Greetings from the Salmon River Restoration Council,

The annual cycles keep turning here on our beautiful Salmon River. Spring greets us with sprouts of new growth from the ground, spring salmon coming into the river, and a myriad of restoration activities bubbling up from our Project Coordinators, staff, crews, volunteers, community members, and our many partners. We're seeing new life blooming from the fires that burned many thousands of acres (mostly with low intensity), of the watershed last year.

The local efforts to develop fire plans, reduce fuels, and create fire safe conditions around our towns and neighborhoods really paid off during last years fires, as was noted by the firefighters working at Butler Creek (Perch Creek Fire), Taylor Creek (Rush Fire) and the town of Cecilville. All of our efforts should be commended, but just as fire will be returning frequently to the Salmon River, so should WE all continue to improve our readiness for wildfires and prevention of structure fires. The SRRC, with the Fire and Rescue, Fire Safe Council, Karuk Tribe, Forest Service and others, can only help so much. The ultimate safety of our homes and watersheds largely depends on our personal fire awareness and readiness. A family/neighborhood effort to create safe conditions around homes and access routes, and our ability to support and promote a fire strategy for the Salmon River will keep us safe, protect our resources, and bring wildfire back in balance. This will help manage our watershed for fish, water and forest health.

As the SRRC enters its 15th year, we're continuing to develop actions to address the strategic needs of our watershed, highlighting our attention on the anadromous fish species, and in particular Spring Chinook salmon – of which the Salmon River and the So. Fork Trinity have the last wild runs in the Klamath/Trinity system. We currently have several integrated Program areas with short and long range Work Plans, and a series of prioritized actions we're taking with the partners involved with managing and restoring the Salmon River.

Willow seedlings in the new native plant greenhouse at the Watershed Center. We'll be planting at prioritized sites to address TMDL and benefitting anadromous fish.

Current SRRC Programs include:

1) Fisheries; 2) Watershed Monitoring; 3) Watershed Education; 4) Fire, Fuels and Forestry; 5) Vegetation Management (Native Plant Riparian Restoration and Noxious Weeds); 6) Road Restoration and Stewardship; 7) River Clean Up; 8) Coordination/Outreach/Development largely at the Watershed Center.

This year, we are highlighting some actions that we are working on with our many partners, which include:

- Continuing to promote the Salmon Learning and Understanding Group to bring all partners together to develop, adopt, and support coordinated Annual Work Plans;
- Updating the Salmon River Restoration Strategy and developing a Long Range Watershed Monitoring and Restoration Assessment Plan;
- Completing the first edition of the Salmon River Community Wildfire Protection Plan- including attaining safe structure conditions, safe access to structures, and addressing the needs of the larger forested landscape in the Salmon River;
- Continuing to move forward with the Klamath Spring Chinook Voluntary Recovery program- highlighting stock identification and life history assessments to help complete the current Limiting Factors Analyses;
- Continuing to implement our Community Approach to Managing All Priority Noxious Weed Species, without using herbicides. This program is recognized as being one of the most successful programs of its type by the federal, state and county government entities;
- Assessing and Engineering priority fixes on Private Roads and increasing Neighborhood Road Stewardship activities;
- Expanding our Watershed Education Program in the schools and community;
- Producing a new website;
- Develop informational brochures for Suction Dredgers identifying high quality rearing areas;
- Completing Riparian Assessment and Prioritization, Plant and Restore sites to lower water temperature as directed by the TMDL;
- Continue to participate in the development of a coordinated Basin-wide Restoration Program to address adaptive management needs.

This is just a small snapshot of our activities this year. If you are interested in knowing more about these or other SRRC projects or would like to be more involved, please let us know. We want to thank everyone in our Watershed for their insight and for the energy that you have for helping to move our watershed towards a better future. It takes a community to move a watershed and working together we stand a chance in succeeding.

Thanks again for your help,
Petey Brucker

FINALLY THELMA THOUGHT SHE HAD FOUND HER BLISS... *illustration by Thomas Whittemore*

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News from the Watershed Center

The SRRC enjoys sharing our Watershed Center with the public. We are open 5 days a week with public access to computer, internet, copy machine and fax. Watershed information and custom mapping services are available.

During the long hard freeze this winter, the pipes broke. We held a dance to help fund repairs. Thank you to The Superfines and Wild Blue Yonder for playing great music that evening. Community support is always greatly appreciated.

Our annual Board of Directors meeting in mid March was well attended and very productive. Exciting plans for our future were discussed. Our annual Community Vision meeting in late March gave us input and support from the community regarding current programs as well as visions of future projects.

There is a new greenhouse behind the Watershed Center. A HUGE Thank you to Jake MacIntire for volunteering his time and efforts building it! It is filling up with native trees and bushes which we will be planting in riparian areas to create shade to cool the water.

Our beautiful SRRC tee shirts have sold well over the years. We've ordered more colors and sizes which will be available soon. A few new designs are on the drawing table, too. Be on the lookout for them! As always the Watershed Center is here for your use.

Stop by for a visit. *-Kathy "Duff" McBroom, Office Manager*

Can We Bring the Spawning Grounds Back? Restoration Effectiveness Monitoring / Steelhead Surveys

By Nat Pennington and Pam Lauer

Steelhead Spawning Ground Surveys occurred again this year March 1st through mid April. These surveys are the toughest for our fisheries technicians because steelhead are such illusive and skittish fish. This year's survey focused primarily on finding the steelhead redds (nests) rather than live fish or carcasses. This year the assessment was focused on observing and recording the effectiveness of restoration activities. In addition to our usual protocol, we focused on monitoring planned projects and the already completed fish barrier removal projects in the Salmon River basin.

This summer the SRRC, in cooperation with the USFS and CDFG, is planning to remove two dams on Whites Gulch. By removing these dams over a mile of historic salmon and steelhead habitat will be restored. Our steelhead surveys have been monitoring this tributary to the Salmon River for years and have deemed these dams worthy of removal.

This is not the first time that fish barriers have been removed on tributaries to the Salmon River in order to restore historic fish passage. Steelhead surveys this year also focused on monitoring similar completed projects, such as the new Kellys Gulch Bridge,

(*photo, left of SRRC folks planting for riparian shade).* Kelly's Gulch had a fish-barrier culvert removed in the summer of 2006. The replacement of this culvert with a bridge was approved and implemented by the County Roads Dept. and the Tri-County Coho Recovery Group. Steelhead surveyors monitored this creek and Merrill Creek as well. After one volunteer creek mouth enhancement workday at Kelly's in 2004, thousands of juvenile spring Chinook were observed rearing in the creek. In response to this discovery, SRRC did a Kellys Gulch creek mouth and rearing area enhancement project, and planted over 300 trees for cover and habitat this spring.

