Ripples in the Grande Ronde

Summer 2006

RIVERS UNITING NEIGHBORS · QUARTERLY NEWS FROM THE GRANDE RONDE MODEL WATERSHED

Right of passage

Improvements for fish and irrigators alike

by Lyle Kuchenbecker, GRMW

Crop irrigation using surface water from streams is an integral component of agriculture in eastern Oregon. Without surface irrigation water, it would be very difficult to grow most crops in this part of Oregon. Diverting water from streams, however, often poses challenges to the salmon, steelhead and resident trout that migrate through those waterways. Recent efforts to improve diversions, however, are changing that.

The Oregon Water Resources Department is the state agency charged with administration of the laws governing surface and ground water resources. Under Oregon law, all water is publicly owned. With some exceptions, cities, farmers, factory owners and other users must obtain a permit or water right from the Water Resources Department to use water from any source, whether it is underground, or from lakes or streams. Water rights remain with the land when ownership changes.

Oregon's water laws are based on the principle of prior appropriation. This means the first person to obtain a water right on a stream is the last to be shut off in times of low streamflows. In water-short times, the water right holder with the oldest date of priority may demand the water specified in his water right regardless of the needs of junior users. If there is a surplus beyond the needs of the senior right holder, the water right holder with the next oldest priority date may take as much as necessary to satisfy needs under his right, and so on down the line until there is no surplus or until all rights are satisfied. The date of application for a permit to use water usually becomes the priority date of the right.

The use of surface water for irrigation in the Grande Ronde Basin is a long-standing use. Water rights date back to the 1860s when European settlers began farming in the Grande Ronde Valley. Water can be withdrawn from streams using either pumps or some type of diversion structure to direct water into a ditch to carry it to its place of use.

The use of water diversion structures can complicate life for native fish in eastern Oregon streams. The first in-channel structures were usually gravel push-up dams installed by hand on smaller streams, or with horses and, later, mechanized equipment on larger streams. Over the years more permanent wood, rock or concrete structures replaced many of the gravel push-ups, although temporary push-ups are still used in some of the smaller streams.

A potential issue with any type of water diversion structure in the stream channel is fish passage. Migrating adult salmon and steelhead as well as juvenile fish must be able to successfully pass the structures in the spring and throughout the summer months when streamflows are low. Adults are able to jump several feet to negotiate obstructions if there is a jump pool below the obstruction.

Adult migration of steelhead and chinook salmon in the Grande Ronde Basin begins in early March and extends to mid-July. Adult steelhead migration in the Grande Ronde, Wallowa and Imnaha River systems begins in early March; the run is finished by mid-May. Adult chinook are migrating through local streams to headwater areas beginning in early June. The run usually ends by mid-July. Bull trout don't have a defined run-time as do steelhead and chinook, but they do move around the basin during the cool-weather months, locating in the coldest-water tributaries over the summer.

.....Continued on Page 2, PASSAGE

Top: Catherine Creek Swackhammer diversion structure prior to 1995. The structure had a single-drop concrete wall with a marginal fish ladder. During periods of low-flow, gravel was pushed up to divert water into the ditch, further restricting fish passage. Right: Construction work in stream channels requires de-watering the work sites. Prior to de-watering, fish must be removed and relocated. Here a crew is using an electro-shocker to collect fish at the Swackhammer project. Fish were transported by buckets to a transport tanker and relocated upstream of the work site.

PASSAGE, continued from Page 1.....

Irrigation diversions generally do not seriously inhibit adult steelhead migration. Streamflows are usually high during this period and additional practices to divert water, such as placing boards to direct more water into an irrigation ditch, are not needed.

On the other hand, adult chinook salmon migration can be affected by diversions, depending on streamflows, run timing, and the onset of the irrigation season. Irrigation is usually well under way before chinook adults have passed through to spawning areas. A diversion dam that is particularly high or has a marginal fish ladder could hinder adult passage. Chinook adults returning to the Grande Ronde Basin have traveled hundreds of miles, avoided predators, and negotiated eight major dams. Obstacles that might not impact an adult fresh from the ocean may impact fish that have made the long trek to Grande Ronde Basin streams.

