RIPPLES IN THE GRANDE RONDE

JANUARY 2003 | RIVERS UNITING NEIGHBORS | VOLUME 2, ISSUE 1

Local Rancher Works to Improve Water Quality

By Kristin Knight, GRMWP

Bill White knows what it takes to be a responsible land steward. His family has roots that run deep in northeastern Oregon – his great-grandparents homesteaded and raised livestock in Baker County – and he himself has owned cattle for close to thirty years. White also spent 32 years working for Boise Cascade. With this awareness of land stewardship, however, comes a responsibility to maintain one's property in a healthy state, and this is just what Bill has done. In the past seven years, he has undertaken two major restoration projects on his own land.

White began to consider a restoration project in 1995. On his property near Union, he wanted to protect Little Creek, a tributary of Catherine Creek, while also creating four pastures to enable rotation of his cattle. He heard from a fellow Boise Cascade employee about the now defunct Oregon Watershed Health Program (OWHP) and how the program would help facilitate restoration projects on private lands.

Rancher Bill White has worked with local agencies to improve stream health on his property.

More grasses have moved in and stablized the banks of Little Creek after fencing was installed to keep out cattle.

Once he contacted Lew Wallenmeyer of OWHP, then field team leader for the organization, it was agreed that a project was feasible and they came up with a design to fence in the majority of the creek while also creating gaps reinforced with rock so that the cattle could still reach their water source. After receiving the needed funding from an OWHP grant, the project went through as planned. Solar panels provide for electric fencing, which protects the creek from the cattle, but also gives White flexibility in pasturing the cattle on his property. "That was our first experience with solar fencing," said White. "We used a 12-volt solar system and it works really well."

After completing the fencing project, White began to see improvements in the condition of the creek, with more grasses

WHITE CONTINUED ON PAGE 3

IN THIS ISSUE

GRMWP Recognizes Howard for Service

By Kristin Knight, GRMWP

At the annual Grande Ronde Model Watershed Program (GRMWP) planning session in December, the staff and fellow board members honored Union County Commissioner John Howard for his contributions to the program.

Howard, who began his tenure as county commissioner in 1986, has a long history of involvement in local natural resource issues and pushed for many of the collaborative programs that exist today. In 1989, he worked with federal, state, and local interests to create the Blue Mountains Natural Resource Institute, which supported research and development in a fourteen county region in northeast Oregon and southeast Washington.

Inspired by the cooperative relationships created by the institute, Howard next worked to form a watershed council for the area. "There was already a partnership approach to resolving resource issues in the Blues with our institute and that created a springboard mechanism for the watershed council," Howard said. He and then Wallowa County Commissioner Pat Wortman worked to create a model watershed with the Northwest Power Planning Council, which already was sponsoring restoration projects and hoped to find a more organized method to conduct these projects.

John Howard, left, receives his award from Mike Hayward, Wallowa County Commissioner.

John Howard with wife Debbie after being honored for his contributions to natural resources in the area.

In 1992, the Grande Ronde Model Watershed Program was born. Howard next took the lead as the chairperson of the watershed board, a position he continued in until recently. "John just had a clear understanding of the relationship between people and resources," said Jeff Oveson, executive director of GRMWP. "He recognized that there could be local control of resources but that you had to go and take it."

When asked what initial challenges the GRMWP faced, Howard spoke of overcoming many individuals' mistrust of the organization. "People were skeptical that the government was involved and that there would be more red tape, but we were able to work through those issues," he said. "Actually, in just two years time, we had landowners coming to us with projects."

Another milestone for the area came when Howard spoke at the 1993 Oregon legislative session to fight for the financial support of the region's restoration projects. As Howard noted, "Southern Oregon was getting all the attention at that time, but I pointed out the salmon were already endangered in our area and so we were able to get five million dollars for the next few years. That really got things mobilized to restore conditions." With that initial push, the program was able to begin a long list of restoration projects, such as taking out inadequate irrigation diversions on Catherine Creek, working with landowners to move cattle away from streams, and improving stream conditions by stabilizing streambanks with plantings. And these improvements have not been without results. "I think the basin is far more fish friendly since the inception of the watershed program," said Howard. "I think the landowners have benefited substantially. When you spend $500,000-700,000 a year, you begin to see results. It's been a big investment in the county."