The fish barrier on Merrill Creek (high gradient culvert with 7 ft. jump) was identified as a problem by the Karuk Tribe and the SRRC in 1999. Steelhead were actually filmed by Karuk Fisheries Biologist, Toz Soto trying to jump into the culvert and failing. The culvert was replaced with a bridge in 2000 and the following year 9 redds and 4 adult steelhead were spotted during our annual Steelhead Surveys. Much thanks to the Karuk Tribe, Siskiyou County Roads Dept., Tri-County Coho Recovery Team and CDFG.

As we move further into spring the Salmon River will again host what may be the Klamath's most important imperiled salmon run, the Klamath spring Chinook. Last year's spring Chinook and summer steelhead population, although better than 2005's lowest run on record, was well below average with an estimated 497 spring Chinook and 290 summer steelhead.

This years Survey dates are set for July 24th - 26th. The SRRC, the Salmonid Restoration Federation, MKWC, the Karuk tribe, USFS and others will host the **Spring Chinook Watershed Symposium** in conjunction with the dives. This is a annual event highlighting spring Chinook restoration in California. This event will be a focal point in efforts to restore Spring Chinook-the once largest run in the Klamath basin. Speakers and organizations from around the state and Pacific Northwest will gather to network and share knowledge about Spring Chinook in Forks of Salmon on the 26th and 27th. Registration forms for the conference and dives will be distributed soon. The conference will be followed by the growing two day annual benefit music and education festival "Jammin' For the Salmon" on the 27th and 28th. Please contact Nat Pennington at fisheries@srrc.org or call 462 4665 for more info. The numbers seem to prove, so far, that by restoring these tributaries and monitoring the results, we can bring the salmon home.

photo, right of one of the dams up Whites Gulch

Klamath River Hydro-Electric License- The FERC Process and Settlement

-Petey Brucker

PacifiCorp, now a subsidiary of Warren Buffet's Mid-American Energy, is in the 6th year of their process to relicense their hydro-electric facilities (dams and reservoirs) in the Klamath River. Three of these hydro-generation facilities are in California (Iron Gate, Copco 1 & 2) and one is in Oregon (JC Boyle). In addition, PacifiCorp uses Keno dam and reservoir for storage to regulate their peaking power activities at JC Boyle. PacifiCorp has indicated that they want to abandon this potentially toxic site, as well as decommission the East and West Side power generators near Upper Klamath Lake and turn their managing responsibilities on Link River dam back to the US Bureau of Reclamation. PacifiCorp indicated in their application process that their dams/reservoirs provide little or no flood control and protection to the Klamath River downstream of their facilities, due mostly to their relatively small storage capacity.

There are two processes currently underway in which PacifiCorp and all interested parties are navigating this license process which could relicense these facilities for up to 50 years. The first is the public administrative process that is under the authority and direction of the Federal Energy Regulatory Commission (FERC). When PacifiCorp completed and submitted its Final Application in 2004, it started the administrative Environmental Impact Assessment (EIS) by FERC and triggered Additional Information Requests to PacifiCorp. FERC released its draft EIS in 2006, which assessed four alternatives – 1) Status Quo Management; 2) Installation of Fish Ladders, Screens, etc; 3) FERC staff recommendation (ladders, screens and additional actions for fish), and 4) Removal of the Lower Two Dams/Reservoirs. FERC concluded that it was cheaper for PacifiCorp and their ratepayers to remove the two Dams than to install Fish ladders, screens etc. FERC is due to come out with their Final EIS and preferred alternative later this year. The two states also have to provide a water quality certification of the proposed project prior to proceeding with a new license.

Administrative Judge McKenna ruled in August 2006, that fish could be successfully reintroduced into the Upper Basin where they once lived and will not significantly impact other native species such as Redband Trout. Removal of the dams/reservoirs would also improve water quality for fish and the river.

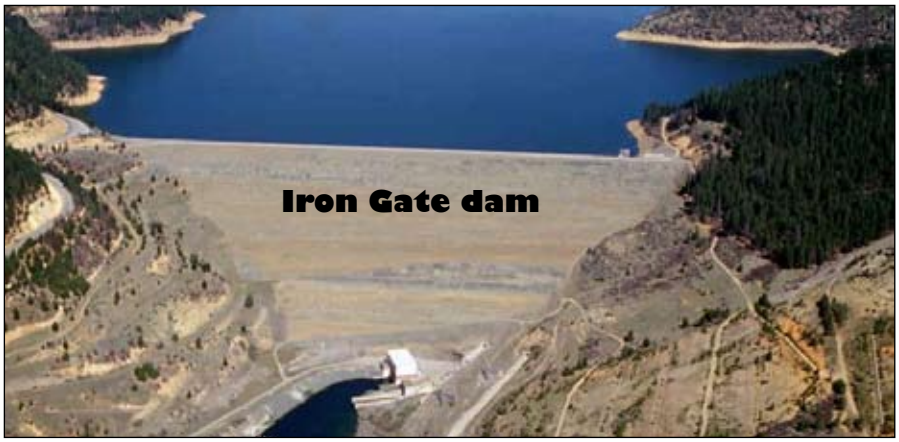
A sediment study of the reservoirs indicates that of the over 20 million yards of sediment currently accumulated in the reservoirs, only 4 million yards are in the active river channel (up to high water/flood level). These sediments were found to be non toxic, with the exception of petroleum residues around the boat docks in Copco Lake. The sediment is largely made up of fine materials likely to flush through the Klamath River and into the ocean, without settling in the river. Biologists have indicated that 4 million yards is not that large an amount of sediment for the Klamath River to handle.

The California Energy Commission has identified that PacifiCorp generates very little power annually (approx. 60 megawatts) and that removal of the dams and replacement of this power with other renewable energy would be most appropriate. A recent study from a UC Davis researcher concluded that reservoirs can produce large amounts of greenhouse gases due to decomposition of organic matter. Shasta Lake was identified as producing carbon dioxide daily equal to 14,000 cars running 40 miles. Methane, a much more potent greenhouse gas, was not quantified but is also emitted. Replacement of these dams with renewable power will likely be much better for the atmosphere and have a positive effect on global warming and climate change. The nutrient rich Klamath River reservoirs, although not assessed in the study, have much greater amounts of organic matter, algae etc., and are likely to produce large amounts of these gases daily.