While adult fish can negotiate relatively high structures under the right conditions, juvenile steelhead, chinook, and resident rainbows and bull trout, depending on their size, often are impeded by jumps as small as a foot. The current passage standard is 6 inches and is based on the most limited species, that being bull trout.

As streamflows decrease and temperatures increase throughout the summer, juvenile salmonids – to survive – must be able to move up and down streams to find springs or other sources of cool water, such as smaller tributaries. Salmonids avoid streams with high temperatures unless they become trapped. Temperatures above 70 degrees can be lethal, resulting in direct mortality. Temperatures above 64 degrees begin to stress fish and may result in sub-lethal effects such as an increased incidence of disease, inability to spawn, reduced survival rate of eggs, and reduced growth. Bull trout require even cooler water than steelhead, chinook and resident rainbows. Less than 50 degrees is optimal.

Early structures were constructed with minimal regard for fish passage. Over the years this has improved. Beginning several decades ago, as structures needed replacing, new diversions were constructed with fish ladders that provided reasonable passage for adult salmon and steelhead during most flows. Juvenile fish passage, however, was often still impaired.

Chinook salmon and steelhead populations have declined precipitously since the early 1900s. Current populations are estimated to be only 20-30 percent of historic numbers in Grande Ronde Basin streams. As a result of diminished numbers, Snake River spring chinook salmon were listed as "threatened" under the Endangered Species Act in 1992. Summer steelhead and bull trout were listed in 1998. ESA listing of these species created renewed emphasis, as well as funding, to improve habitat in the freshwater tributaries.

Although reasons for the decline of anadromous fish runs are many, fish managers have known that substantial fish benefits could be realized quickly by addressing fish passage deficiencies at irrigation diversion structures as well as culverts at road crossings. In contrast to riparian habitat improvement work, which may take many years to mature, improved passage can result in immediate fish benefits.

In the early 1990s, the Grande Ronde Model Watershed, Oregon Department of Fish and Wildlife, Union and Wallowa Soil and Water Conservation districts, the Natural Resource Conservation Service, the Bureau of Reclamation and others began a concentrated effort to replace, modify or consolidate diversions restricting fish passage. Numerous large diversion structures were replaced on the Wallowa River, Lostine River and Catherine Creek. Smaller structures were replaced or modified on streams such as Indian Creek, Dry Creek and Mill Creek.

Irrigation diversions with passage issues on the larger streams received a lot of attention early on. Catherine Creek is the major source of surface irrigation water for the southeast portion of the Grande Ronde Valley. It has over 25 diversion withdrawal points beginning several miles above the City of Union and continuing to its confluence with the Grande Ronde River, east of Alicel. In 1994 and 1995, three large diversions were replaced in and above Union – the City of Union diversion (not currently used for municipal water source), Swackhammer, and the Wright-Hempe-Hutchinson diversion. The three had single-drop concrete structures with marginal fish ladders. Gravel was often pushed up to facilitate water withdrawal during low-flow periods. During particularly low-water years, adult chinook were frequently trapped below Union due to the combination of low water and the configuration of the concrete and diversion boards at the Wright-Hempe-Hutchinson structure. The Wright-Hempe-Hutchinson and Swackhammer structures were replaced with two-bay concrete, full channel-spanning weirs. The City of Union structure was replaced with a five-bay weir.

In the Wallowa system, the Wallowa and Lostine rivers were also areas of emphasis. The Lower Valley diversion consolidated four withdrawal points on the Wallowa River. While not always fish passage problems, the previous diversions often required equipment use in the river to push up gravel. The Clearwater, Tulley-Hill, Miles, and Poley Allen structures on the Lostine River were replaced between 1995 and 1998.

Top: Catherine Creek Swackhammer diversion in 2006. The old diversion structure was initially replaced in 1995. Modifications were made in 2005 to meet the 6-inch juvenile fish passage standard. Two additional walls were added to convert from a two-bay structure to a four-bay structure. Left: Catherine Creek Swackhammer diversion during construction. Construction work in stream channels often requires diverting the entire streamflow into a bypass ditch around the construction site.