Howard's natural resource efforts have moved beyond the GRMWP as well. For the past two years, he has been involved in writing the National Fire Plan as the national counties representative, working closely with western governors. In addition, Howard was a member of the Wildland Fire Leadership Council Team and the Eastside Riparian Function Advisory Committee for the Oregon Department of Forestry.

Although Howard's time as county commissioner came to an end in late December, he hopes to continue his involvement in natural resource issues. In mid-January, he heads to New Orleans as a panelist at the National Fire Conference, speaking on the role of local governments in the National Fire Plan. Beyond that, Howard simply maintains that he would like to be involved in future efforts. "I would like to stay engaged in natural resources and I would like to see how I can fit into the future. Working with natural resources was one of the most rewarding experiences as a county commissioner, because the results are so immediate."

Editor's Note

Welcome to the fourth issue of the *Ripples* newsletter published by the Grande Ronde Model Watershed Program. As the new editor, I hope to continue to create a newsletter that represents the natural resource issues relevant to all of us in Union and Wallowa Counties. *Ripples* strives to highlight local restoration efforts, volunteer opportunities, and educational tips and activities. We want to bring you an informative and engaging newsletter. Please let us know if we do otherwise.

– Kristin Knight, *Ripples* Editor

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E-mail us if you would like to be included on our electronic mailing list!

Electronic versions of this and all past newsletters are available at:
http://www.fs.fed.us/pnw/modelwatershed

Wallowa SWCD Gives Insight into their Role

By Cynthia Warnock, Wallowa SWCD

What is an SWCD?

A Soil and Water Conservation District (SWCD) is a local unit of government or special district created under Oregon law that is administered by locally elected directors. These directors are local ranchers or farmers that serve on the SWCD Board for no pay. Districts are authorized to provide assistance to farmers, ranchers, and citizens as well as to county, state and federal agencies. Districts are not regulatory or enforcement agencies nor are they an activist or environmental group.

Who do SWCDs Work With?

The 45 SWCDs in Oregon have a partnership with the United States Department of Agriculture's (USDA) Natural Resources Conservation Service in order to provide information and technical assistance to private landowners in improving the condition of natural resources and their operations. In many areas, the SWCDs work closely with other agencies such as the Oregon Department of Fish & Wildlife, the Oregon Department of Forestry, Oregon State University Extension and watershed councils to help serve landowners the best they can.

A stretch of private land in Wallowa County that benefitted from SWCD project support.