In addition to FERC's public administrative process, PacifiCorp has invited several key parties to try and develop an alternate resolution process through a comprehensive settlement that's good for everyone involved. This second process is being conducted under a confidentiality agreement, which PacifiCorp required and the group developed and agreed to. Although the details of this process are not easily made public, many involved are hoping to address the dams and reservoirs owned and run by PacifiCorp in the Klamath River as well as many of the long standing conflict over resources. There is a push by all of the parties toward settlement to arrive at enough mutual resolve to help bring "Peace" to the Klamath Basin, and to create a more collaborative future for the fish, wildlife, rivers and our communities.

Our Salmon River Spring Chinook whose migrations are known to be affected and driven by snow melts and cooler water temperatures, may be a key run in a reintroduction effort for the Upper Basin. Historic information indicates that most (approximately 70%) of Spring Chinook range was above the dams in the Sprague and Williamson rivers. Without the development of a larger meta-population residing throughout the Klamath Basin, many doubt that our Salmon River run of Spring Chinook can survive over time. This is a large reason why the SRRC has been an active participant in the FERC process and in the settlement negotiations. These various processes may be culminating this year and we will be actively engaged.

If people would like to learn more about these two processes or get involved, please contact Petey Brucker of the SRRC, pbrucker@srrc.org.



Fire and Fish – What's the Connection? Marc R. Horney, PhD, CRM.

On the face of it, fish and wildfire may not seem to share much in common. After all, one prefers it cold and wet and the other likes it dry and hot. The fact is, though, that wildfires – and efforts to suppress them - can greatly affect quality of life for a fish.

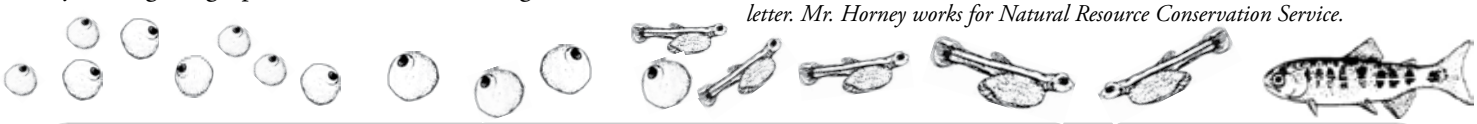
Probably the most obvious connection between wildfire and fisheries is sediment. Wildfire can increase the amount of sediment delivered to the stream channel. Fires remove the trees, shrubs and grasses which protect the soil from erosion, slowing the rate at which gravity can pull soil down from the slopes into creeks, streams and rivers. When soil enters waterways at a slow rate, the water can carry away the small soil particles (sediment) from the larger gravels and cobbles. When soil erosion is increased, the capacity of the water to move sediment can be overwhelmed for a time, allowing the open spaces between gravels and cobbles in channel bottoms to become filled with sediment. Since those open spaces help move oxygen-rich water through the egg masses, having them filled in with sediment can seriously impact hatching success. Depending on the size and severity of the fire, the time of year, and the terrain it occurs in, it can take a watershed anywhere from years to decades to slow the rate of soil erosion back down to baseline levels and flush the excess sediments from the system. For the period of time it takes the watershed to recover, fish production can be significantly reduced. Not all fires produce catastrophic results, and some can result in long-term benefits, but the risk posed by fires to fisheries is quite real. Where fish populations are already subject to significant environmental and biological stresses, a large fire or series of fires at critical times or locations could be serious indeed.

Methods used to fight fires have their own hazards. Many necessary fire-fighting operations, such as cutting fuel breaks and operating trucks, dozers and other equipment on slopes and other fragile sites, will accelerate soil erosion to some degree. Most fire-fighting agencies do what they can to minimize damage and repair sites afterwards, but it is often difficult to fully restore areas in a short time. Many chemicals used for suppression (retardants and foams) have some level of toxicity for fish, and/or for the aquatic insects needed for food. These toxic effects are variable, however. For example, Gaikowski (1996) found that Rainbow trout and Chinook fry were more sensitive to retardants than their eggs. In the same study, two foams used in the trials were relatively more toxic to fish than the three retardants being evaluated. It may not be practical to pick and choose fire control chemicals for their impacts on fish, especially in the middle of a fire, but it is helpful to be aware of these issues when developing fire management plans beforehand in sensitive areas.

Not all effects of fire are bad for fish, however. Fires, for example, free up nutrients that drive the food chain used by fish, they maintain environments where a variety of plants of all ages and types flourish, and they can help control diseases and pests. The healthy streams and rivers that are needed by fish are themselves produced by healthy upland environments. Fire is a natural part of that process. The trick is in creating environments where, when fires occur, they are manageable and useful. Accomplishing that requires that fuels be managed so that the ignition, growth and spread of wildfires can be safely managed for the most benefit and least long-term harm. Fish (and people) are most threatened where fuels are allowed to accumulate to high densities in areas that are difficult to reach, which often are on sites that have a high erosion risk and where roads are few and easily cut off, and water access is limited.

Is your community fire-safe? If it is, not only will your family and friends be secure, but the fish will thank you too.

-Originally published version appeared in the Scott River Watershed Council newsletter. Mr. Horney works for Natural Resource Conservation Service.



Fires on the Salmon 2007 - Records of fires since 1910 show that, 571,036.7 acres of the Salmon River subbasin have burned in wildfires since that time. For a watershed of 480,000 acres, that means that more acres have burned than exist! Of course, in reality, some ground has not burned at all and some has burned more than once. In comparison to other areas in Siskiyou County, the Salmon River has had more fire per acre than any other area.

Last fire season (2006) when all was said and done, 48,085 acres burned in 7 fires on the Salmon River. These fires included the Hancock fire that burned 21,845 acres, the Uncle fire that burned 3,602 acres, the Rush fire that burned 4,868 acres, the Somes fire (Salmon River Portion) that burned 9,812 acres, and the North Bar fire that burned 1,745 acres. Common to all of these fires is that they started high in the watershed and generally burned downhill. They also tended to burn with low to moderate severity, partially due to the previous winter's abundant moisture. Management of these fires was also different because the fire managers used "Appropriate Management Response" to battle the blazes. We know that our landscape's plants and animals evolved with frequent low intensity fire, so these fires were definitely good for the forest. Let's hope that intelligent management and fuel reduction efforts combine to produce more of these "good fire" years.