There have been numerous smaller diversion improvement projects on streams such as Indian Creek, Prairie Creek, Ladd Creek and Mill Creek. Diversion improvements haven't always involved replacement or modifications. In some cases, irrigators have chosen to abandon the structure altogether and replace it with a pumping system. Fish benefit because there is one less impediment in the stream. Irrigators benefit because less maintenance is required and, if the project included conversion from flood to sprinkle irrigation, it is a more efficient use of water.

Over $2 million have been spent in the Grande Ronde Basin (including the Wallowa River system) over the last 11 years upgrading, replacing or consolidating irrigation diversion structures. The major public funding sources for these projects include the Bonneville Power Administration, Oregon Watershed Enhancement Board, Bureau of Reclamation, National Marine Fisheries Service, and the Natural Resource Conservation Service. Many additional entities, such as the Oregon Department of Fish and Wildlife, Union and Wallowa Soil and Water Conservation districts, and the Oregon Water Resources Department, have provided funds and technical assistance. Irrigator cost-share in the form of in-kind labor or cash was a part of many projects.

All of these projects have resulted in some level of improved fish passage; some have resulted in vast improvements. A few have required additional work in subsequent years to repair damage, adjust rock configuration, or further modify a structure. The fish passage standard was a 12-inch drop in the early years. This has since been reduced to a 6-inch standard, primarily in response to the ESA listing of bull trout.

Chinook and steelhead runs in the Grande Ronde and Wallowa subbasins, although not increasing significantly, are holding their own. Naturally produced steelhead returns to Catherine Creek, for example, have been steady over the last 10 years, and have ranged from about 130 to 270 adults. The naturally produced spring chinook salmon in Catherine Creek have been stable since the mid 1990s, with adult returns ranging from about 40 to 100 fish in most years. We had some very good returns in 2001 to 2003 as a result of good out-migration and ocean conditions, and saw 190 to 280 wild fish in those three years. Additionally, the Confederated Tribes of the Umatilla Indian Reservation and the Nez Perce Tribe operate chinook hatchery supplementation programs in the basin – the Umatilla's in the Grande Ronde and Catherine Creek, and the Nez Perce Tribe's in the Lostine and Imnaha systems.

Many irrigation diversion improvement projects have been completed over the last decade. Projects are complex, involving significant work in planning, coordination with agencies and irrigators, regulatory permitting, Endangered Species Act consultations, and engineering. Construction involves heavy equipment, requires limited stream work periods, and is expensive. Nearly all of the most problematic structures have been improved. There are still some problem sites on tributaries or less-than-optimal passage on larger streams that need to be addressed. Nevertheless, it appears that improving fish passage at irrigation diversion structures has been a very effective strategy at maintaining, and perhaps improving, steelhead and chinook populations in northeast Oregon. ■

Out and About in the Community

Each year, the Grande Ronde Model Watershed participates in several volunteer and educational activities around the area. In May, 43 volunteers painted over graffiti on the bridge at Riverside Park in La Grande, and removed 30-plus garbage bags of litter and weeds from the park and adjacent property. Volunteers included EOU students and staff, La Grande Head Start, La Grande Middle and High School students, Training and Employment Consortium work crews, and local citizens.

Also in May, about 100 sixth graders from Central, Willow, Island City, and Greenwood schools in La Grande headed up to Spring Creek Campground for a day of exploring the outdoors. Outdoor educational stations included the Grande Ronde Model Watershed's wildlife station, a compass station, the Confederated Tribes of the Umatilla Indian Reservation's fish habitat station, and La Grande Middle School eighth graders' tree planting and insect stations.

The GRMW sponsored the Wallowa County Community Spring Clean-up. Twenty-two volunteers and 311 families filled the Ant Flat Landfill with 183,950 pounds of garbage and debris during May.

On June 10, 125 kids (ages 14 and under) participated in the free fishing derby for the fifth annual Free Fishing Day. The Oregon Department of Fish and Wildlife stocked 400 trophy fish measuring 16-22" in Morgan Lake a couple days prior. Congratulations to Kaleb Giese for bringing in the biggest fish of the day, measuring 19 5/8"!

On June 30 in Enterprise, Wallowa Resources held its second annual Watershed Festival in celebration of Wallowa County's natural resources and their importance to the community. Families enjoyed educational exhibits, live music, and free food featuring grass-fed beef donated by local ranchers. Families had the opportunity to build birdhouses; participate in a scavenger hunt; learn to rope cattle; pet a draft horse and a baby buffalo; visit live birds of prey; and identify wild animals in the watershed. Photos by Mary Estes, GRMW.

