

RIPPLES *in the* GRANDE RONDE

FALL 2004

RIVERS UNITING NEIGHBORS

VOLUME 3, ISSUE 3

The McIntyre Sustainability project

By Richard W. Galloway

Talk to Rick Wagner, and you will learn that he is a man who believes in the sustainable management of our watersheds. As a Forest Practices Forester for the Oregon Department of Forestry, (ODF) Northeast Oregon District in La Grande, he has been instrumental in giving the ODF a clearer picture of how all the practices we use to enhance our watersheds must be combined into one holistic management scheme, if we are to reap the benefit of each practice.

Now, meet Mark Gomez, the minerals/fisheries man with the US Forest Service (USFS). After 11 years of service with the Union Hot Shots, Mark, an avid fly fisherman and steelheader, says, "This job just seemed like a natural progression and perfect fit for me." Mark shares with Rick a passion for bringing our watersheds back to a healthier system. The work that has been done on McIntyre, McCoy and Meadow Creeks provides a cumulative benefit to the health of the Grande Ronde River. It does this by improving temperatures and reducing sediment in addition to increased amounts of fish habitat.

Rick believes that all issues affecting our watersheds are important and that we must look at the social, ecological and economic issues in equal light before the decision is made on what will be done in any particular area or, on a certain project.

Mark told me that this was a "Win win situation for everybody involved, the landowner, all the various agencies and the community."

An example of this kind of approach is a recent project designed by ODF in 2003, along with



A example of a bundled barrier doing its job on McIntyre Creek
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the US Forest Service and the landowner, Dick Snow. The project was designed to enhance the riparian area of McIntyre Creek, a tributary of the Grande Ronde River near Starkey. When combined with the work on two other tributaries, McCoy and Meadow creek, it takes a step in improving management access and range utilization at the same time.

The ODF, with funding from the Oregon Watershed Enhancement Board (OWEB), directed the building of ponds on the ridges and in the higher draws to entice the cattle away from the easily impacted riparian systems in the bottom of the drainage.

These ponds were designed to be deep, with steep sides, to hold water longer into the dry part of the year. Shallow ponds tend to become choked with grasses and other aquatic plants that take away from the amount of retained water in only a few short years. The ponds, developed by the ODF have the steep sides to limit the aquatic plant growth that tends to encroach on the ponds, restricting the amount of stored water over time, giving them greater, useful, life spans.

After a year of allowing cattle on the ponds to trample the earthen dam, using their weight and movement to help the banks seal, the ponds are fenced off and a siphon system is installed to carry water from the ponds over the bank and into a water trough equipped with a float valve. This will ensure a clean water supply for the cattle and creates a "Micro" environment around the pond encouraging wildlife, small birds and insects to make their homes there. These are self-generating, as the plants grow, they attract insects, which in turn, attract birds and the food chain makes the connections from there on to the top, us humans who come to observe them in their everyday battle for life.

An added benefit is that the deep ponds are excellent sources of water for helicopters to dip their fire fighting buckets in, for quick suppression of wildland fires. Total, there are now seven ponds on Dick Snow's property, making it a shorter trip for helicopter or cattle to find water.

A system designed to supply water for one of the ponds consists of 6" perforated PVC pipe buried 3 to 4 feet deep at the base of a spring. There are 3 legs on the line, each approximately one hundred feet in length with a clean-out stem on the end of each line. These are 3-4 foot tall, white PVC pipes, marking the ends of the pipes. Valves buried

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McIntyre Creek Bundles at work
USFS photo

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Salmon Creek: Stream temperature and riparian conditions after 14 years

By Coby Menton

The first article in this series of three discussed the science behind water temperature and heat transfer as well as environmental variables affecting stream temperature. Stream temperature is a very important water quality parameter that influences resident and anadromous fish in addition to many other aquatic organisms essential to stream health. Many streams in the Grande Ronde Basin have documented elevated summer temperatures. Much of this is the result of land management activities, past and present. Forest and agricultural practices, mining, roads and urban development have all affected water quality in the Grande Ronde Basin to varying degrees. For more information refer to “Ripples in the Grande Ronde, volume 2, issue 2, spring 2003”.