SWCD CONTINUED ON PAGE 6

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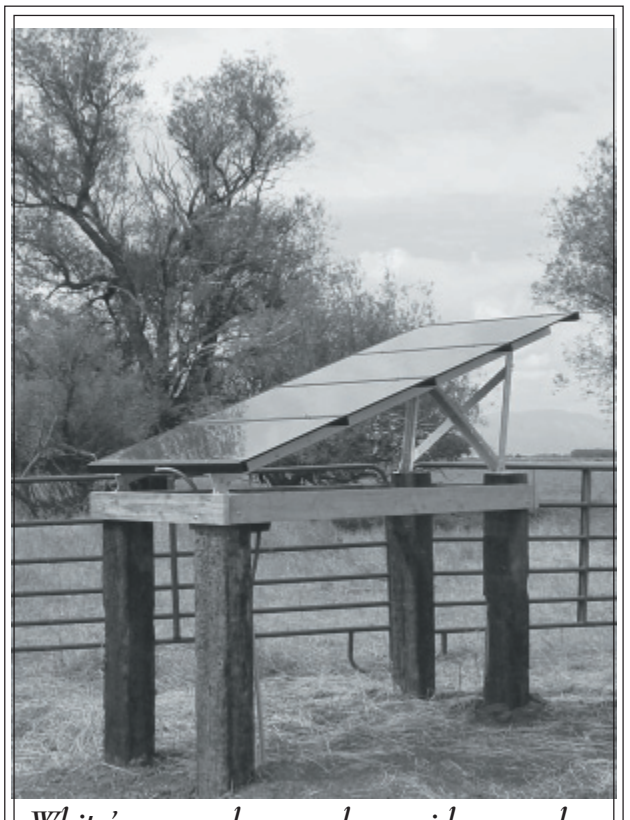
growing in and along the creek and flourishing willows along the banks. But he noticed that in the summer months the cattle still lingered at the water breaks, trying to cool themselves but dirtying the water. In addition, recent droughts had left the creek with little more than a trickle, and he worried that he might be entirely without water in severe dry periods. Initially, he put down a well and pumped water with a gas pump when necessary. Although a short-term solution, this forced someone to come out twice a day to fill the troughs. "The thought came to me that we needed to do something to ensure against the lack of water and also to help stream quality late in the year so that the cattle didn't get in there," recalled White. "If the cattle were grazing over the whole length of the stream, it would disperse manure loading, but with the water gaps, it concentrates all of it in one place."

With his prior experience with solar energy and restoration projects, the next step was an obvious one for White. He envisioned a solar system to power a pump that would both provide a permanent water source and keep the cattle out of Little Creek in the summer months. Working this time with the Grande Ronde Model Watershed Program (GRMWP) and current project planner, Lyle Kuchenbecker, White's plan went into action; in August 2002 White installed a solar panel and a 6000 gallon storage tank, which holds close to a three day supply of water. White has been impressed with the performance of his system thus far. "I was amazed," he said. "The panel is only the size of a sheet of plywood - 4' x 8'- with four small panels, and I clocked it [the pump] twice at 26 gallons/minute."

White has nothing but positive remarks about his solar system and mentioned that there are similar set-ups that utilize wind energy or combine both wind and solar power. He covered approximately 50% of the costs on his restoration projects, but believes that the investment is worthwhile. "There are two promising benefits," he said. "One is that you have the availability of water without the fear of it drying up. The other is that in the long-term it will improve water quality." White also sees collaboration with natural resource agencies as a valuable way to utilize their expertise and to improve conditions before regulations become a necessity. "I just see it as being an investment in the future to ensure that we can be out ahead of the curve so that legislation doesn't necessarily have to address everything, that some of it can be done on our own incentive."



White's new solar panels provide enough energy to power his water pump at a peak of 26 gallons/minute.

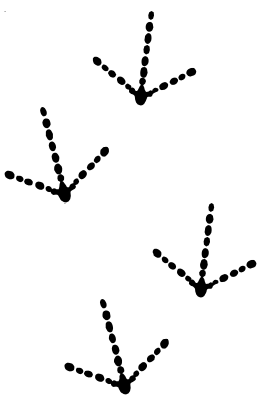
And White isn't letting it stop there. He has plans to plant more willows in the coming year and believes that it is a landowner's responsibility to forever take care of their land.

Winter Wildlife

Look for signs of life around you! Although many animals travel to warmer places or hibernate (sleep for most of the winter), there are many other creatures that stay active during the winter.

Tip: Make a simple birdfeeder by covering a pinecone in peanut butter and rolling it in birdseed!

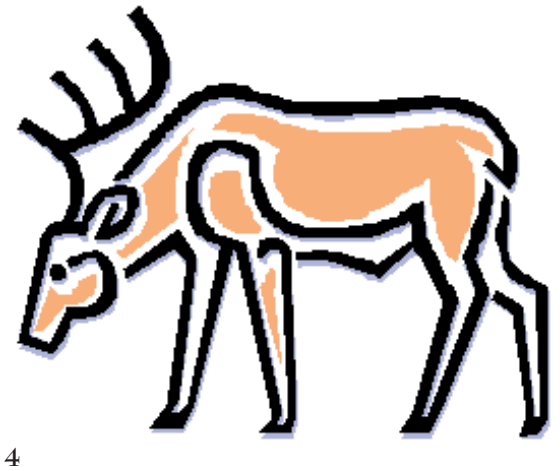
Watch for birds around! Many birds, such as robins, finches, sparrows, and blue jays, are in the area during the winter, and they are even easier to spot when trees and shrubs are free of leaves. Better yet, a birdfeeder provides a way to attract and observe birds. Place high energy food such as black sunflower seeds or suet in your feeder to give birds a boost. Make sure you commit to filling your feeder throughout the winter, as birds will become dependent on your food.



