appropriate response measures.

This problem is so complex and expanding exponentially that adequate response, which gets to the cause and promotes cooperation from all aspects of society, will be difficult to achieve. This project is further limited because managers and professionals typically view themselves as the sole responsible agent and often times fail to recognize the importance of community and public involvement in the control of noxious weeds. The agency's dependency on the use of chemical herbicides may reduce the likelihood for control of these species, and may pose an unneeded significant threat to the environment.

X. CONCLUSION:

Citizen efforts such as the Salmon River Restoration Council are the best vehicle to achieve watershed/fisheries recovery, providing minimum dislocation to existing economic and social activities. Each year the Council has expanded its Program. To date we have brought in almost one million dollars worth of value to improve ecosystem health in the Salmon River. As is evidenced by the Council's accomplishments and volunteerism, 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 may not be 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.

The clock is ticking for the well being of the local community and the Salmon River ecosystem. The Council believes that increased amounts of funding are needed to expand and support a more effective Community Restoration Program and the general needs of the area. Our work within the 3 river elementary schools, local volunteer fire and rescue departments, local water board, and other local infra-structural entities that exist in this remote area are threatened by the decrease in the local population.

In order to maintain and expand upon our fundamental "barn raising" and "potlatch" (those who amass more must take on more responsibility) approaches to ecosystem management, we have identified target activities that are recommended to accomplish. Our Program seeks to enlist cooperation and support from the US Forest Service and other federal regulatory agencies, State of California, Karuk Tribe, resource user groups, environmental community, recreation and others to accomplish this task. The Salmon River Restoration Council has already shown itself to be a "Performance Based Organization" that is a good investment.

XI. RECOMMENDATIONS

A) PLANNING AND ORGANIZATION

- Regularly update Salmon River Community Restoration Plan (CRP), Annual Work Plan, Action Matrix and Activities Calendar.
- Hold monthly staff meetings.
- Hold steering committee/executive committee meetings quarterly.
- Hold annual board meeting for adoption of CRP and other planning strategies.

- Develop Partnership Agreements and Memorandums of Understanding to link SRRC with the key agencies, tribes, and other organizations. (Roads, fish habitat and reaches, noxious weed sites, etc.)
- Establish a technical advisory group to include broader stakeholder representation in order to facilitate various planning strategies.

- Develop a long-range fund-raising strategy that draws from public as well as private sources needed to accomplish SRRC's work.
- Develop and update a Cooperative Restoration Strategy for the Salmon River Subbasin.
- Develop a Coordinated Fire Management Strategy that includes site-specific pre-attack and emergency plans, update fuels assessments, prioritize area for treatment and recommend appropriate fuels prescription. Create a network of control zones at the watershed and landscape level (road corridors, fuelbreaks, etc) to prepare for controlled burning projects and future wildfire events. Address plantation needs. Restore fire to its natural role in the ecosystem. Emphasize protection of towns, neighborhoods, and residences. Employ approaches such as: reduction of fuels to a safe level around residences and facilities as well as along emergency fire access routes, pre-treatment of proposed control burn projects, establishing a year round crew of local residents to perform this and other management needs. Prioritize private lands for treatment.
- Develop a Mining Tailing Restoration Strategy.
- Develop Noxious Weed Long Range Management Plan
- Develop Annual Work Plan and Report.
- Develop Fisheries Management Working Group and related Plan.
- Develop a water-users management strategy that promotes improved water quality and quantity in the Salmon River and focuses on fisheries management and protection.
- Develop a multi-tiered Roads Management Strategy that includes: Road condition assessments, Waste (Dirt) Disposal Management Plan, Management Strategy for log landings and turnout management and restoration, promoting sub-watershed neighborhood stewardship groups to assist in day to day care and monitoring, inventory, prioritize, and other resource needs.
- Develop and Implement Comprehensive Coordinated Monitoring Plan to assess watershed conditions and project effectiveness. Develop specific criteria and procedures for monitoring at the Project level and the Program level. Utilize hypothesis-testing methods when applicable.
- Identify resource problems and develop suggested Minimum Impact Resource Use Guidelines for various resource uses.
- Develop Management Plan for Mushrooms
- Develop a Recycling and Toxic Management Plan to increase awareness and reduce associated problems in the subbasin
- Develop management plans for fire wood cutting to provide for the public need and to overlap this activity better with fuels reduction
- Develop management plan for non-traditional products to help offset the costs of improving forest health.

B) EDUCATION/OUTREACH

- Host annual series of ecosystem awareness workshops/workdays and restoration training workdays, highlighting current management topics.