The second article discussed efforts and policies to reduce abnormally high stream temperature. Current efforts and policies do not solely address stream temperature, but include all water quality parameters that may be having a negative effect on designated beneficial uses. Other water quality parameters include water chemistry, nutrient levels, sedimentation, and bacteria. Refer to “Ripples in the Grande Ronde, volume 2, issue 3, summer 2003” for more information.

This is the third article discussing stream temperature and will describe two projects on the lower end of Salmon Creek a tributary to Chesnimnus Creek in the Upper Joseph Creek Watershed in Wallowa County, Oregon. Both projects are on private land and treatments include livestock exclusion fencing, riparian planting, juniper riprap, and a 15-year lease agreement with the landowners. A continuous 2.3-mile section of Salmon Creek was fenced and planted by the end of the 1989 work season. Project objectives include:

- 1. Stabilize streambanks
- 2. Improve riparian vegetation
- 3. Improve water quality
- 4. Improve fish habitat

To document the effectiveness of both projects automated stream temperature loggers were installed above and below the project reach. Stream temperature has been recorded every year for the spring, summer and fall months since 1992. To compliment the monitoring effort photo-monitoring points were installed and photos are taken in the early fall of every year.



Swamp Creek-riparian regrowth
© Rock Rabbit Photo

Editor’s Note

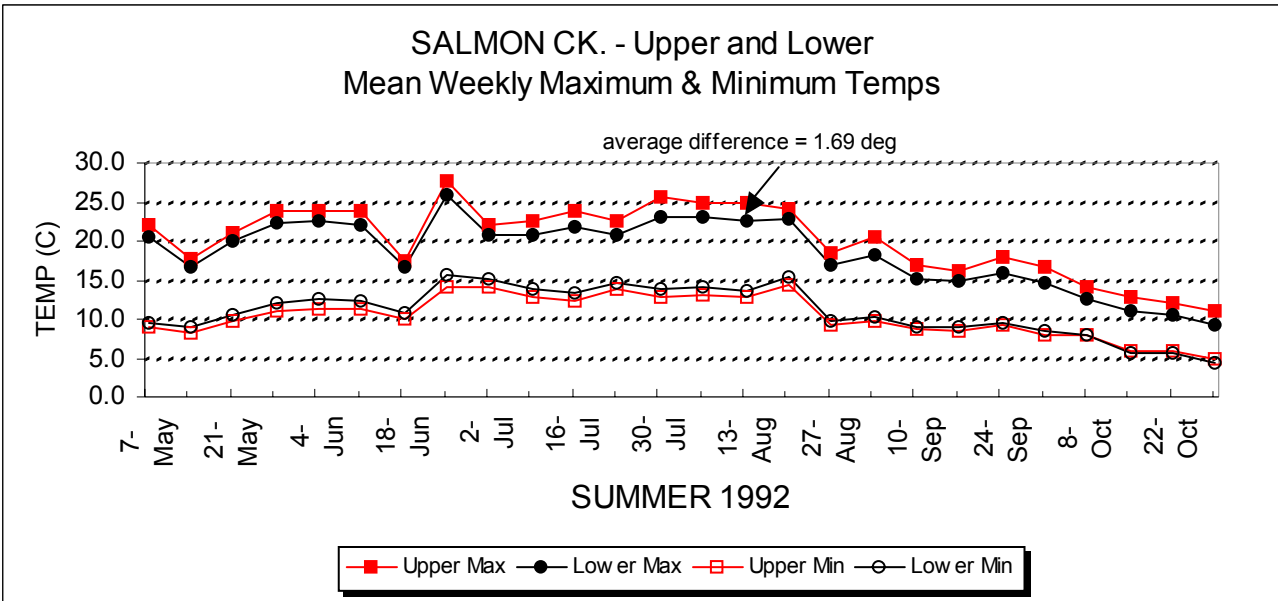
Welcome to the ninth issue of the *Ripples* newsletter published by the Grande Ronde Model Watershed Program. We at *Ripples* strive to highlight local restoration efforts, volunteer opportunities, and educational tips and activities in Wallowa and Union Counties. We want to bring you an informative and engaging newsletter. Feel free to contact us if you have any questions, concerns or suggestions.
– Richard W. Galloway, *Ripples* Editor

