

# Juniper distinguished as rangeland, water stealing culprits



Junipers consume approximately 20 gallons of water a month during summer months.

The following article, written by Richard Yost, is reprinted with permission from the Oregon Farmer Stockman.

A quick check of the headlines and topics of discussion at most watershed workshops and one thing becomes quite clear: The riparian zone, that band of vegetation along rivers and streams, is the darling of the resource rehabilitation movement.

Landowners and government agents intent on making management changes to promote better soil and water conservation need to remember that this zone of life is only one small part of a much greater whole, according to OSU rangeland specialist Jay Lorenz.

"Riparian zones are the focal point for most of our watershed management. In many areas, as much as 75 percent of the wildlife is dependent on this area," Lorenz said. "But, we humans tend to break things into many different parts. Instead of looking at the environment as a whole, we tend to look only at the uplands, or the streams or the riparian zone. When we are talking about resource management, we must be careful to not make nature fit our efforts to compartmentalize it. We would do well to remember that everything is interconnected."

He added that this separating of things into convenient cubby-

holes spills over into looking at the environment based on property lines and the legal constraints placed on government agencies.

"We have to overcome some of the cultural barriers we've set up for ourselves," Lorenz maintains. "We need to get together with our neighbors (and various agencies) and work on the whole system."

### Water Thieves

The best-recognized water-stealing culprits on rangelands are junipers. Just how much these trees take and their impact on a section of rangeland has been the focus of an eight-year study by OSU range resources specialist Lee Eddleman. He has found that there is "a big change in the water and nutrient cycle" in areas where juniper can get a "roothold" and spread.

"First you see the forbs die out and then the grasses and then the shrubs," he said. "In an area of low rainfall like eastern Oregon, the trees can literally use all the water."

Putting some numbers on such claims, he pointed out that the plants in this arid region have adapted to existing on only 12 to 13 inches of annual rainfall. When junipers encroach upon an area, the available moisture for other plants can be reduced to zero inches.

"A big juniper can intercept 70 percent of the moisture that fall," Eddleman said. "Its branches will catch the snow and hold a tremendous amount of rain water, both of which then evaporate back into the air without ever touching ground."

"During the summer months, one tree will use in excess of 20 gallons of water. The trees send out a wide-spread mat of roots to capture every bit of available moisture. They will even grow around the roots of other trees and bushes, robbing them of any moisture."

Eddleman also stressed that while there might be a little excess water left over to feed area streams in years of good rainfall, during times of drought, as is now the case in much of the eastern parts of the state, a heavy juniper infestation assures no water ever makes it into the streams.

If junipers are the cause of a lack of soil moisture, then it follows the situation will be im-

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## Basin plan focuses on fish populations

Salmon and steelhead habitat totaled about 14,700 river miles in the Columbia River Basin before 1850, biologists estimate. Today, the total is about 10,100 miles, a loss of about 30 percent. In Idaho, 66 percent of the habitat once available for salmon and steelhead has been lost or blocked dams.

In the 1930s, before construction of the mainstem dams on the Columbia and Snake rivers, annual runs of adult salmon and steelhead totaled between 11 million and 16 million fish. Today, the total run is about 2.5 million fish, a decline of 85 percent. Of those 2.5 million, about 300,000 (12 percent) are wild fish. The remaining 88 percent originated in hatcheries or are hatchery stock that now return to streams to spawn.

### Woman charged in husband's death

A 43-year-old member of the Confederated Tribes of Warm Springs has been charged with second-degree murder for allegedly stabbing her husband in the neck with a kitchen knife.

Wanda McCraige was arraigned last week before a magistrate in federal court.

She is accused of fatally stabbing her husband of nearly 20 years, Warren McCraige, age 42, August 6 during an argument at their home on the Colville Indian Reservation in Washington. The case is being investigated by the FBI.