Examine a pond or stream that hasn't frozen over. Do you see any movement? Fish and other water residents stay active all year round. See which ones you can spot.

Survey your yard for places where animals are spending the cold winter months. Many kinds of creatures, such as small mammals and birds, use piles of leaves or small holes for protection, and amphibians, reptiles and insects burrow to stay warm. Try not to disturb or destroy these shelters.

Study a tree. Can you identify it without its leaves? Are there any insects living under the bark? Nests are also more visible during the winter. See where birds have lived around you.



Look for tracks on the ground when it snows. Try to identify some of the prints you find. Do they belong to a deer, a raccoon, or just the neighborhood cat?

Take a fieldtrip! Visit the Elkhorn Wildlife Area near North Powder to see the wintering elk herd. Call Oregon Dept. of Fish and Wildlife at 541-898-2826 for more information. Look for other active creatures when you are skiing or doing other activities in the outdoors.

Think Link Provides a Multifaceted Look at Art and Science

By Mariah Rose Hey, Think Link Museum

In October Think Link Discovery Museum and the Grande Ronde Model Watershed Program teamed up to merge art and science. Melissa Cochran, Education Outreach Coordinator with the Grande Ronde Model Watershed Program, contacted Think Link in hopes that we would be able to partner on an educational project. Our ideas quickly bloomed into a series of events as we discovered that by partnering we would be able to offer our students a well rounded experience involving multifaceted education. With Melissa's expertise, her connection with the Grande Ronde Model Watershed Program and the philosophy of Think Link, we were able to provide participants with a closer look at aquatic habitats through several different disciplines.

GRMWP's Melissa Cochran demonstrates the salmon cycle to a Think Link audience.

Our events took place at Think Link where we learned about the intricate relationships between salmon and watersheds, the ecosystem of a river, the relationship between oceans and rivers as well as details about the life cycle of a salmon. To connect art and science we made fish prints using a large salmon and a steelhead that were provided by the Confederated Tribes of the Umatilla Indian Reservation and the Oregon Department of Fish and Wildlife. The hands-on process of fish printing enabled the students to get up close and personal with the topic thus reinforcing what they had learned in class and reaffirming the relationship between art and science.

Kids and adults alike get their hands dirty making their fish prints.

The project was a great success and has led to additional partnership projects that will provide holistic educational experiences for the children of our community. This project also inspired Think Link to provide science related classes on a weekly basis. In December, Think Link Discovery Museum began the Magna Smarta Monday program, (almost) every Monday afternoon from 3:30 - 4:30. All aspects of science and technology will be explored. Experts from the fields of biology, fisheries and wildlife, agriculture, anthropology, computer science, chemistry and many more will lead classes geared to making science fun. For example in January we are offering classes about Kitchen Chemistry, the Food Web, Ancient Number Systems and much more. If you would like to register your child for a class please feel free to contact us at 975-2040. Our class list is posted on our website at http://thinklink.eoni.com, everyone is welcome to join us for our next event.

Think Link Staff Member Mariah Rose Hey helps prepare a fish for printing.