At home on the range

One researcher's efforts on the Zumwalt Prairie

by Beth Stewart, Editor

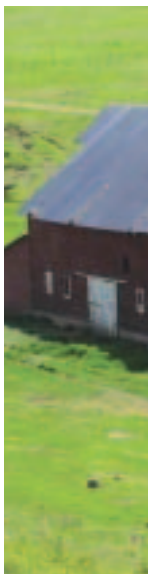
Pat Kennedy came to northeast Oregon the roundabout way. Born and raised in Chicago, she migrated west to Colorado as a teenager, earning a bachelor's degree in biology from Colorado College in Colorado Springs. From there, she traveled to the University of Idaho for her master's degree in zoology, then on to Utah State University for a Ph.D. in biology. Her education, a lifelong love of birds, and the inherent ecologist inside her led her to a career intimately involved with birds of prey.

A renowned expert on goshawks and other raptors, Kennedy spent 11 years as a professor for the reputable Department of Fisheries and Wildlife Biology at Colorado State University. In 2002, she left the bustling campus life of Fort Collins for a quiet little, one-horse town in northeast Oregon named Union. On the outskirts of town sits Oregon State University's Eastern Oregon Agricultural Research Center, where Kennedy is employed as a professor and researcher. While she resides in Union, only a stone's throw away from the research center, Kennedy is probably most at home traipsing through the bunchgrass of Wallowa County's Zumwalt Prairie, the largest remnant of native bunchgrass prairie in North America.

Kennedy spends the bulk of her spring and summer months on the Zumwalt Prairie spearheading various research projects. If she's not on her hands and knees searching for songbird nests hiding among the grasses, she's glassing the rocks and trees for signs of nesting ferruginous or Swainson's hawks. Somewhere between, Kennedy is taking painstaking notes; managing an eclectic crew of research technicians; and making sure there are enough beds, food, and water in the bunkhouse. Clad in hiking boots, ball cap, backpack and binoculars, the tall, lanky researcher in her early 50s can out-walk most people 15 years her junior. She's not only an expert on hawks and other resident birds, but is both student and proponent of the prairie and the ranching lifestyle of the families that have been stewards of the Zumwalt for generations.

Named after an early pioneer family, the Zumwalt Prairie encompasses 220 square miles. Within its confines, The Nature Conservancy owns and manages a 26,000-acre preserve, the group's largest land acquisition in Oregon. The remainder of the 160,000-acre Zumwalt Prairie is privately owned by local ranchers. The symbiotic relationship between the native grasslands and the cattle ranchers is what spurred Kennedy's most recent research project. This past spring, she and her colleagues at OSU and TNC were awarded a USDA National Research Initiative grant to fund a four-year study investigating the effects of cattle grazing on soils, plants, invertebrates, and ground-nesting songbirds in the Zumwalt Prairie.

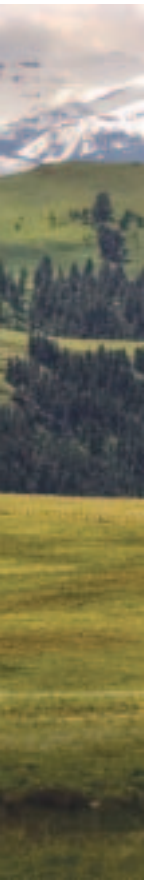
The new study entails 16 fenced pastures on the preserve, each 100 acres in size. The pastures are arranged in four blocks of four pastures. Each block will consist of a pasture with low, medium and high stocking rates of cattle. The fourth pasture will not be stocked with cattle at all, acting as a control for comparison purposes.



Top right: Pat Kennedy (on right) and research technician Andi Lueders experiment with track plots designed to document the presence of various small mammals and reptiles, which leave their tracks in the sand. Right: Wallowa County's Zumwalt Prairie ranges in elevation from 3,500 to 5,500 feet. The prairie is dominated by several species of native bunchgrasses, including bluebunch wheatgrass, Idaho fescue, and Sandberg's bluegrass. Idaho's Dutch Oven Ridge in background. Photos by Rick McEwan.

