McKenzie Meanderings

A Newsletter of the McKenzie Watershed Council

Summer 1998

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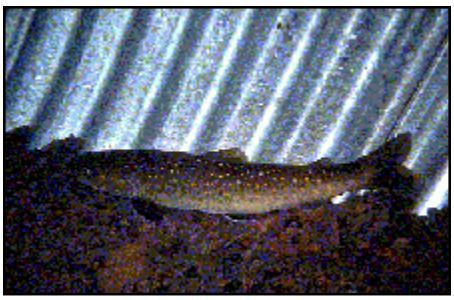
Salmon and Trout in the McKenzie

by John Runyon, McKenzie Watershed Council Coordinator

The recent "threatened" listing for bull trout (*Salvelinus confluentus*) and the proposed federal listing for the Upper Willamette spring chinook salmon (*Oncorhynchus tshawytscha*) underscores the critical situation facing these and other fish species in the Pacific Northwest. We are devoting this edition of *McKenzie Meanderings* to a discussion of salmon and trout, their status, and the quality of aquatic habitat in the McKenzie.

Designing a recovery strategy requires sound knowledge on the status of bull trout and chinook salmon habitat and populations. Bull trout were probably found historically throughout much of the Willamette Basin. Bull trout populations have been adversely affected by increases in water temperature through streamside tree removal, and other habitat alterations, especially impassable dams and culverts. Currently the McKenzie Watershed has the only documented viable population of bull trout in the Upper Willamette Basin. Bull trout require very cold waters for spawning and rearing, with spawning in the McKenzie River system usually occurring from early September to early October in cold, spring-fed creeks.

Bull trout restoration efforts in the McKenzie Watershed have concentrated on reducing harvest of adults and improving fish passage into important spawning areas. For example, in 1995, upstream passage for bull trout was re-established in Olallie Creek, a spring-fed tributary in the upper watershed. Bull trout now appear to be recolonizing Olallie Creek with spawning adults, juveniles, and increasing numbers of redds (spawning sites) observed in recent surveys.



Bull trout swimming upstream through Olallie passage culvert on Willamette National Forest, McKenzie Ranger District, Oregon.

Spring chinook have unique life histories, which provide clues on what kind of habitat they require to maintain healthy populations. In contrast to coho salmon, which reproduce and rear in small, coastal streams, chinook salmon prefer relatively large waters. In the McKenzie River spring chinook reproduce, for the most part, in the upper portions of the watershed — such as Horse Creek — where there is high quality spawning habitat. In a recent survey, the quantity and quality of existing spring chinook spawning habitat in the upper watershed was found to be good, with little change from what was found historically — with the exception, of course, of areas blocked by dams. The native McKenzie spring chinook population, however, is on a downward trend. In the past more than 18,000 adult spring chinook would return to the McKenzie River. In 1998 to date, a little over a thousand returning adult fish were counted at Leaburg Dam.

Historically, large numbers of juvenile chinook would move from the upper portions of the McKenzie River watershed to the lower river (beginning near Deerhorn County Park) where the river was characterized by a channel that would meander across the wide valley bottom. In these areas juvenile spring chinook will hold in pools and side channels before migrating downstream to the ocean. Unfortunately, there has been loss over time of this kind of important juvenile chinook rearing habitat in the river, with most habitat degradation occurring in the lower basin where private lands are concentrated.

The lower McKenzie River valley is increasingly in urban, residential, and agricultural land uses. Dikes and riprapping have confined large portions of the lower river to a set channel, with dramatic decreases in pools and loss of side-channel habitat. Between 1930 and 1990 the lower river experienced a 67 percent loss of large pools and over a fifty percent reduction in mid-channel islands.

Artistic rendering of a chinook salmon.

Unfortunately for the fish, the situation is not getting better. Lane County's population is growing and the floodplain area in the lower McKenzie River valley is where much of the current residential and urban development is concentrated. Homebuilding and other development in the river's floodplain impacts fish habitat through removal of vegetation along stream banks, ongoing riprapping (or placement of large rock to stabilize the river bank) of the river channel, increased pollution, and other habitat modifications.