Wintertime Wildlife Word Search

Y	Z	T	E	M	H	Y	N	D	A	H	V	N	S	H
D	L	S	X	B	I	L	G	R	A	H	T	H	K	A
A	V	M	G	Y	B	K	C	R	E	K	E	W	C	L
B	I	R	D	F	E	E	D	E	R	L	O	W	A	P
S	E	Y	J	K	R	F	W	W	K	R	C	J	R	V
O	N	I	R	G	N	R	T	P	R	N	F	I	T	M
N	O	O	C	C	A	R	O	U	S	J	C	B	C	U
A	B	W	W	Q	T	L	B	B	F	R	O	S	T	I
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B	M	L	P	S	U	N	K	P	L	T	F	D	E	T
B	I	R	E	G	V	T	U	E	D	S	J	B	B	X
C	M	E	N	D	W	T	B	X	Q	O	M	Y	P	M
L	D	H	K	B	G	Q	I	O	C	G	F	X	I	Y

BEAR
BIRDFEEDER
BIRDSEED
BURROW
ELK
FROST
HIBERNATE
ICICLE
RACCOON
ROBIN
SNOWFLAKE
TRACKS

Community Forest Restoration Board Gives Boost to Local Resource Management

By Kristin Knight, GRMWP

Government agencies always struggle with how to involve local opinion in their decisions. In 2000 the Union County Commissioners created the Community Forest Restoration Board, a group comprised of area residents that advises government agencies, specifically the U.S. Forest Service, on natural resource decisions.

After noticing the lengthy planning and implementation process of the Forest Service, Union County decided to bring together qualified community members to help direct and speed up the process. Under the direction of the county commissioners, the 11 member board provides representation from governmental agencies, environmental interests, landowners, industry and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR). The board focuses on developing projects on the La Grande Ranger District that take less than 12 months to plan and implement. In order to accomplish this goal, the group has encouraged the district to streamline its procedures, such as by using tape recordings to document conditions or by combining public review periods to produce a shorter process overall. These small changes have allowed the Forest Service to begin to reach the goal of a 12 month completion period.

Although the goal of the Community Forest Restoration Board is to accelerate Forest Service projects, the two organizations do their best to work together. John Herbst, chairperson of the board, said, "The Forest Service, because of the qualified local members, utilizes us as a sounding board." This cooperative relationship allows the board to work within the system to represent the area's interests, but also gives the Forest Service the support of a qualified advisory group when needed.

The board works directly with the Forest Service and visits project sites to understand proposals more thoroughly. Using a sub-watershed approach in past years, the Forest Service hopes to complete all the necessary restoration projects within a sub-watershed, such as thinning forests and improving stream conditions, and then leave the area for 10-15 years, allowing it to return to its natural state. The board supports this method and Sprinkle Creek is an example of one project successfully started under this plan. Both the Forest Service and board members are looking forward to beginning restoration in the Catherine Creek sub-watershed.

The Community Forest Restoration Board also oversees the implementation of Forest Service pilot projects, which give the federal agency the authority to test out innovative approaches to resource management. The La Grande Ranger District currently is trying out "integrated resource contracting," which allows several elements of a project to be placed under one contract, a process not typically done by the Forest Service. Yet another role of the board is to monitor the Forest Service's contracts to see whether or not the agency is employing local contractors with family wages. "We realize that to maintain the high level of ability needed for contracting in the area, we need to continue to employ and support local entities," said Herbst.

In addition to the benefits the Forest Service and the community receive from the group, the board itself has seen positive changes. Up until now, they have been able to meet all decisions by consensus, and members hope to continue on this path. "Another benefit that comes out of the program is that people talk with one another that typically wouldn't be having a conversation together," stated Herbst. With the diversity of its members, the Community Forest Restoration Board is contributing to increased communication and support, both inside and outside of the group.

The board meets quarterly or more frequently as needed to assist the La Grande Ranger District. Contact John Herbst at (541) 663-0509 for upcoming meeting times and location.