- Jim Villeponteaux

The Economics of Dam Relicensing

Illustration by Thomas Whittemore

As most people in the Northwest are aware of, Pacific Power, a division of PacifiCorp, is now in its sixth year of review over relicensing four of its seven hydroelectric dams on the upper Klamath. The company's 30-50 year operational license on the four dams expired in 2006 and is currently operating on renewable one-year extensions until the Federal Energy Regulatory Commission (FERC) grants the company a new license. Bowing to the February decision of the US Fish & Wildlife Service and the National Oceanic and Atmospheric Administration, FERC must require PacifiCorp to install fish ladders and screens on all four projects as a condition of relicensing, opening 350 miles of habitat in the upper Klamath basin to returning salmon for the first time in a hundred years.

Of course, fish ladders are not the answer; they don't address serious water quality issues above and below the dams, and they will continue to block upstream passage for several other Klamath River species. Initially, a CA Energy Commission (CEC) report (the official report, currently on file with FERC) found that breaching the dams would cost $101 million less than installing fish ladders. Unhappy with that estimate, Pacific Power hired a private, "independent," energy consulting firm, Christensen Associates Energy Consulting LLC, to reanalyze the cost of each option (dam removal vs. upgrades). The consultants used the same economic model and showed that Pacific Power would save $46 million by remodeling the dams and continuing their operations. The $147 million difference in the two analyses is mainly because in their analysis of the dam removal option, the private consulting firm including costs associated with removing sediment that has accumulated above the dams. Susanne Garfield, an Energy Commission spokeswoman says the CEC report didn't assess costs for sediments because an earlier study funded by the CA Coastal Commission indicated that sediment deposits and their toxicity wouldn't affect the cost. They reran their economic model using Pacific Power's own numbers, excluding consideration of sediments, and found there to be an even larger savings than first discovered; now it is estimated that Pacific Power would save $114 million by removing the dams instead of upgrading them. Is it just good business practice that Pacific Power hired a consultant to review the Energy Commission's estimate, or did they hire them to say what they wanted to hear, thus giving them another bargaining chip in a money making game that controls the fate of the Klamath salmon?

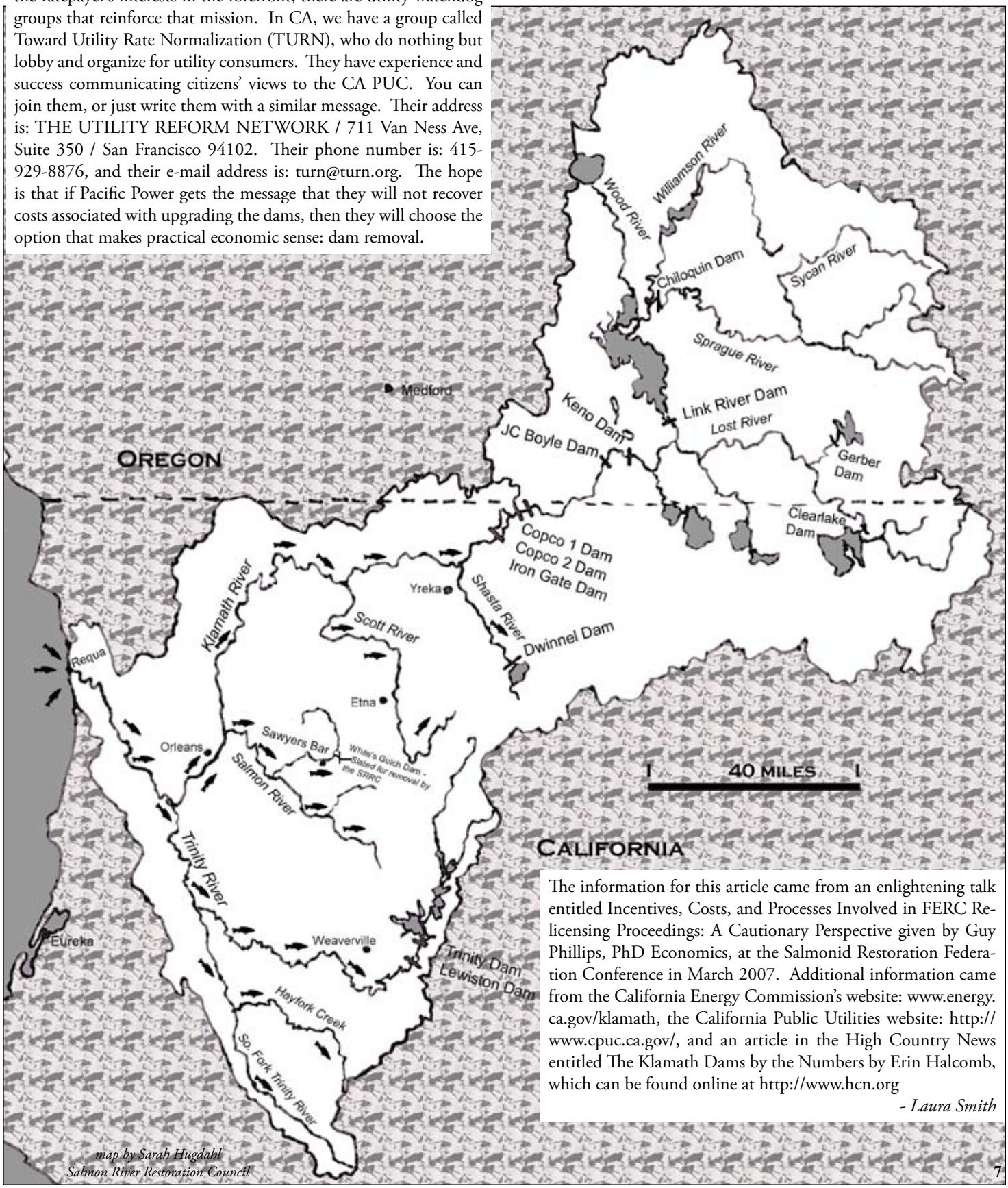
Warren Buffet's company, MidAmerican Energy Holdings Company, recently bought Pacific Power from Scottish Power. They bought it as an economic investment; a low risk investment with a relatively stable rate of return. Unlike most businesses, which earn profit based on the amount or quality of their product, electric power utilities and their dams create a profit depending on how much money their operators invest in the project's infrastructure; entirely independent of how much energy the dam produces. In economic jargon, this is called a "cost of service model" compared to the more common "profit model." Pacific Power's Klamath dams have an established rate of return of 9%, and their dams are valued at about $37 million. So every year Pacific Power earns $3.3 million, which is 9% of the $37 million value. In other words, every year, Pacific Power earns—$3.3 million—9% of the value of the dams regardless of the amount of power they produce. Where does this money come from? It's from ratepayers, through the Public Utilities Commission (PUC). The PUC is a state agency that oversees privately owned utilities in the name of the customers. Their website states: "The CPUC is responsible for assuring CA utility customers have safe, reliable utility service at reasonable rates, protecting utility customers from fraud, and promoting the health of CA's economy."