To begin to address these threats to spring chinook and bull trout populations, the McKenzie Watershed Council is working to protect and restore important habitats by identifying areas in the watershed that are candidates for conservation easements and acquisition (see article on Page 5), to encourage collaborative restoration efforts such as the Gate Creek Partnership project (see article on Page 3), and to monitor water quality, or indicators of water quality such as macroinvertebrates (see article on Page 2) so that we may understand the status of the ecosystem upon which spring chinook salmon and bull trout depend. We invite you to join us in protecting and restoring the McKenzie Watershed by getting involved in these or other ongoing McKenzie Watershed Council programs.

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Partner Organizations

Audubon Society of Lane County
City of Eugene
City of Springfield
East Lane Soil and Water Conservation District
Eugene Water & Electric Board
HMT Technology
Lane County
McKenzie Fisheries Restoration Project
McKenzie Valley Residents' Association
Mohawk Community Council
Oregon Department of Fish and Wildlife
Oregon Division of State Lands
Springfield Utility Board
University of Oregon Outdoor Program / McKenzie River Trust
U.S. Army Corps of Engineers
U.S. Bureau of Land Management
U.S. Forest Service
Watershed Educator / Lower River Resident
Weyerhaeuser Company

Our Mission

"to foster better stewardship of the McKenzie River watershed resources, deal with issues in advance of resource degradation, and ensure sustainable watershed health, functions and uses"

Newsletter Editor: Renee Davis-Born

River Stewardship Starts By Linking Together

by Steve Hinton, Oregon Trout Riverkeepers Program

Do you consider yourself a "steward" of your watershed? What do you believe constitutes stewardship? Is stewardship something that is practiced alone or in groups? If you would like to explore the answers to these questions while learning more about the fauna of your watershed please join us this fall for the First Annual Macroinvertebrate Round-up on the McKenzie!

Oregon Trout and the Xerces Society, a biological conservation group, are teaming up with the McKenzie Watershed Council and local volunteers to collect and identify aquatic insects (also called macroinvertebrates) in the watershed. Macroinvertebrates are an important food source for salmon and trout and can serve as indicators of water quality because of their sensitivity to pollution.

We'll kick off this exciting program with an evening seminar about macroinvertebrates on **Thursday, August 27th at 6:30 p.m. at the Walterville Community Center**. The seminar, which is sponsored by the McKenzie Flyfishers, features a presentation by Rick Hafele, author of *The Complete Book of Western Hatches: An Angler's Entomology and Fly Pattern Field Guide*. We also will discuss stewardship programs in the Northwest and monitoring and restoration activities within the McKenzie Watershed. Refreshments will be provided. If you're interested in learning more about macroinvertebrates, or would like to meet and talk with your neighbors about stewardship in your community, please join us on August 27th.

In preparation for the Macroinvertebrate Round-Up, the McKenzie Watershed Council is sponsoring a volunteer training on **Tuesday, September 8th at 6:00 p.m. at Mohawk High School Library**. Staff from Oregon Trout and the Xerces Society will teach interested volunteers how to sample and identify macroinvertebrates. Be prepared to learn alot!

Finally, on September 12th, volunteers will round-up McKenzie macroinvertebrates! Everyone is encouraged to join along for a full day of fun and excitement as we probe the substrate in an effort to assess the health and welfare of the mighty McKenzie and its tributaries. Throughout the day we will discuss the notion of stewardship, protection and recovery of native fish stocks, and a strategy to monitor macroinvertebrates within your watershed. Kids and parents are welcome to join in and help collect samples. (Waders will be provided, but if you have an extra pair, please bring them.) The information that we collect will help everyone understand more about the watershed and the effects of land use impacts, habitat restoration, and recovery measures. By learning more about the McKenzie and the animals that depend on it for survival, we all can become better stewards.

Adult dragonfly.

If you have questions about either the seminar or the round-up, please contact Steve Hinton at 503/222-9091 or the McKenzie Watershed Council at 541/741-5235. We hope to see you later this summer!

And speaking of bugs...

The McKenzie Watershed Council recently received two grants to begin a macroinvertebrate monitoring and education program. The Padi Foundation provided funds for the council to train and assist local volunteers with yearly monitoring of aquatic insects, and the Springfield Education Foundation awarded a grant to work with teachers and students at Thurston Middle and Elementary schools on macroinvertebrate monitoring. Our sincere thanks to both of these sponsors!

The Gate Creek Partnership Project

by Maryanne Reiter, Weyerhaeuser Company, and
Karen Martin, Bureau of Land Management

The Gate Creek watershed, a tributary to the middle McKenzie River, was selected as a project site of a unique fish habitat enhancement partnership due to its diverse fish species and ownership patterns. Habitat for such fish species as chinook salmon, rainbow trout and potentially bull trout, which might forage in the lower reaches, exists in Gate Creek, while landowners include private timber companies and federal agencies.