The idea is to get a better understanding of how cattle affect the availability of resources for other organisms on the prairie; how habitat for wildlife, such as ground-nesting birds, changes as stocking rates change; and how livestock weight gain is influenced by stocking rate.

This summer local contractors are erecting more than 18 miles of fencing while researchers conduct baseline inventories of birds and insects. The cattle will come next June, says Kennedy, but only for 45 days, simulating current ranching practices in the area. The long Wallowa County winters prevent ranchers from bringing cattle onto the native grassland too early in the season. For years, ranchers have rotated their livestock to different areas during the winter when snow and frigid temperatures render the prairie uninhabitable for cattle, thereby protecting the natural landscape.



The pressures and rigors of grazing are not new to the Zumwalt. Historically, the bunchgrass prairie evolved with large ungulates such as bison, elk, deer and pronghorn antelope. Kennedy and her colleagues suspect that a certain level of grazing is healthy for the prairie and the wild critters that inhabit it. Too many cattle, on the other hand, can cause excessive trampling and soil compaction resulting in fewer plants, which means fewer insects, which in turn limits the numbers of songbirds that thrive and produce young. Ground-nesting birds also rely on the native vegetation to provide cover and to conceal their nests from predators. Through their research efforts, Kennedy and her colleagues hope to find the ideal stocking rate that benefits both ranchers and prairie alike.

Above: Red-tailed hawks, shown here feeding their nestlings, normally mate for life. Both parents share in the responsibilities of guarding, hunting for, and feeding their young. Photo by Rick McEwan. Top left: Home base for research technicians on the Zumwalt is a solar-powered bunkhouse. The Nature Conservancy's compound is affectionately called "Summer Camp." Photo by Pat Kennedy. Center left: As part of the old fields study and stocking rate experiment, researchers locate the ground nests of songbirds, and document the number and condition of the young, like this horned lark nestling. Photo by Pat Kennedy. Bottom left: Hawks prey on the Belding ground squirrel, and other small mammals and birds. Plentiful ground squirrels is one reason why the hawks thrive on the Zumwalt. Photo by Rick McEwan.

This field season also marked the end of another four-year study, this one pertaining to hawks. The Zumwalt Prairie is home to one of the highest concentrations of nesting ferruginous, Swainson's and red-tailed hawks in North America. According to Kennedy, the redtails and ferruginous hawks normally return to the Zumwalt in February and March. The Swainson's hawks don't arrive until May, having spent the winter in South America.

Kennedy and her crew have spent the last four field seasons documenting the presence of these broad-winged hawks in 100 randomly placed plots, each 800 square meters, the approximate size of a hawk's territory. Kennedy has tried to collect data that can be compared to research conducted 25 years ago by Marcy Houle, a college friend of Kennedy's and author of *The Prairie Keepers*. Houle's book documents her observations and experiences as a graduate student conducting research on the Zumwalt Prairie in 1979 and '80.

Kennedy's objective was to resurvey the same study area and nesting sites that Houle documented to determine if the landscape is still supporting the abundance of hawks it did back then. Kennedy and her team documented the presence of hawks by monitoring territories (an area a pair of hawks will rigorously defend from other hawks) as opposed to nests. Kennedy points out that if the habitat is suitable for nesting, the hawks will defend these territories annually although they may not nest every year. If the habitat has been modified so that it can't support nesting hawks, the territory will

.....Continued on Page 8, ZUMWALT

Firsthand look

Journalists visit the Grande Ronde Watershed

by Chris Bryant
Institute for Journalism & Natural Resources

A group of 15 reporters and editors visited the Grande Ronde watershed this spring during a nine-day learning expedition through parts of Washington, Oregon and Idaho. The trip, called the Blue Mountains Institute, was planned and conducted by the Institute for Journalism & Natural Resources.

IJNR, a Montana-based non-profit group, is dedicated to encouraging better journalism – higher standards of accuracy, fairness, balance, depth and explanatory context – in the coverage of news about natural resources and economic development. We operate under the belief that experiencing natural resource issues personally in relevant places will help journalists better understand the economic, scientific, political and social contexts of the stories they are responsible for explaining.