The PUC will not automatically give Pacific Power the money it spends or a profit on its investments. Pacific Power has to request "cost recovery" from the PUC. The PUC will review the costs and then decide whether or not to give Pacific Power the ratepayers' money. So long as Pacific Power can justify that it spent money in the interest of providing power for ratepayers, the PUC is likely to grant it cost recovery. The most assured way that Pacific Power can earn that 9% rate of return on capital that they invest in the dams is if they can show that those expenses were required for them to continue to operate their power generating dams. Since hydro dams must be licensed by FERC, it is essentially guaranteed that Pacific Power will earn 9% interest on the money that they spend going through the FERC relicensing process. It is estimated that they will spend $35 million on that alone. Then, if FERC requires them to upgrade the dams at an estimated cost of $350 million, Pacific Power will have spent an estimated total of $385 million for the new 50 year licenses. With the 9% rate of return, that investment would earn $34.65 million for their shareholders. That is more than 10 times what Pacific Power has been earning from the dams. It would increase the value of the dams and, therefore, increase the annual return. All of this number crunching leads to why Pacific Power may not care if installing fish ladders is more expensive than taking out the dams. So long as Pacific Power can show the PUC that they incurred expenses in the interest of making power for ratepayers, they make a profit. The more money they spend, the more money of theirs that yields that high dividend. This commissioned study that shows upgrading the dams as the most cost effective option would support Pacific Power when they go to the PUC and ask for cost recovery on the millions they want to spend to install fish ladders, to relicense the dams, and to continue to operate those fish-blocking, water quality degrading, toxic algae creating, inefficient Klamath dams.

Given the format of economic incentives and payoffs, how can we encourage the removal of the Klamath dams and save ratepayers money in the process? Assuming that this is your position, you can write to the CA Public Utilities Commission in San Francisco, saying that you support the removal of Pacific Power's Klamath dams, and that you urge the Public Utilities Commission to refuse spending ratepayer money on costly improvements to dams with low energy output. Reiterate that removing the dams is estimated to cost less than the required improvements. In addition to making economic sense, removing the dams will help repair the health of the river, will remedy the problem with toxic algae accumulations in reservoirs, and will open up more than 300 miles of habitat for salmon, whose consecutive years of low returning adults caused a closure of the ocean fishery in parts of Oregon and California last year. If Pacific Power goes ahead with installing fish ladders on the Klamath dams, they should not assume cost recovery for the associated expenses.

The California PUC's address is: CA Public Utilities Commission/ Consumer Affairs Branch / 505 Van Ness Ave. / San Francisco, CA 94102-3298. You can also give them a call toll-free, Monday – Friday, 9 a.m. – 3 p.m. at 1-800-649-7570. Be sure to include your address and phone number. While the PUC is supposed to keep the ratepayer's interests in the forefront, there are utility watchdog groups that reinforce that mission. In CA, we have a group called Toward Utility Rate Normalization (TURN), who do nothing but lobby and organize for utility consumers. They have experience and success communicating citizens' views to the CA PUC. You can join them, or just write them with a similar message. Their address is: THE UTILITY REFORM NETWORK / 711 Van Ness Ave, Suite 350 / San Francisco 94102. Their phone number is: 415-929-8876, and their e-mail address is: turn@turn.org. The hope is that if Pacific Power gets the message that they will not recover costs associated with upgrading the dams, then they will choose the option that makes practical economic sense: dam removal.

Klamath River Sediment and Dam Investigation, Gathard Engineering, November 2006, submitted to the FERC record by the CA Coastal Conservancy.



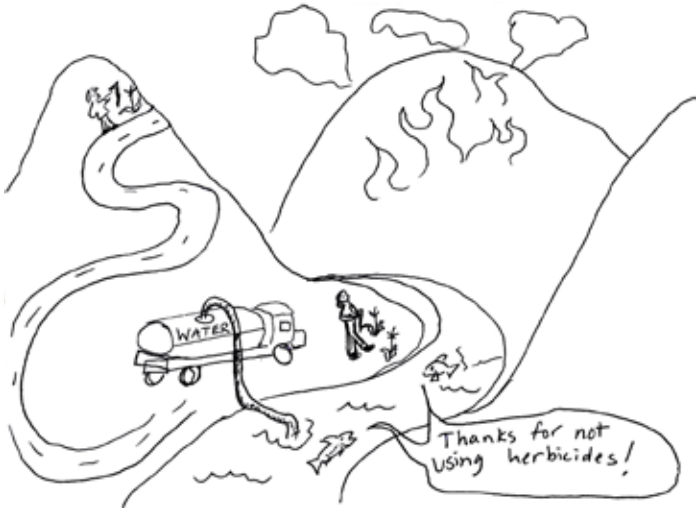
map by Sarah Hugdahl
Salmon River Restoration Council

The information for this article came from an enlightening talk entitled Incentives, Costs, and Processes Involved in FERC Relicensing Proceedings: A Cautionary Perspective given by Guy Phillips, PhD Economics, at the Salmonid Restoration Federation Conference in March 2007. Additional information came from the California Energy Commission's website: www.energy.ca.gov/klamath, the California Public Utilities website: http://www.cpuc.ca.gov/, and an article in the High Country News entitled The Klamath Dams by the Numbers by Erin Halcomb, which can be found online at http://www.hcn.org

- Laura Smith

Noxious Weeds on Fire

The Salmon River Cooperative Noxious Weeds Program is working hard this year. We are out in full force, working not only on the high priority weeds like Spotted Knapweed, Italian Thistle, and White Top but also on lower priority weeds such as Marlahan Mustard. Wednesdays are being highlighted as community workdays in our scenic towns. The impact of our work continues to show what people can do with a community effort. Some of the areas that were carpeted with Italian Thistle last year can now be described as "sparse". The relatively short seed life of Italian Thistle may be what makes it quicker to control than Knapweed was. Of course knapweed will be continue to be sought in upcoming years, but we expect



to see less than a thousand plants, in the same areas that, in 1999, contained 200,000. Keep your eyes peeled- any new Salmon River sightings of knapweed reported to the SRRC will earn a reward!
Noxious Weed Control is an arena that is fully interconnected with the multiple systems at work in the watershed. Although relations between vegetation, the watershed, fish and fire may seem distinct, their integration overlaps in Noxious Weeds behavior and management.