In 1995, Guistina Land and Timber, Guistina Resources, Weyerhaeuser Company, the Bureau of Land Management, the U.S. Forest Service, Oregon Department of Fish and Wildlife and Oregon Department of Forestry worked together in various capacities to enhance near-term and long-term fish habitat in Gate Creek. Near-term habitat enhancement projects included placing logs and boulders in the stream to increase in-channel habitat complexity. The long-term supply of large wood to the stream was improved by increasing conifer growth in riparian areas.

Money for the projects originated with a matching grant from Bring Back the Natives for the watershed analysis work done by Weyerhaeuser Company in 1995 and road treatments and fish passage improvements accomplished by all three private timber companies. Bring Back the Natives is a cooperative effort between the National Fish and Wildlife Foundation, the Bureau of Land Management, the USDA Forest Service, the Bureau of Reclamation, U.S. Fish and Wildlife Service and Trout Unlimited to restore native aquatic species and their habitats through local and regional partnerships.

Past forest practices including harvest of trees adjacent to the stream and direct removal of wood from streams, as well as natural disturbances such as fires and floods have left many stream channels with low amounts of in-channel and stream-adjacent wood in the Gate Creek watershed. Many previously disturbed riparian areas are now dominated by hardwoods (mainly red alder) as a result. While hardwoods provide many functions to stream channels, conifers provide more long-term stability once they fall into the stream channel due to their durability. To increase the long-term supply of conifers to the South Fork of Gate Creek, approximately 12 acres (8 acres on private and 4 on federal lands) of hardwood/shrub-dominated stands were cleared and planted to conifer. Near-term in-channel habitat complexity was increased by the addition of over 100 pieces of large wood that had previously been deposited high on stream banks during the 1996 flood. In the North Fork of Gate Creek small diameter conifer stands were more abundant than in the South Fork of Gate Creek. These were thinned to increase near-term growth and potentially increase the rate at which large woody debris enters into the stream. In addition, large boulders were added to the North Fork to increase habitat complexity.

The final portion of the Gate Creek project was completed in the spring of 1998. Though there was some skepticism in the beginning about bringing together such a diverse group, it soon faded and people began to enjoy working together. Because the Gate Creek fish enhancement partnership project was so successful, many of the partners, plus managers for Hancock Timberlands, are looking to work together in the Deer Creek drainage.

Gate Creek project site.

Mohawk Minute

by Lorna Baldwin, East Lane Soil and
Water Conservation District (SWCD)

East Lane SWCD, as a partner on the McKenzie Watershed Council, has supported the formation of the Mohawk Watershed Planning Group. This group of local, volunteer landowners has been meeting since June of 1996, educating themselves and others about their watershed. The group's education committee is working with the local school board to address state requirements for natural resource education programs, and with other community members to involve students in landscaping the new school with native trees and shrubs. Another committee is working to develop a Quality Assurance Project Plan for the Department of Environmental Quality that will serve as the beginning of a Citizen Water Quality Monitoring Program.

The Mohawk Watershed Planning Group is also working with their technical team to complete an assessment of the Mohawk Watershed with funds from the Governor's Watershed Enhancement Board. The Natural Resources Conservation Service is taking on the core work of the assessment with other team members supplying data and peer review. Assessment topics include among others, fish habitat, hydrology, and sediment sources. Projected completion date for the action plan is Fall of 1998.

The East Lane SWCD has worked with over 40 landowners on the Mohawk and mainstem McKenzie rivers in the last few years. Projects completed in 1998 include 3,140 feet of riparian exclusion fencing and over 2,000 native trees and shrubs planted on 8 different sites along the Mohawk and in the upper McKenzie Watershed. Projects were selected based on their ability to improve water quality, decrease soil erosion

(Continued on Page 4)

Thanks to Louise Solliday, charter member of the McKenzie Watershed Council, for suggesting McKenzie Meanderings *for our newsletter name!*

Mohawk Minute

(continued from Page 3)

and improve fish and wildlife habitat. Forty-five volunteers participated from three schools and the community. Northwest and Looking Glass Youth Corps' were hired for plantings and for blackberry abatement.