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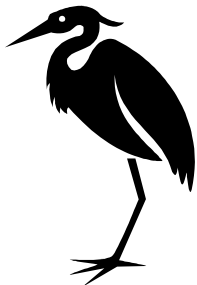
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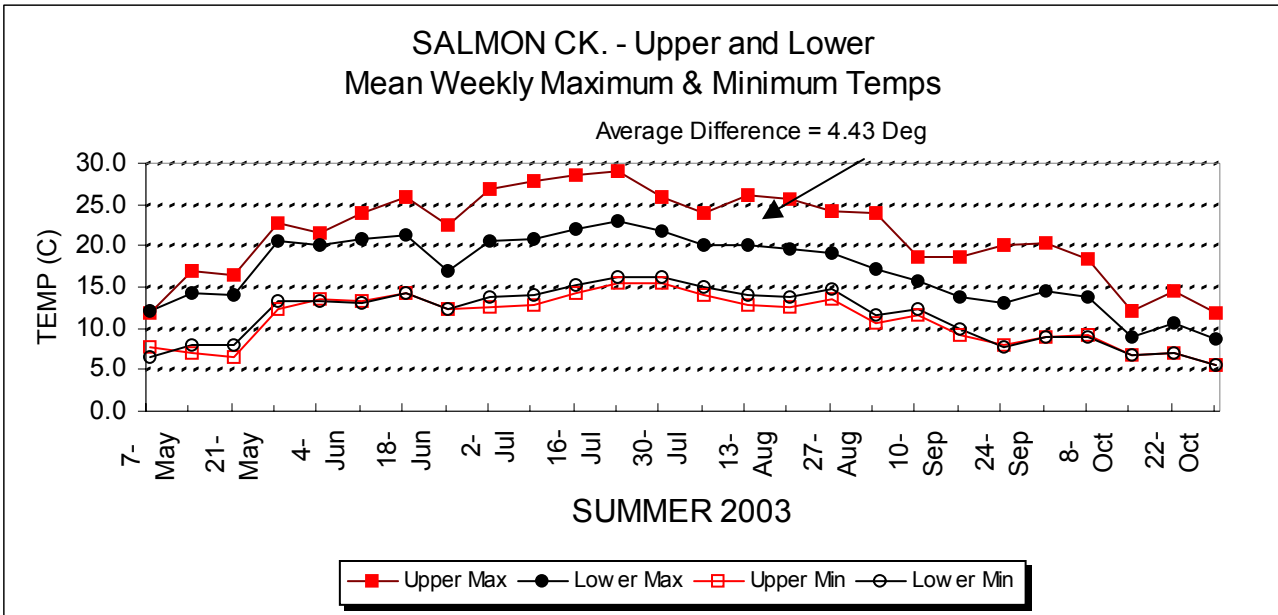
[http://www.fs.fed.us/pnw/
modelwatershed](http://www.fs.fed.us/pnw/modelwatershed)



The preceding chart shows the mean weekly maximum and minimum temperatures for the upper (red) and lower (black) monitoring locations on Salmon Creek in 1992. The lowest lines with the hollow markers detail mean weekly minimum temperatures and the highest lines with the solid markers detail the mean weekly maximum



temperatures. For the maximum temperature lines the average difference between sites was calculated at 1.69 degrees Celsius with the upper site recording warmer mean maximum temperatures for the monitoring period of May 7th through October 22nd.



The 1989 photo depicts riparian conditions lacking woody vegetation and stream shading. After fourteen years of altered grazing management woody vegetation has returned, shade to the stream has increased, and bank stability has improved. All

are key components to improved water quality and fish habitat.