A Noxious Weed's fuel characteristic is one of the criteria we use to determine a weed's priority for eradication. Some burn hotter than others. Oil-rich Scotch broom, which is highly flammable and also forms a ladder fuel, is a weed we've been removing since 1994. Weeds like the beautiful sweet peas, grow quickly in the spring then die in summer, leaving very flashy fuels by the roadside.

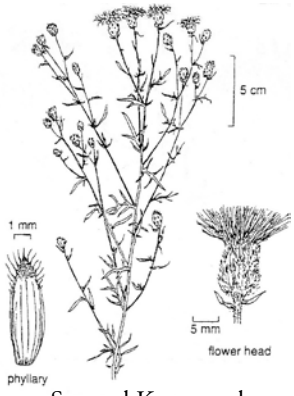
Disturbance and movement are what give noxious weeds the edge they need to "opportunize" their way into the area. This kind of impact to ecosystems is standard operating procedure in a wildland fire situation. We look to Fire Fighters as a crucial vector for prevention. Education and outreach with our partner, the U.S. Forest Service, increases awareness and enlists support to help prevent seed transport. Protocols are in place, and actions are taken to mitigate the threat of contaminated equipment bringing in invaders from other areas.

Fire can also be used in a controlled way for noxious weed management. Individual plants may be singed with a propane torch. Burning piles on top of existing weeds and seed banks is a method also in use. Fire and broadcast burning may ultimately be a long-term control method to incorporate into land management in some areas, but wildfire management does not currently allow this.

If you want more info or would like to get involved please contact Shannon Flarity@srrc.org or call the Watershed Center 462-4665

Italian Thistle
carduss pycnocephalus

White Top
cardaria draba



Spotted Knapweed
centaurea maculosa

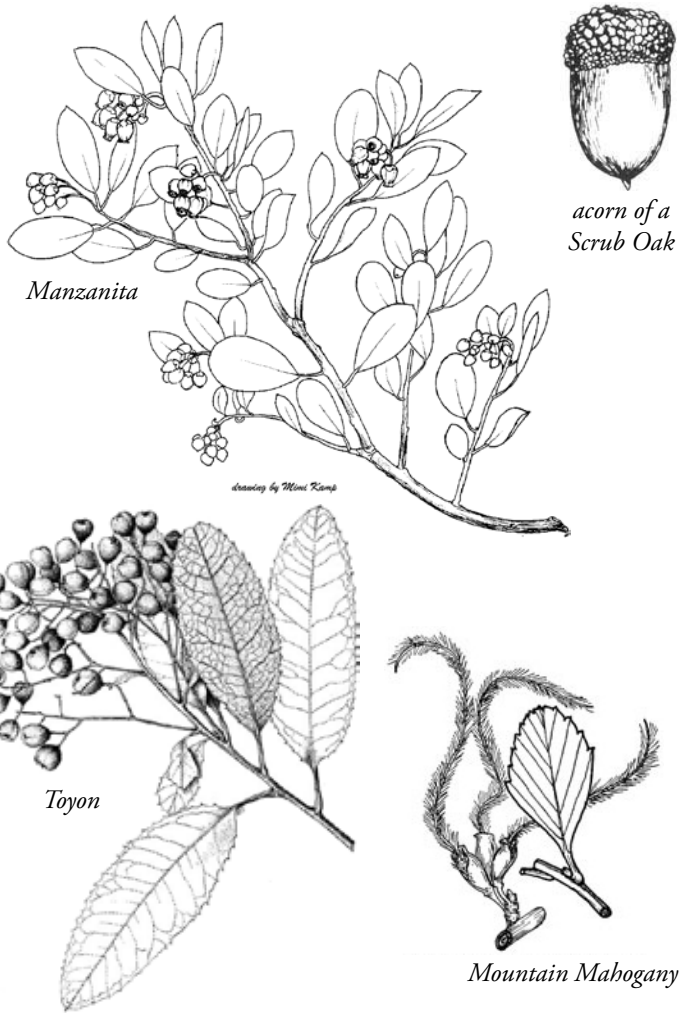
All of North America contains approximately 18,000 native plant species. Of those, California hosts over 5,000. The count is 7,200 when counting subspecies and varieties. Over one third of California native plants are found nowhere else on earth. *- California Native Plant Society*