The Mohawk Watershed Planning Group will be distributing a newsletter prior to their second annual "community dinner" at Shotgun Park in September. If you are interested in being on the mailing list or would like assistance with your stream bank give Lorna Baldwin, East Lane SWCD, a call at 541/338-8078.

Volunteers planting a seedling along recently fenced stream bank.

Would you or someone you know like more information about volunteer opportunities with the McKenzie Watershed Council, or to be added to our mail or e-mail list? If so, please contact us at 541/741-5235 or send an e-mail to davisborn@proaxis.com.

The Army Corps of Engineers Studies Floodplain Restoration

by Matt Rabe, U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers has begun the reconnaissance phase of a Willamette River Floodplain Restoration study. This study will evaluate the potential for flood damage reduction, in addition to environmental and floodplain restoration within the Willamette Basin. The Corps has until May 1999 to complete this first phase.

Floodplain restoration offers an opportunity to provide for fish and wildlife restoration by improving habitat through non-structural measures. Restoring flood plains will reduce flood hazards to homes, public structures and farms. A restored floodplain would act to absorb excess flood waters, slow the velocity of flood waters, and create habitat for a wide variety of plants and animals, including proposed and federally-listed threatened and endangered fish species, such as bull trout and spring Chinook salmon in the McKenzie.

The $100,000 reconnaissance phase and any follow-up projects will focus on priority benefits of ecosystem restoration and flood damage reduction. The project would encourage further private and public partnerships in the region in the prudent and beneficial uses of floodplains.

The scope of the Corps' study is open to the entire Willamette Basin, including major tributaries such as the McKenzie River. As the study continues, however, the scope will be refined as needs and opportunities are identified. If the Corps decides there is a federal interest in proceeding, a feasibility phase, which takes an even more detailed look at the problem and potential solutions, would take place during the next few years. The Corps hopes that groups such as the McKenzie Watershed Council will actively participate in developing a comprehensive plan for floodplain restoration and then in implementing restoration projects within their watershed.

Floodplain condition along the mainstem Willamette River ranges from natural to highly altered.

The federal government is providing 100 percent of the funding for this first phase of the study. The feasibility phase will require a 50-50 cost-share with a local sponsor. Implementation of any Congressionally approved plan would require a 35 percent cost-share from a local sponsor. For more information on the Corps' Willamette River Floodplain Study, contact Matt Rea, study manager, at 503/808-4732.

The McKenzie Watershed Council would like to thank the many local businesses that sponsored our recent riverside events:

Bi-Mart Corporation
Log Cabin Inn
McKenzie Mist
McKenzie River Nursery
Spar Pottery Productions
Springfield News
Swartz Bros. Select Markets
Triangle 5 Ranch
Wayfarer Resort

Habitat Protection in the McKenize

by George Grier, McKenzie River Trust

Healthy habitat is a key component of a healthy watershed. Habitat mitigation, restoration and protection is a central theme of the McKenzie Watershed Council's action plans, the Oregon Plan for Salmon and Watersheds and the mission of our federal agencies. In February, a group composed of representatives from the McKenzie Watershed Council, the McKenzie River Trust (a local land conservation group) and employees of state and federal agencies started meeting on a regular basis to share information on potential mitigation sites, explore mitigation and restoration programs and funding, and brainstorm and collaborate on candidate sites for conservation easements and acquisition.

Dubbed the Habitat Conservation & Acquisition Working Group (AWG for short), this informal cooperative approach has laid the foundation for some exciting future results: collaboration on an Oregon Department of Transportation mitigation site for the Highway 126 construction, prioritization of mitigation sites for Bonneville Power Administration/ Oregon Department of Fish and Wildlife (ODFW) funding and a referral for a 640-acre working forest conservation easement. Preliminary negotiations are underway for a cooperative purchase by a local utility and ODFW for acreage that would allow protected expansion of wellfields, which provide many watershed residents with their water supply, while enhancing habitat adjacent to land under conservation easement to the McKenzie River Trust.

Longer term, this type of collaborative approach will be important in furthering relationships with private landowners and competing for scarce funding. The U.S. Army Corps of Engineers recently met with the group as part of the initial outreach for its Floodplain Restoration Study (see article on Page 4). The AWG's priority sites have received favorable scores during the Bonneville Power Adminstration's evaluation process for funding. Stay tuned...