To determine stream temperature trend with a high degree of certainty many decades of continuous monitoring needs to be accomplished, yet we can gain valuable clues as to project effectiveness through monitoring in the short term as demonstrated in this article. To further enhance project-monitoring efforts we include surrogate measures such as photo points to document project

The above chart for 2003 is formatted the same as the 1992 chart. This chart shows a similar pattern to the 1992 chart where calculated minimum temperatures closely track each other and warmest calculated maximum temperatures occur in the mid summer months. The calculated average difference of 4.43 degrees Celsius between the upper and lower mean maximum temperatures compared to 1.69 degrees Celsius in 1992 is the most notable difference between years. It is difficult to determine over an eleven year time period if Salmon Creek stream temperatures have cooled but by comparing the upper site (above treatment) to the lower site (below treatment) we can see that the relative differences have increased.

The following photos show conditions in the project area at the time of project implementation and what conditions currently look like (as of last photo monitoring in 2003).



Figure 2: Photo point #6 taken October 23, 2003.



Figure 1: Photo point #6 taken October 10, 1989.

effectiveness. Surrogates are those measures that have a primary impact on water column characteristics, can be detected in less time, and include vegetation or bank stability response to the project. Since 1994 the GRMWP, local, state, and federal land management agencies as well as private landowners and Tribes have participated in many projects in the Grande Ronde Basin. A multitude of projects that include fencing, planting, altered grazing management and bank stabilization produce results similar to those on Salmon Creek.

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at the base of the water trough allow them to control the flow to the pond, the trough or it can bypass the trough completely, for livestock management practices.

The road system originally in this drainage was right along the stream and created erosion problems over the years, contributing an unacceptable amount of sediment to McIntyre Creek. Working with the landowner, the ODF and the US Forest Service moved the road up on the hillside, but still with-in visual distance of the stream. This redesigned road system allows management access to the range while eliminating the sediment input of the previous road. Road maintenance is less of an issue because of the erosion associated with the proximity of the road to the stream.

The project also connected the lower road to existing roads on the ridges, giving the landowner the ability to make a circuit of the ponds and place salt blocks without backtracking on each of the previously dead-end roads. Parts of the new road were placed in an existing, but seldom used cattle drive. These fenced off drive lanes were the primary way of moving cattle in years past. Mr. Snow used to trail his cattle back to the home place in Echo, but they are typically gathered to a central corral and shipped in cattle truck these days.

One part of this type project that is often hard to discuss with landowners, is the added benefit to riparian areas of excluding cattle for a period of time that will allow a “kick start” to the riparian recovery. Mr. Snow is a man of vision and



New pond with fencing in place, showing aquatic plant growth.

© Raock Rabbit Photo



Bundles in place with large woody debris to slow water flow.

© Rock Rabbit Photo

understood that with the new ponds on the upper country where the grass stays green well into the summer; his cattle would actually increase in weight gains, not lose in the process. When the only water source was in the lower riparian area, the cattle did not make the long hike to the top of the ridges to utilize this feed and it went to waste. Now that there are water sources nearby, the cattle use the higher rangeland to graze and have actually gained weight because of the project.

Mark thinks that the best thing to come from this project was the partnership with the landowner, the ODF, the GRMWP and all the other departments and entities involved. The next important thing is the start of a trend of improving watershed health as a result of different management practices geared toward the sustainability of the natural resources in the watershed. Stream enhancements used included the placement of large logs and boulders in the steam channel to slow the flow of water and prevent further bank erosion. Rick Wagner also over saw a bit of an experimental treatment, a process utilizing bundles of small trees and tree limbs about two feet in diameter by six to eight feet in length. These bundles were placed in locations where redirection of water was paramount but where traditional methods were less than ideal. This time they used a nylon twine, but Rick and Mark both say that on other projects or in different situations, they may switch to a biodegradable twine that will allow the bundles to disintegrate over the course of a few years. This would allow the spread of the contents over a larger area, or allow the limbs to flow downstream to catch on the large boulders and logs, enhancing the usefulness of those objects.

The contractor hired by the USFS for this project was Mike Partney, of Mitrac Contracting, here in La Grande. Mark Tsiatsos, another La Grande contractor, also participated a great deal in

the project. Both are very familiar with McIntyre Creek and with Dick Snow and his cattle/ timber operation. The involvement of local contractors is important to all the partners in this project, helping address the social and economic aspects of watershed restoration.