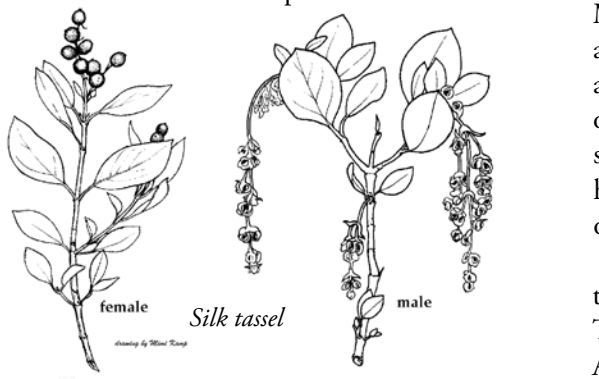
Chaparral: Master of fire adaptation

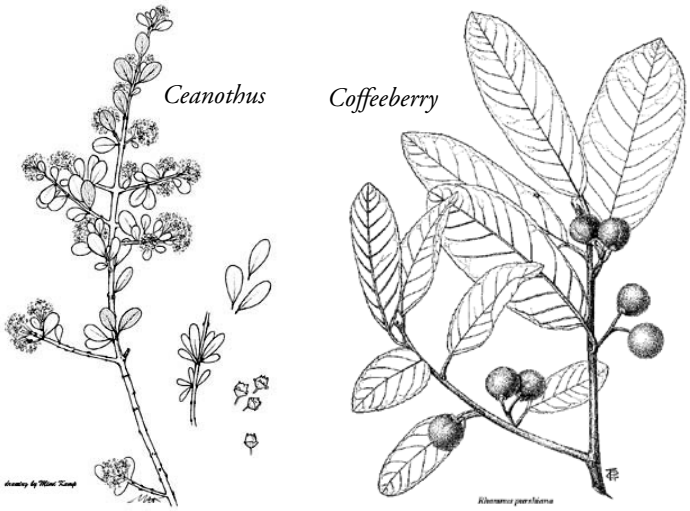
The Salmon River watershed contains many members of the Chaparral plant community - one of the most fire prone plant communities. They have evolved many adaptations to actually thrive in high heat, full sun, poor rocky soils, up to six months of no rain and forest fires to boot. Though many see forest fires as a destructive process, the amazingly hardy Chaparral plants would eventually die out if it wasn't for fire.

Some of the Chaparral plants one can see in the Salmon River Watershed are: Manzanita (Arctostaphylos spp.), California lilac (Ceanothus spp.), Scrub oak, California Coffeeberry (Rhamnus californica), Chaparral honeysuckle (Lonicera interrupta), Toyon (Heteromeles arbutifolia), Mountain mahogany (Cercocarpus spp.), and Silk-tassel (Garrya spp.). Chaparral plant communities are mostly made up of evergreen plants with small waxy leathery leaves. They often have very stiff braches and grow up to two meters. Cowboys often wore chaps in the west to protect their legs from the stiff Chaparral branches covering about 8.5 % of the California landscape. Chaparral is also found in other places in the world where Mediterranean climates are found.

Chaparral plants have many physiological adaptations. The leathery leaved plants are called sclerophyllous. In some Manzanita the leaves grow perpendicular to the rays of the sun to reduce water loss. These sclerophyllous plants also have fewer stomata than other plants. Stomata are tiny pores in the leaves that regulate transpiration. Plants such as Manzanita have root crowns. These crowns have the ability to resprout after a fire has burned the mature plant.







Many Chaparral plants produce very flammable resins, oils and alcohols which make for a very hot fire. This very hot fire is more apt to kill non Chaparral seeds further ensuring the dominance of the Chaparral community. The Manzanita seeds often need scarification to germinate. In Manzanita, this is provided by the heat of the fire and chemicals and smoke released by the burning of the adult plants.

If you have hiked in Chaparral in the past you may have noticed that there was little to no vegetation growing underneath. There are two main reasons for this. The first reason this occurs is Allelopathy - the leaching of chemicals from foliage and leaf litter from the Chaparral into the ground that inhibits growth of other plant species. The second reason one finds little undergrowth is that the dense Chaparral plants offer a safe haven for mammals and birds that eat seeds and small plants. Predators such as coyotes, hawks and owls have a difficult time seeing or getting to the animals protected under the branches of a Chaparral.

Chaparral is one of the many fascinating plant communities found in nature. Fire ecology is intimately intertwined with the well being of this plant community. Often, after a wild fire has burned Chaparral, the following spring one can find a virtual sea of sprouting plants. With conditions too hot and dry for most plants and many original plants resprouting from their root crowns, the Chaparral community will rejuvenate itself back to its former glory.

- Bob Atwood

sent in March 2007

Dear Salmon River Community Members,

With the summer months and fire season approaching, this will be a friendly reminder for everyone to do his or her part in being fire safe and staying prepared. Despite the cool and the rainy winter/spring we have had, fuels are drying out fast. It is easy to lose focus, become careless, or forget good practices. Here are a few reminders to help us all get through the 2007 fire season safely:

- Burn barrels and dooryard burning permits are required.
- Campfire permits are required this coming season except in developed campgrounds. Watch for more restrictive regulations as fire danger increases.
- Remember last year? The fires started and many of us were scrambling to clean around our houses. Don't wait until the fires are here. Make sure dead and dry vegetation is cut and cleared from around homes and outbuildings – a minimum of a 100 foot defensible space around your home and outbuildings. The Salmon River Fire Safe Council will have a grant to help you create the 100 foot defensible space around your home and outbuildings. If you are interested in participating, please contact us at 462-4665.
- Keep gutters and roofs clean of fallen leaves and needles.
- Check generators and make sure they are running properly and spark arrestors are in place. Check for oil spills and remove waste oil containers. Make sure the area around the generator is clear of any fuels.
- Think ahead and clean chimneys and wood burning stoves. Safely dispose of all ashes. Check entire system for excessive wear. Check and clean electrical and gas appliances in your home. Remember to be safe with candles.
- Have your fire extinguishers checked and charged. Watch for posters for opportunities to do this or contact the fire equipment companies within the county.
- Be safe during woodcutting season by checking the spark arrester on your chainsaw and always have a shovel and water with you. Be sure you are complying with any restrictions on chainsaw use call 530-842-4588 to check current regulations.
- Stack firewood safely away from your house.
- Check your water system and top off emergency tanks.
- Kayaking/mountain biking/mining season will soon be here bringing in a lot of forest users. Keep an eye out for abandoned campfires.
- Although campfires are legal on private property, consider the risk. If you must have a campfire make sure you have good clearance around the fire. Always have water and a shovel on site. Use only small wood. Drench with water and stir to put the fire out.
- If you smoke, snuff all smoking articles before throwing them away.

If you have any questions or need help with these fire safe tips, don't hesitate to call Salmon River Volunteer Fire and Rescue at 462-4706, the Salmon River Restoration Council at 462-4665 or the Salmon/Scott River Ranger District at 468-5351. These reminders can help all of us safely get through the 2007 fire season.

Sincerely,

Jim Bennett, Chief, Salmon River Volunteer Fire Department
Jim Villeponteaux, Facilitator, Salmon River Fire Safe Council
Kathy McBroom, Secretary, Salmon River Restoration Council
Ray A. Haupt, District Ranger, Salmon/Scott District Ranger
Kelly Blake, CDF Siskiyou Chief, Battalion 1

A New and Appropriate Management Response to Fires by the USFS

This last fire season, the Forest Service took a different approach to battling the many fires that started in the watershed. In the past we have seen the fire managers use direct, aggressive suppression techniques and back burning to control fires. We have seen many back fires result in more damage then the original fires. Last season the Forest Service used a tool that gave them more flexibility to actually use the fires to "do some good" by reducing fuels with mostly low intensity fire. This tool is called Appropriate Management Response (AMR).