SWCD... CONTINUED FROM PAGE 3

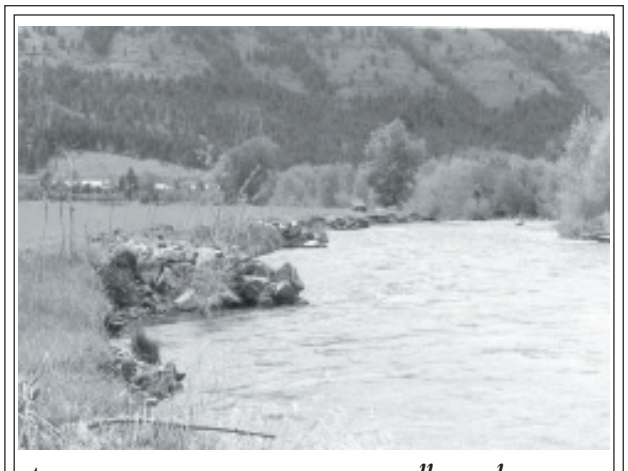
What can SWCDs do for you?

Your local SWCD works with landowners to provide not only technical assistance but to find the best cost-share program to help with the financing of a conservation project. Cost-share programs are available from the USDA, the Oregon Watershed Enhancement Board (OWEB) and Bonneville Power Administration (BPA). If there are any permits needed for a project, the districts will help landowners go through the process.

Districts try to keep abreast of all issues that may affect natural resources and distribute this information to the public. They work on education, such as tours and workshops, to inform landowners and producers of various best management practices. Each year they encourage school age children to participate in the annual conservation poster contest and/or speech contest. Local winners of these contests go on to the state competition and winners there have the possibility to go on to the national contest.

Where can you find your SWCD?

SWCDs are typically located in Agriculture Service Centers. Although SWCDs do not always fall along county lines, they do in our region. The Union SWCD is located at 10507 N. McAlister Road in Island City. The Wallowa SWCD can be found at 209 NW 1st Street, Enterprise. Stop by and get to know your local SWCD staff and directors that serve your area. They would like to get to know you.



A restoration project using willow plantings and rock, sponsored by the Wallowa SWCD and Bonneville Power Administration.

Urban Update: Staying Earth-friendly During the Winter

By Kristin Knight, GRMWP

During these frosty months, most people focus on staying warm and surviving the gray winter. But even though we spend most of our time indoors, our lifestyle still has an impact on our environment. By paying attention to just a few of our actions, we can save money, protect the environment, and conserve resources all year round.

Within the house, we use more energy during the winter than at any other point in the year. Keeping the house cozy translates into using more resources. Simple ways to reduce your heating bill include turning down the heat when people aren't home or are asleep. Try adjusting the temperature when at home and see what your true comfort range is. Within the 60-70° F range, every degree you lower can bring up to 5% in savings. Close doors or block vents to those rooms that don't need to be heated. Open window coverings during the day to let in warming sunlight, but close them at night to prevent heat loss. A dirty filter on your heating system can also reduce efficiency – make sure that it remains clean.

With shorter days comes the need to use more lights as well. Make sure you are using only the lights necessary, and get in the habit of flipping off the switch as you leave a room. Install motion detecting lights over outside entrances; they provide extra security, but switch off when not needed.

Do you have an extra refrigerator in the garage? A refrigerator can add as much as 10-25% to your electric bill. Consider unplugging the appliance and simply let the cool winter take over the job of chilling your non-perishables. Or bring the extra drinks inside – a full refrigerator uses less energy than a half-empty one.

When outside we can also do our part to stay earth-friendly. If you are removing ice from the driveway or sidewalk, consider using kitty litter, sand or another non-toxic substance. Salt, although effective as a deicer, can run off into your yard and eventually into our waterways. Plants have difficulty growing with excess salt in the soil and fish and other water inhabitants are sensitive to even small changes in water chemistry.

Also consider long-term solutions to conservation and efficiency. Feel around windows to see if you are losing heat to the outside and look at either installing caulk or weather stripping or replacing older windows with more airtight panes. Are your hot water pipes and water heater well insulated? Added insulation avoids the lengthy wait for hot water when washing dishes or showering. New appliances, such as refrigerators, are also much more efficient than their older versions.

Finally, a new heating system or simply a programmable thermostat can provide significant household savings.