Already, in the first year after the project, there are reports of spawning steelhead, and sightings of smolt in the springtime water flow. I personally observed a fair number of above legal size trout in some of the pools that were created by the placement of the woody debris and boulders.

Consultation with the United States Fish and Wildlife service, NOAA Fisheries and the Corp of Engineers was combined with the expertise of the USFS biologist, engineers, botanist and others, with the objectives of enhancing watershed health and fisheries habitat while securing the sustainable management of both federal and private land in the production of cattle.

The cattle on this property, when I visited the site, were all high on the ridges, in the shade of some pine trees, near a deep pond, which is set on the bench of a ridgeline. Below, in the draw, I observed a green belt of growth where the stream is located, an indicator of a recovering watershed. Surrounded by a recently thinned and healthy forest, the cattle had adequate green grass to feed upon, and were not overly impacting any one area. Salt blocks in various locations entice the cattle to move between feeding and bedding areas.

While Rick tells me the ODF may not take on another project like this for several years, they are very willing to display this location as a prime example of what can be accomplished and they will aid in the landowner making the right connections for funding aids, and design issues.

Mark and the USFS have set up “photo points” and will continue to monitor and adjust the riparian area for the next 5 years. Future work may include more gradient changes in the flow, increased numbers of weirs, designed to create pools for the fish to rest and feed in, and to create gravel beds for production of new Redds.

The USFS planted 4,000 hardwood trees and 5,000 conifers along the stream in 2003 and



Gravel bed rejuvenation-Sighted steelhead Redd location

© Rock Rabbit Photo

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Watershed Restoration

Planning & Implementation

By Lyle Kuchenbecker

The Grande Ronde Model Watershed Program (GRMWP) is a local entity created in 1992 by proactive local residents, County Commissioners, agency representatives, and tribes. The GRMWP coordinates watershed planning activities to restore and enhance salmonid habitat and encourage and support land and water management while considering economics, and multiple land uses consistent with sound ecosystem management.

A primary emphasis of the GRMWP is to provide technical assistance and funds to accomplish on-the-ground habitat restoration projects. Projects are done on federal and state lands, as well as on private lands. Many entities have been involved in habitat restoration in the basin including soil and water conservation districts, federal agencies, state agencies, tribes, schools and local governments. Private landowners are key to accomplishing habitat restoration goals in the Grande Ronde Basin since more than half of the land area is in private ownership.

The process for implementing habitat restoration projects involves more than willing landowners, technical assistance and funding. It involves, Endangered Species Act Consultation, permits and contracting involving state and federal agencies. This purpose of this article is to help those wishing to do restoration work on their lands understand some of the consultation and permitting background, terminology, legal requirements and processes.

ESA Consultation

The Endangered Species Act (ESA) was passed by Congress in 1973. Section 7 of the Act requires consultation with the National Oceanic and Atmospheric Administration (NOAA Fisheries) and U.S. Fish and Wildlife Service (USFWS) when an action is undertaken using federal funds, that may affect ESA listed endangered or threatened species, or their habitat. ESA listed fish species in the Grande Ronde Basin include Snake River spring chinook salmon and summer steelhead, and bull trout. Animal species include the bald eagle and Canada lynx. Plant species include Macfarlane's four-oclock, Spalding's catchfly and Howell's spectacular thelypody.

ESA Consultation involves preparing and submitting a Biological Assessment (BA) to the regulatory agencies, NOAA and USFWS, describing the elements of a proposed project and the effects those actions will have on the ESA listed species. In response NOAA and USFWS prepare either a Letter of Concurrence (LOC) or a Biological Opinion (BO) depending on the complexity of the project and the effects the project will have on listed species. The Biological Opinion specifies work methods and may identify actions to mitigate any short term negative impacts associated with construction activities. The

timeframe from submission of an acceptable Biological Assessment to issuance of a LOC or BO and project initiation, can take up to 120 days.