AMR allows for a full range of strategies to be applied, from an intense full suppression response to managed wildland fire use. The first decision to be made is whether to have a suppression-oriented response or to allow the fire to burn to fulfill the land manager's objectives (fire use). An Appropriate Management Strategy is used to develop a plan or direction taken by an agency administrator to guide wildland fire management actions and meet protection and fire use objectives.
The following components are available in AMR:

Full Response – A suppression-oriented response action that can include: control lines surrounding the entire perimeter (hot spot and cold trail may be considered completed line) including any spot fires, protection of interior islands, burn-out of fuels adjacent to control lines, and mop-up to a standard adequate to hold under high fire intensity conditions. Full response objectives are based on safe yet aggressive approach to achieve containment of the fire at the most practical size by the beginning of the next burn period. Fire behavior may dictate, at least temporarily, the utilization of natural barriers or indirect strategies. These strategies and tactics would include direct control.

Confinement Response – The suppression-orientated strategy employed in AMR where a fire's perimeter is managed by a combination of direct and indirect actions and use of natural topographic features, fuels, and weather factors. These strategies and tactics could include perimeter control.

Wildland Fire Use (WFU) – The management of naturally ignited wildland fires, in pre-defined geographic areas, to accomplish specific pre-stated landowner objectives, as outlined in the Fire Plan. Strategies and tactics employed in a fire use action may reflect perimeter control and will include prescription control.

Maximum Management Area (MMA) – The firm limits of management capability to accommodate the social, political, and resource impacts of a wildland fire. Once an approved Wildland Fire Use Plan is established, during the Stage III process the MMA is fixed and not subject to change. If MMA determination is exceeded, the fire will follow the Wildland Fire Situation Analysis (WFSA) process.

Initial Management Area (IMA) – The interim limits of management of wildland fires placed under a Stage I or II implementation plan and before completion of best science fire behavior predictions for Stage III implementation. The size of an IMA may be adjusted based on fire behavior predictions, weather forecasts, site analysis, and risk assessment. The IMA becomes fixed as an MMA once a wildland fire is placed under a stage III implementation plan.

Salmon River Volunteer Fire and Rescue Update!
A new ambulance has come to the Salmon River. After an October collision left the local ambulance inoperable, the Salmon River Volunteer Fire and Rescue was in dire need of an ambulance. Etna Ambulance Company graciously contributed their extra ambulance, which was greatly appreciated and put to good use. However, only a four-wheel drive ambulance is really suitable for this area.

Tina Bennett found an ideal new ambulance. It is a 2002 Ford E350, with a 7.3-liter diesel engine. It has four-wheel drive and many other amenities, such as an infant seat and adjustable gas and brake pedals. A professional paint job with custom lettering clearly identifies the ambulance as Medic 11, part of the Salmon River Fire and Rescue fleet.

Fire and Rescue has also outfitted the ambulance with a new gurney. This is the very latest in rugged gurneys and promises the smoothest ride possible in and out of the ambulance. There is an added benefit in that it is identical to the one used by Etna Ambulance Company. Patients no longer need to be transferred to a different gurney when meeting up with Etna Ambulance for Advanced Life Support.

These exciting new developments enhance the safety of everyone in the Salmon River area. They also are costing Fire and Rescue a substantial amount of money. Local fund raising has been very helpful. The Forks Community Club continues to support Fire and Rescue with fund raising efforts such as calendar sales, dances and a games night. Cecilville Community Club has also contributed money. The Karuk Tribe generously contributed most of the cost of the new Gurney. Personal contributions are always welcome at any time. Keep an eye out for upcoming events to help keep the Fire and Rescue up and running. Thank you to everyone who has given so much to Salmon River Volunteer Fire and Rescue. *- Shannon Flarity*

SALMON RIVER FIRE WEEK - MAY 14th through MAY 18th

May 14th - Chainsaw Workshop 10 am at the Forks Community Club.

Update your knowledge or Learn anew about Chainsaw maintenance, Safe chainsaw practices, Safety, Equipment needs, and Falling & bucking up a small tree. RSVP the SRRC Watershed Center ASAP 462-4665 or info@srrc.org Bring: Your chainsaw if you have one, in good working order, your safety equipment, gloves, etc. and a lunch. Sponsored by the Fire Safe Council of Siskiyou County and the Salmon River Fire Safe Council.

May 15th - Fire Safety Training Level 1, Watershed Center @8am-4pm

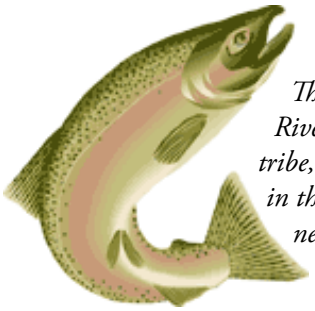
May 16th - Fire Safety Training Level 2, Watershed Center @8am-4pm

May 17th - Community Fire Safe treatment workday, meet at Forks Park @9:30am

May 18th - Community Fire Safe treatment workday, meet at Kathy + Dean McBroom's @9:30am

related date - May 29th - Salmon River FSC May meeting will be in Cecilville @1pm. Topic is 100' Defensible Space

SALMON RIVER SPRING CHINOOK/SUMMER STEELHEAD SURVEY - JULY 24th TO JULY 26th



July 24th - Survey Dive Training

July 25th and 26th - Spring Chinook & Summer Steelhead Survey Dives

July 26th and 27th - **Spring Chinook Watershed Symposium.**

This is an annual event highlighting Spring Chinook restoration in California, hosted this year by the Salmon River Restoration Council, the Salmonid Restoration Federation, MidKlamath Watershed Council, the Karuk tribe, USFS and others. This event will be a focal point in efforts to restore Spring Chinook - the once largest run in the Klamath basin. Speakers and organizations from around the state and Pacific Northwest will gather to network and share knowledge about Spring Chinook in Forks of Salmon. Registration forms for the conference and dives will be distributed soon.

July 27th and 28th - "Jammin' For the Salmon" *a benefit music and education festival.*

Please contact Nat Pennington at fisheries@srrc.org or call 530-462-4665 for more info.

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