IJNR takes reporters and editors off deadline away from newsroom distractions and into the field for intense "expeditions" of learning that typically last about eight days. We visit fisheries, mining and milling operations, active logging sites, watershed projects, working cattle ranches, and innovative farms.

As readers of *Ripples in the Grande Ronde* already know, the Blue Mountains area is handsome, diverse and, in terms of its natural-resource challenges, quite complicated. Because of all this, we found it to be a wonderful place to investigate issues that are unfolding all across the West.

The Blue Mountain trip brought together journalists from a wide variety of news organizations and geographies. The group included freelance writers, newspaper journalists and radio folks from Oregon, Washington and Idaho, as well as Colorado, Massachusetts and New York.

Along the way, the group camped at a farm near Culdesac, Idaho; in the Starkey Experimental Forest and Range; on the Zumwalt Prairie; and at Dug Bar, on the banks of the Snake River. We discussed energy issues, water management challenges, climate change impacts, forest management, and rural community development, among other topics.

The group met more than 70 speakers during the journey – longtime locals and newcomers, farmers and ranchers, tribal officials and elders, scientists and policy makers, environmental activists and elected officials – many of whom are working hard to build a durable economic future and a healthy environment.

GRMW executive director Jeff Oveson joined us for the day as our group walked the newly formed banks of the Wallowa River with landowner Doug McDaniel at his impressive restoration project. Allen Childs, fisheries biologist with the Confederated Tribes of the Umatilla Indian Reservation, and Nils Christoffersen of Wallowa Resources helped explain what we were looking at and how it came to fruition. We visited with members of the Nez Perce Tribe and some of the people who work for them at the weir on the Lostine, and were treated to some traditional hospitality arranged by Nez Perce fisheries biologist Jim Harbeck. Local agriculture producer Steve Wolfe, along with Brad Smith from the Oregon Department of Fish and Wildlife and Tom Smith of the Natural Resource Conservation Service showed us a number of conservation projects and talked about the work completed over the years – and the work that remains – in helping to restore or maintain the ecological health of working landscapes. After lunch, Steve Parrett talked about the Oregon Water Trust's work, and the history and legal basis for purchasing and leasing water for in-stream use.

IJNR is grateful to all of the folks in the watershed who met with us during our visit and many more who helped us learn about the place before we arrived.

Wallowa County Tour

On June 22, the Grande Ronde Model Watershed hosted a tour of the award-winning McDaniels/ Wallowa River channel relocation project. Other highlights of the day were visits to the Nez Perce Tribe adult fish weir on the Lostine River, the site of a potential wetlands creation and enhancement project, and the Wallowa Lake Dam. Among those attending were representatives of the Northwest Power and Conservation Council, and the Bonneville Power Administration. Photos by Beth Stewart.

Staying one step ahead *of* wildfire

by Angie Johnson, Oregon Department of Forestry

In response to state and federal legislation, four counties in northeast Oregon – Baker, Umatilla, Union and Wallowa – embarked on a project to prepare "community wildfire protection plans" that enhance future collaboration with local, state, and federal wildland fire protection agencies to reduce the impact of wildfire on lives, property, and the landscape.