Throughout the year, we experience the beauty of snow and sun, but we must also keep in mind what we can do to keep our environment healthy. If you are interested in learning more about improving efficiency in your home and reducing utility bills, take a look at some of the following Internet sites for more suggestions: http://homeenergy.org; http://consumerenergycenter.org; http://www.aceee.org and http://www.energyideas.org

Teacher Tips and Liquid Links

By Kristin Knight, GRMWP

Although spring and summer months seem far off right now, this is the perfect time to plan school restoration and gardening projects. Activities such as backyard wildlife restoration or a vegetable garden can be an opportunity for kids to spend time outdoors, learn to be a responsible land steward, and study the growth and change in plants and the ecosystem.

Backyard restoration projects can take many shapes and forms. The first task is to identify an area that is available, ideally a neglected stream bank, wetland, or plot of land. Several websites provide great tips and funding opportunities for educators. Then plan out the type of restoration you are going to accomplish. The National Wildlife Federation, at http://www.nwf.org/schoolyardhabitats, gives tips on restoration projects and also has a small grants program. Take a look the Diack Ecology Education Program at http://www.diack-ecology.org; they give funding and support to hands-on field projects in Oregon. The U.S. Environmental Protection Agency (EPA) also has grants and resources for a wide range of projects at http://www.epa.gov/teachers.

A school or classroom garden can also be a rewarding experience for children. Whether it's simply an indoor salad garden or an outdoor native wildflower project, kids are sure to love the chance to get their hands into the dirt and see the plants grow that they help along. Check out websites such as http://www.kidsgardening.com, where you can see what other schools in your state are doing school gardening projects; they also offer grant money. Also look at http://www.aggie-horticulture.tamu.edu/kindergarden/kinder.htm. The site offers great tips for gardening with children. Two other sites at http://www.for-wild.org/seedmoney.htm. and http://www.hardyplant.com/grantinfo.htm provide more opportunities to apply for funding for your garden.

Some grant deadlines have already passed for this year, but it's never too early to begin planning your project. Also ask around and see if other educators have done similar projects and what resources they used. If you yourself have a suggestion, please submit it to *Ripples* so that it can be shared with others!

Attention: Teachers, Parents, and Kids!

The *Ripples* newsletter is always looking for contributions from children of all ages! Your artwork, photography, writing and any other creative creations that relate to topics like water, nature, and the outdoors are always welcome. Contact *Ripples* at (541) 962-6590 for more information or submit your creation at:

GRMWP
10901 Island Ave.
La Grande, OR 97850
ripple@eou.edu

Let Your Mind Run Wild!

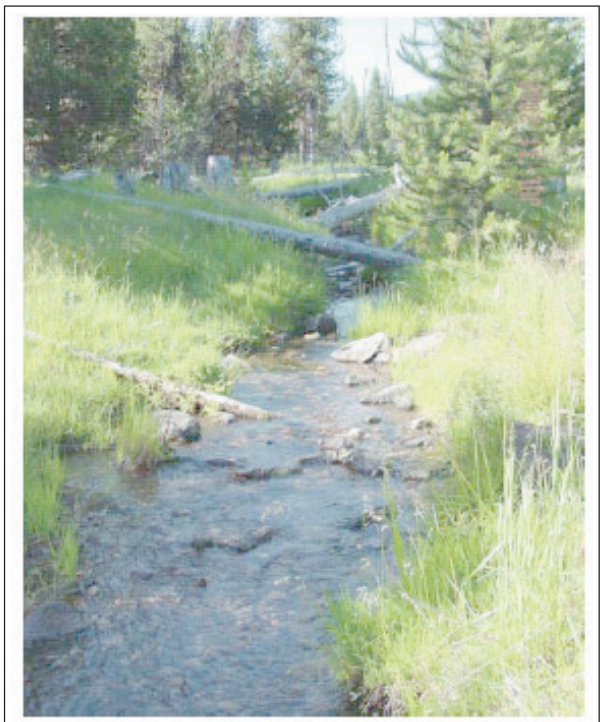
NOAA Fisheries Office Establishes its Role in the Region

By Catherine Broyles, NOAA Fisheries

The National Oceanic and Atmospheric Administration (NOAA) Fisheries (formerly known as National Marine Fisheries Service) opened its doors in La Grande, Oregon, on June 1, 2001. Located in the U.S. Forest Service building on Highway 30, the La Grande Field Office (LGFO) is currently staffed by five biologists and a team leader.