### WHAT KILLS FISH?

**Dams**  
Dams on the Columbia River and its tributaries are considered the biggest salmon killers.

Adult salmon migrating upstream to spawn must find their way over the dams. Fishways, such as ladders, have been installed at many dams, but water conditions at the base of the dams can mask the flows that should attract fish to the fishway entrance. Work is under way to increase upstream survival rates.

Young salmon, called smolts, migrating downstream can be stunned or killed as they pass over spillways or are swept into turbines. Intense water pressure fluctuations in the turbine pits kill many young fish, and others are actually chopped up by the spinning turbine blades. Smolts also are susceptible to "gas bubble" disease, caused by inhaling the frothy water at the base of spillways.

Reservoirs behind Columbia and Snake river dams contribute to fish mortality because reservoirs slow the flow of water in the river. This stalls the migration of juvenile fish to the ocean, upsetting their biological transformation from freshwater to saltwater creatures, a transformation that is timed to coincide with an unimpeded rush to the sea. The sluggish waters also make the salmon more susceptible to predators, such as squawfish and walleye, and disease.

**Disease**  
Because of the concentration of large numbers of fish in small areas, hatchery fish are more susceptible to disease than wild fish.

Indirectly, hatchery fish also are responsible for declines in wild runs, as wild fish must compete in the river and ocean with greater numbers of hatchery fish.

**Fishing**  
Commercial and sport fishing, both in the ocean and on the rivers, harvest thousands of fish. Because both wild and hatchery stocks swim together in what is known as a "mixed stock" fishery, large numbers of wild fish are caught in the commercial harvests.

**Development in general**  
Logging, mining, road building and streamside development to

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## Construction building Tenino by-pass road

Tribal Construction has entered into an agreement with the Bureau of Indian Affairs for the extension of the East Tenino road. The East Tenino By-Pass project consists of clearing, excavating and paving 1.41 miles of road from behind the Community Center east to Highway 26 and south of Shitike Creek.

The project will provide between 20 to 30 tribal member jobs. Over half of the \$1.7 million contract value will remain in the community in the form of payment for wages to tribal members, tribal member equipment leases, suppliers and subcontractors. Chilkat Enterprises, Johnny Guerin, DMJ Automotive, Tenino Fuel and Warm Springs Crushing are the anticipated tribal member suppliers and subcontractors.

General Manager of Business and Economic Development Charles Jackson submitted to Tribal Council a resolution requesting the project be negotiated as a 93-638 contract. Tribal Construction will provide jobs and continue to train and develop tribal members in the construction industry.

Wages are estimated to be in excess of \$250,000. According to

Doug Medlin of tribal construction, this one job alone will have more economic impact to the community than the approximate \$9 million being spent on the new tribal museum and the Early Childhood Center. Equipment operators, lab laborers and flaggers will be the primary personnel used on the project.

Jackson stated that by using tribal member employment, sup-

pliers and subcontractors, the money stays in the community and has a multiplier of approximately two times the expenditures.

This is an example of the construction department providing a service, employment and economic benefits to tribal members and the entire Warm Springs Community, concluded Medlin.



Work began recently on the construction of the East Tenino By-Pass project. The road will join Highway 26 near mill's truck scale.

## 509-J announces guidelines for reduced/free meals

Jefferson County School District 509-J announced its policy for free and reduced price meals for children unable to pay the full price of meals served under the National School Lunch Program. Each school and the office of Jefferson County School District 509-J has a copy of the policy, which may be reviewed by an interested party.

The following household size and income criteria will be used for determining eligibility. Children from households whose income is at or below the levels shown are eligible for free or reduced-price meals.