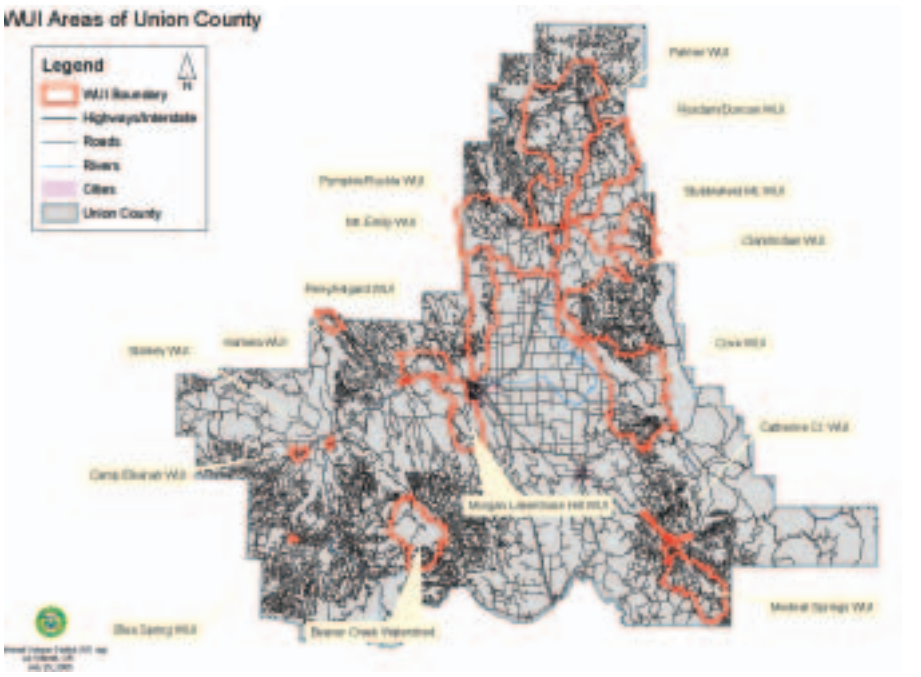
Local communities now have a unique opportunity to influence where and how federal agencies implement fuel reduction projects on federal lands, and how federal funds may be distributed on non-federal lands. Each county developed committees of local, state, and federal wildfire agency personnel, land managers, and private citizens with the task of creating a community wildfire protection plan for the wildland-urban interface (WUI) areas in each of their respective counties. A WUI refers to areas within or adjacent to an at-risk community where wildland fuels intermix with combustible homes and structures.

Protecting priority WUI areas in northeast Oregon from large wildfire events can be achieved through improved fire response, fuels treatment, defensible space, and fire prevention campaigns. All citizens of northeast Oregon, whether in a WUI area or not, are encouraged to protect their homes and property from a large wildfire by creating defensible space (a 30- to 100-foot border free of combustibles around a structure), removing debris and flammable vegetation around structures, screening openings to structures, and keeping access into homes clear for fire apparatus.

All four county plans contain information to assist landowners and homeowners in developing strategies that address protection from wildfire. Citizens within WUI areas are encouraged to work with land managers to address landscape or community-level fuels reduction. Communities at risk within WUI areas are also encouraged to contact their county emergency services manager to develop communication and evacuation plans for their community.

The goals of a community wildfire protection plan are to:

1. Promote wildfire awareness, and target fire prevention and safety information across at-risk communities.
2. Promote cooperative emergency fire response, identify available resources and needs, and review interagency communication and suppression strategies.
3. Identify, assess, and reduce hazardous fuels; coordinate risk reduction strategies; and prioritize fuel reduction areas and projects.
4. Complete annual monitoring and evaluation to assess progress and effectiveness, and recommend changes as appropriate.



Those communities and WUI areas most at-risk from a wildfire event were identified and prioritized based on public input, the committee members' knowledge of the local area, and an assessment of hazard factors using federal and non-federal data. Information from the hazard assessments was used to develop a scoring matrix. The results of the assessments can also be found in each plan.

Each plan is considered a working document to serve as a tool for coordinating management of lands in a manner that protects communities and local values at risk from wildfire. The Baker, Wallowa, and Union County Wildfire Protection plans will become a part of the Tri-County Natural Hazard Mitigation Plan. The Umatilla County Community Wildfire Protection Plan will become part of the Umatilla County Natural Hazard Mitigation Plan. The plans will satisfy the requirements for the wildfire section of each of those plans. While some strategies and activities could be individually accomplished by landowners, the community wildfire protection plan is not intended to mandate treatment activities. It is provided only as a resource and guidance document, allowing

.....Continued on Page 8, WILDFIRE

Right: One prime example of where forest meets homes is at the base of Mt. Emily in La Grande, Mt. Emily Wildland-Urban Interface area. Photo by Angie Johnson. Far right: A helicopter drops water on a fire last summer in the Clark/Indian Creeks Wildland-Urban Interface area. The fire grew to 650 acres. Homes were directly threatened, but no evacuations took place. Photo by Logan McCrae, ODF equipment operator.

ZUMWALT, continued from Page 5.....

disappear. To evaluate territory occupancy, the researchers visited each plot three times during the season, once each during April, May and June. Kennedy and her research associates will spend the winter back home in Union interpreting the data and drawing conclusions.