NOAA Fisheries biologists work with federal agencies such as the Bureau of Land Management (BLM), U.S. Forest Service, Bonneville Power Administration (BPA), and the Natural Resources Conservation Service (NRCS) to help ensure that projects implemented within the range of steelhead and chinook salmon promote the conservation of these species listed under the Endangered Species Act (ESA). The LGFO addresses the range of anadromous salmonids (chinook salmon and steelhead) in eastern Oregon, which includes the John Day, Umatilla, and Grande Ronde River Basins.

Playing an important role in the implementation of the ESA, the LGFO works with federal land managers



North Fork Catherine Creek, Wallowa-Whitman National Forest

Heavy machinery being used to remove debris from the Nursery Bridge Fish Ladder on the Walla Walla River.

and other federal groups that fund or authorize activities that may impact species listed under the ESA. The objective of this "consultation process" is to work closely with the project sponsors to help achieve the objectives of the project while promoting activities that will improve habitat conditions for threatened steelhead and chinook salmon. The list of participants in this process may be quite long with state and local parties often playing critical roles in project implementation and monitoring. As a part of the consultation process, LGFO biologists participate in the initial phases of project planning. This early involvement includes participating in planning meetings and site visits to view proposed action areas. Early involvement by LGFO biologists has proven to be the most beneficial approach to address concerns regarding listed species while ensuring that the objectives of each proposed project are met.

An example of the type of project that LGFO biologists have had the privilege of working on is the McCoy Meadows Restoration Project. Located in Union County on the privately-owned 2,500-acre McCoy Meadows Ranch, this project is funded by the BPA and administered by the Confederated Tribes of the Umatilla Indian Reservation with technical assistance from the Oregon Department of Fish and Wildlife, NRCS, and others. McCoy Meadows historically contained a large wetland complex with beaver ponds, backwater areas, and meandering stream channels. Extensive beaver trapping, livestock grazing, logging, and farming have forced McCoy Creek, a tributary of the Grande Ronde River, to be channelized and straightened. The consequent reduction in the quantity and quality of deep pool habitat, higher summer stream temperatures, and actively eroding streambanks limit the use of McCoy Creek by both steelhead and chinook salmon. The overall objective of the project is to restore the natural character and function of the meadow complex, along with its accompanying wetlands, flood plains, and meandering stream channel.

Another example of a project that NOAA Fisheries biologists consulted on is the Nursery Bridge Fish Ladder located on the Walla Walla River near the town of Milton-Freewater, Oregon. Two high flow events occurred at the fish ladder in the spring of 2002, leaving the fish ladder clogged with debris. The first event resulted in an emergency shut down of the facility to remove large wood and stranded juvenile salmonids from the fish ladder. The second event resulted in gravel deposition in the fish ladder. In order to reduce the potential for impairing fish passage, the deposited gravel had to be removed. NOAA Fisheries provided BPA with the legal coverage required to clean out the Fish Ladder, and is working with BPA on modifying the operation and maintenance of the facility to prevent the debris deposition problem from happening again in the future.

Swamp Creek, Wallowa-Whitman National Forest

As a field office of the Habitat Conservation Division of NOAA Fisheries, the LGFO staff are actively working with a wide array of local, state, and three federal land managers to promote the return of steelhead and chinook in northeast Oregon rivers. We invite you to learn more about the agency's mission and approaches to salmon and steelhead concerns in the Pacific Northwest by visiting our web page at http://www.nwr.noaa.gov/. You may reach the LGFO by calling 541-975-1835.