Families may fill out applications prior to the start of school so that lunch benefits are not delayed. Applications are available at the District office at any time, 1355 Buff Street, Madras, Oregon 97741 (Phone: 475-6192) or at the individuals schools beginning on August 23, 1991. The information provided on the application will be used for the purpose of determining eligibility and may be verified

at any time during the school year by school or other program officials. **Important—benefits will not begin until the application has been approved.**

For school officials to determine eligibility, households receiving food stamps or "Aid for Dependent Children" (ADC) must list the child's name, their food stamp or A.D.C. case number and the signature and name of an adult (21 years or older) household member. Since

you have already given information to the welfare office, the school can confirm your eligibility. Households not receiving food stamps or A.D.C. must list: names of all household members; social security number of the primary wage earner responsible for the child applying for benefits; total monthly income and the amount of income (before deductions for taxes, social security etc.) each received last month and source of

the income received by each household member such as wages, retirement, or welfare; and the signature of an adult household member certifying that the information provided is correct. If you have a household member for whom last month's income was higher or lower than usual, list that person's expected average monthly income.

## Diabetic Breakfast Club meets

On the fourth Thursday of every month, the Diabetes Program at the IHS Clinic serves a breakfast for patients with diabetes. An education topic is also presented at the breakfast. In addition, IHS staff are available to take blood sugars and to answer any questions you may have.

This month the breakfast will be on Thursday, August 22 from 8:30 a.m. to 9:30 a.m. Linda Knight, Public Health Nurse at the Clinic, will be discussing immunizations for patients with diabetes. The breakfast this month will feature huckleberry pancakes with huckleberry syrup (sugarless, of course). Thanks to Lucinda Green and the Diabetes Exercise Class for picking the huckleberries!

If you have any questions about the breakfast or about the Diabetes Program in general, please call Candace Reich, Diabetes Program Coordinator at the Clinic at 553-1196.

## Spilyay Tymoo

..... Staff Members .....

**MANAGING EDITOR** ..... SID MILLER  
**ASSISTANT EDITOR** ..... DONNA BEHREND  
**PHOTO SPECIALIST/WRITER** ..... MARSHA SHEWCZYK  
**REPORTER/PHOTOGRAPHER** ..... SAPHRONIA COOCHISE  
**TYPESETTER/RECEPTIONIST** ..... SELENA THOMPSON

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**Spilyay Tymoo, P.O. Box 870, Warm Springs, OR 97761**  
**PHONE:**  
 (503) 553-1644 or (503) 553-3274  
 FAX No. 553-3539  
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## Timber tour set for September 4, 5

WARM SPRINGS INDIAN RESERVATION MAP

### Timber Tour Agenda

September 4-5, 1991

**WEDNESDAY, SEPTEMBER 4th**  
**8:30 A.M.** Bus leaves from Tribal Administration Building  
**9:30 A.M.** Arrive at Indian Creek proposed timber sale (stop #1)  
**12:00 P.M.** Lunch at Bear Springs Camp Ground (stop #2)  
**1:00 P.M.** Arrive at Paquet Gulch/Quartz Butte proposed timber sale (stop #3)  
**3:00 P.M.** Return to Warm Springs

**THURSDAY, SEPTEMBER 5th**  
**8:30 A.M.** Bus leaves from Tribal Administration Building  
**9:30 A.M.** Mill Creek proposed timber sale. Discussion on Spruce Budworm. (stop #4)  
**12:00 P.M.** Lunch at Old Mill Camp (stop #5)  
**1:00 P.M.** South Fork - Miller Flat proposed timber sale & road rehabilitation program. (stop #6)  
**3:00 P.M.** Return to Warm Springs

The Tribal Timber Committee and the BIA Forestry Department would like to invite all interested Tribal members to attend the annual Timber Tour that has been scheduled for September 4-5, 1991. The purpose of the Timber Tour is to hear comments and concerns on the proposed timber sales. There will be four proposed timber sales presented by the BIA Forestry Staff. The bus will leave the administration building at 8:30 each morning. The Timber Committee encourages all those who have concerns, comments or questions to attend the Tour. If you have any questions please feel free to contact the Tribal Timber Committee Secretary at 553-3257 or the BIA Forestry Staff at 553-2416. We hope to see you on the tour.