Another facet of the hawk research project involved evaluating the landscape and comparing it to the habitat of 25 years ago. Kennedy and her colleague Anne Bartuszevige, another OSU scientist at the Union Station, are trying to determine what is happening to the hawks' favorite nesting sites – aspen and willow stands on the prairie. They hypothesize that these deciduous trees are disappearing on the Zumwalt, as they are throughout the western United States. Fire suppression over the last two decades, and herbivory by cattle, elk and mule deer are the likely culprits. With the suppression of fire also comes the invasion of ponderosa pine, not typically associated with the prairie. If you get enough conifers over time, says Kennedy, the habitat turns from one that supports broad-winged hawks and other prairie species to one that supports goshawks and other wildlife associated with forestland instead.

Last but not least, Kennedy's third research project involves comparing the suitability of previously cultivated prairie sites with native prairie for songbird nesting. The four key songbird species on the prairie are horned larks, savannah sparrows, vesper sparrows and Western meadowlarks. While hawks may be the "sexy" avian species on the prairie, as Kennedy describes them, these ground-nesting songbirds are key indicators of the grassland's health.

"Grassland birds are among the most imperiled groups of North American birds and most species of grassland birds show consistent patterns of continental declines," says Kennedy. Although the virtual elimination of prairie habitat due to cultivation throughout the United States had a negative impact on grassland bird densities, this change occurred primarily before 1950. Therefore, recent declines are likely due, at least in part, to factors reducing the quality of remaining grassland habitats, says Kennedy. One factor that could contribute to this decline is the planting and invasion of exotic grasses. With the help of aerial photos from the turn of the century, Kennedy and her colleagues are trying to determine how well the old fields on the Zumwalt Prairie (some of which have not been cultivated since the 1930s) function as nesting habitat.

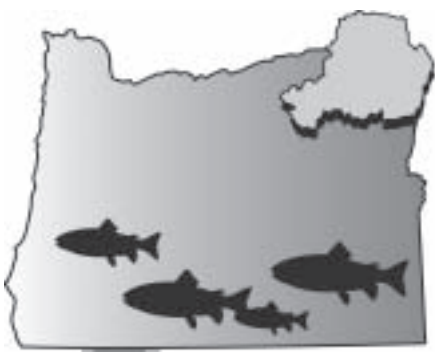
Like anyone who spends precious time on the prairie, be it researcher or rancher, Kennedy is a big fan of the Zumwalt. Like her friend Marcy Houle, she commends the ranchers for taking such good care of the prairie. "The worse thing that could happen to this prairie would be subdivisions," says Kennedy. "Globally, grasslands are the least protected landscape because they are more suitable for development and agriculture. Rangelands like the Zumwalt can support healthy wildlife populations if managed properly and not converted to 40-acre ranchettes."

Unlike the nearby Wallowa Mountains or the Hell's Canyon National Recreation Area, the Zumwalt Prairie still remains under private ownership. Kennedy points to the younger generations of the ranching families. They are key, she says, and have a monumental responsibility if the Zumwalt Prairie and their ranching way of life are to survive and thrive. ■

WILDFIRE, continued from Page 7.....

for community collaboration with regard to mitigation strategies that protect communities from the risk of a large wildfire.

For more information about the northeast Oregon plans, visit http://www.odf.state.or.us/areas/eastern/northeast/default.asp. Any questions regarding the hazard assessments may be directed to Angie Johnson, Oregon Department of Forestry, (541) 963-3168 or ajohnson@odf.state.or.us. ■



Grande Ronde Model Watershed

Upcoming Board Meetings

The public is welcome to attend

- Tuesday, August 22, 6:30 p.m.
  St Mary's Catholic Church, 12th Street, Elgin
- No September Meeting
- Tuesday, October 24, 6:30 p.m.
  Wallowa Community Center, Wallowa

Meeting dates subject to change. Please call 541-663-0570 to confirm. Thank you!

Grande Ronde Model Watershed

1114 J Avenue ■ La Grande OR 97850
ph 541-663-0570 ■ fax 541-962-1585

Beth Stewart, Editor
bstewart@eoni.com