While these large-scale projects can have significant immediate effects, it is the cumulative impacts that will make the most difference in the long term. Smaller scale efforts by private property owners have enormous potential. Through property donations, bargain sales and conservation easements by individuals, the McKenzie River Trust has been able to protect lands along the McKenzie, Horse Creek and Blue River. Individuals can explore cooperation with federal programs such as the Natural Resource Conservation Service's Wildlife Habitat Improvement Program or the Coordinated Resource Management Program. These programs have been of great assistance to landowners who are interested in improving their riparian area along the Mohawk. Mitigation banking and riparian habitat preservation and enhancement opportunities also are available through ODFW and East Lane Soil and Water Conservation District. The McKenzie Watershed Council has and will continue to hold workshops on riparian habitat management and plantings and can provide you with guidance for where to go to get the best management practices for your property.

We all can make a difference; for information contact the McKenzie River Trust at 541/345-2799 or the McKenzie Watershed Council at 541/741-5235.

The McKenzie River.

Scenes from the Watershed

Volunteers removed Scotch broom and English ivy at Helfrich Landing during "Down by the Riverside" 1998.

McKenzie Watershed Council partners and friends improved trails at the council's 5th Birthday Celebration, held at the Old McKenzie Trout Hatchery.

Local residents, in cooperation with the watershed council, Springfield Utility Board, and City of Springfield, completed the first year of water-quality monitoring on Cedar Creek.

Events in the McKenzie Watershed -- Summer and Fall 1998

Jul. 31 -Aug. 2 Mary Cole Days in the Mohawk Valley. Call Pat Thompson, Mohawk Community Council, at 933-2003 for more information.

Aug. 1 McKenzie River Lions Leaburg Festival. Call the McKenzie River Valley Chamber of Commerce at 896-3330 for more information.

Aug. 1 Salmon Watch Volunteer Training, Eugene Water & Electric Board, 8 a.m.-4 p.m. Call Rebecca Martin at Oregon Trout, 503/222-9091 for more information.

Aug. 2 McKenzie River Guides' Association River Clean-Up. Call Brad Edwards at 896-3547 for location and information.

Aug. 4 Mohawk Watershed Planning Group, Mohawk High School Library, 7 p.m. Call Lorna Baldwin at 338-8078 for more information.

Aug. 27 McKenzie Flyfishers' Macroinvertebrate Seminar, Walterville Community Center, 6:30 p.m. Call Steve Hinton, Oregon Trout, at 503/222-9091, or the McKenzie Watershed Council at 741-5235 for more information.

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Sept. 1 Second Annual Mohawk Watershed Planning Group Community Dinner, Shotgun Park. Call Lorna Baldwin at 338-8078 for time and information.

Sept. 5 Walterville Community Fair. Call the McKenzie River Valley Chamber of Commerce at 896-3330 for more information.

Sept. 8 Macroinvertebrate Round-Up Volunteer Training, Mohawk High School Library, 6:00 p.m. Call Steve Hinton, Oregon Trout, at 503/222-9091, or the McKenzie Watershed Council at 741-5235 for more information.

Sept. 10 McKenzie Watershed Council, Eugene Water & Electric Board, 5:30 p.m. Call John Runyon at 741-5235 for information.

Sept. 12 First Annual Macroinvertebrate Round-Up. Call Steve Hinton, Oregon Trout, at 503/222- 9091, or the McKenzie Watershed Council, 541/741-5235 for location and information.

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Nov. 3 Mohawk Watershed Planning Group, Mohawk High School Library, 7 p.m. Call Lorna Baldwin at 338-8078 for more information.

Nov. 12 McKenzie Watershed Council, 5:30 p.m. Call John Runyon at 741-5235 for location and information.

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The McKenzie Valley Residents' Association meets monthly on Monday evenings. For date, time, and location, call Carrieanne Davis at 896-3539.

Also, the Cascade Center for Ecosystem Management is sponsoring several *Nature Talks!* at Delta Campground this summer. Contact Pam Druliner, Blue River Ranger District, at 541/822-3317 for more information.

Interested in learning more about forest practices in our area? Call the Oregon Forest Resources Institute at 800/719-9195 or check out their web site at http://www.oregonforests.org/ to find out about field tours scheduled for this summer.

CALL THE McKENZIE WATERSHED COUNCIL AT 741-5235, OR E-MAIL TO davisborn@proaxis.com, TO HAVE YOUR EVENT ADDED TO OUR CALENDAR!

McKenzie Watershed

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