- Maintain local office/watershed center to improve public access to information and activities.
- Increase public awareness through newsletters, brochures, handouts, notices, posters, video, and other multi-media presentation.
- Maintain and Upgrade Council's Webpage.
- Make presentations at conferences, to managing agencies, legislators and potential supporters.
- Provide local schools with technical support and enlist community participation in their Watershed Education Programs. Develop annual curriculum.
- Assist in updating KRIS in the schools, through SRRC.
- Develop Council work products for KRIS.
- Review agency-planning activities (i.e., NEPA) and provide comments and feedback.
- Furnish progress reports to the various agencies and tribes that provide Council's assessment of recent cooperative efforts.
- Assess the year's progress in an annual report that outlines our goals activities and accomplishments.
- Provide technical assistance to the community and training for technically demanding jobs. This includes various levels of computer and resource management training.
- Create a toxic awareness education program for the schools, community, agencies, tribes and the general. Tier these activities to Strategy or Management Plan. Develop transfer station. Attract multiple cooperators from the private and public sector at the local, county, state, federal levels. Promote identification and reduction of toxic chemicals and provide the community with alternatives.
- Hold field trips to increase knowledge and awareness of local issues and restoration needs. Integrate the local community, agencies, tribe, resource users and others. Host specific field trips for the entities such as: the Klamath Fisheries Task Force and for funders, scientists, politicians and others. Develop a specific field trip that reviews successful projects and identifies attributes that led to success.
- Create Multi-Media products such as: Video, music, theater, art and other mediums. Distribute these products in various manners- at events, through contacts, the internet, newsletter and others.
- Provide computer training including Webpage development, GIS and GPS tools, desktop publishing and other. Increase the awareness and ability of the local community to understand and perform specialized survey work such as for Survey And Manage Species, Roads Assessment, Vegetation Assessment, fuels assessment and other technical tasks.
- Hold an annual Fire Awareness Week in the spring to provide fire response training and increasing awareness and promote planning to get the Salmon River fire ready.
- Hold an annual Fish Awareness Week in the summer to provide fish survey training and to increase awareness and promote planning for the Salmon River fisheries.

- Develop educational products, such as CD's, to capture the history of the Salmon River

C) AQUATIC ECOSYSTEM RESTORATION AND PROTECTION

- Improve habitat conditions in appropriate places.
- Reduce mortality of juvenile salmonid associated with water diversions.
- Clear blocked stream mouths to increase salmonid spawner access.
- Perform River Clean-Up activities.
- Investigate problems and opportunities associated with juveniles stranded from late spring high waters.
- Provide fish access to areas unnaturally blocked, when appropriate.
- Identify and implement improved hatchery practices.
- Identify potential toxic chemical problems associated with the water and take appropriate mitigating actions.

D) TERRESTRIAL ECOSYSTEM RESTORATION AND PROTECTION

- Develop a shaded fuel break network across public and private lands at the residence, neighborhood, sub-watershed and landscape level.
- Conduct restoration, emphasizing revegetation and bank stabilization, on mining tailing sites adjacent to the river.
- Promote Neighborhood Road Stewards Program to reduce sediment production, improve roads assessment, and increase maintenance prescription effectiveness, and reduce the costs of road maintenance.
- Identify problems and monitor impacts associated with grazing.
- Expand our native plant/seedbank cooperative.
- Develop projects that will remove excessive fuels and identify alternative forest products from coniferous plantations and other areas of the forest.
- Develop projects that improve methods and results associated with conifer plantations. Explore subsidizing costs of project through the sale of non-traditional products such as: boughs, poles, etc.
- Control Noxious Weeds through non-chemical methods.

E) ECOSYSTEM ASSESSMENT/MONITORING

- Utilize and expand our GIS/GPS technology in all aspects of assessment.
- Develop, upgrade, and compile an inventory of existing watershed information from various sources. Include information in the KRIS to promote dissemination of information.
- Monitor conditions and restoration response on both private lands and public lands.
- Monitor sediment sources in the entire subbasin; focus on prioritized areas and restoration techniques.
- Upgrade fuels inventory and identify prioritized areas for treatment.

- Prioritize restoration needs on private lands, particularly neighborhoods and towns.
- Monitor water temperatures in subbasin.
- Monitor SRRC restoration projects to establish project level data.
- Monitor non-SRRC restoration projects to establish project level data.
- Conduct regular coordinated juvenile and adult population and habitat surveys for spring and fall Chinook Salmon, winter and summer Steelhead and Coho Salmon. Increase attention for steelhead and coho.
- Identify data gaps for the Subbasin Restoration Strategy and other SRRC plans.
- Conduct other fish monitoring activities, such as: anglers taking scale samples, fish marking, fish barrier inventory and compile local knowledge of fisheries.
- Inventory Toxic Sites.
- Monitor for water flows.
- Monitor for water quality.
- Monitor for riparian conditions at the project and program level.
- Monitor Upslope Conditions at the project and program level.

F) ECONOMIC DEVELOPMENT

- Investigate and stimulate Salmon River Jobs being made available to qualified Salmon River Residents.
- Promote Community Action Planning.
- Identify and support possible feasibility studies which investigate creation of jobs that are consistent with the SRRC Mission Statement.
- Provide and encourage training conducive to upcoming natural resource management job opportunities.
- Identify job opportunities emerging in the new natural resource management regime (ecosystem management).
- Provide Store-Front Access by Salmon River residents on the SRRC Webpage.