Permitting

Permit requirements originate from the Clean Water Act, originally enacted by Congress in 1972. Various sections of the Act delegated enforcement responsibility to either federal or state agencies. Permits to conduct habitat restoration activities can be required from the Oregon Department of State Lands (DSL), Oregon Department of Environmental Quality (DEQ) and the U. S. Corps of Engineers (COE). As with ESA Consultation, the kinds of permits, level of complexity and timeframe to receive permits varies depending on the scope, magnitude and effects of the projects. Factors such as stream classification and presence of listed species, wetland presence, type of work, and volume of fill or removal determine which agencies have jurisdiction and permit requirements. It is important to note that permits may be required for any fill and removal work in or around streams or wetlands, regardless of funding source.

This process involves submitting a joint Section 404 Permit Application to the DSL and COE. Agency personnel review the application, request additional information if necessary, determine jurisdiction and permit requirements, and issue the appropriate permits. As with Biological Opinions, permits can specify work methods and may identify mitigation actions. The permitting process also may take up to 120 days running concurrently with the ESA Consultation process.

The GRMWP, Union and Wallowa Soil and Water Conservation Districts, Oregon Department of Fish and Wildlife, Oregon Department of Agriculture and Natural Resource Conservation Service have

personnel available to assist landowners wishing to do restoration work on their land. Both technical, and ESA Consultation and permitting assistance are also available.

ESA Consultation and permitting are often required for habitat restoration work. These processes are sometimes frustrating and can extend project approval timeframes, but they are intended to improve the results of habitat restoration work.

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Swamp Creek from the highway, up stream.© Rock Rabbit Photo

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there are plans for more plantings in 2005. Mark figures they have a ways to go on the increase of the shade for McIntyre creek. It is currently at approximately 20 percent, and ideally should be 60 percent shade cover. Replanting of native grass in 2003, was accomplished with native grass seed that came from a program where farmers in the Grande Ronde Valley used small amounts of native seed gathered on Wallowa Whitman forest ground to produce larger amounts of seed for this very type of project. Another example of how the revitalization of the local watersheds benefited those who live in the watershed.

Rick can be contacted at the Oregon Department of Forestry, Northeast Oregon District, 611 20th street, La Grande OR, 97850. The phone number is 541-963-7964 or via email at rwagner@odf.state.or.us

Mark can be reached at the Wallowa Whitman National Forest, La Grande Range District, 3502 Highway 30, La Grande, OR 97850. 541-963-7186 or via email at magomez@fs.fed.us

This is a wonderful example of real life sustainability in a riparian area. It can and should be showcased as a model for years to come as the health of the watershed improves for both the fish and the cattle.

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Swamp Creek-upstream view. A riparian area in the healing process.

© Rock Rabbit Photo

Meet the Staff

Heather Hall

Heather Hall started at the Grande Ronde Model Watershed Program eight years ago. She was raised in Union county and graduated from Eastern Oregon University with an Associates Degree in Secretarial Science. Heather works part-time as the GRMWP receptionist, which enables her to be home with her children in the afternoons. She enjoys the small office atmosphere and the people she works with. Since Heather's background mainly included working in medical offices, she has learned a great deal about watershed health and the role it plays in the Grande Ronde Basin.

When not at the GRWMP office she enjoys hunting, fishing and going to car shows with her husband, Shawn and children, Katelynn and Jett.

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*Heather greeting visitors at the GRMWP in La Grande *Staff photo*



Urban Update

Still Want that Green Lawn?

Katie Lazich

Gray water is wastewater that doesn't go down the toilet. It is water from your shower, sink, dishwasher, and washing machine. If properly collected and stored, it can be safely re-used. A gray-water recycling system can pump wash water through a small filter and then make it available to flush toilets or water the lawn or non-edible plants. By using your gray water you can potentially save up to 35% of your fresh water consumption. Gray water use is restricted and cannot be sprayed, but can be used in flood or drip irrigation on non-edible landscaping.

Here are some helpful websites to learn more about gray water use.

<http://oasisdesign.net>

<http://paynes.com>

<http://www.sahra.arizona.edu/programs/water>

Enjoy a favorite quote of Katie's: If there is magic on this planet, it is in water. Loren Eisley

Teacher Tips and Liquid Links

Education in the Joseph Creek Watershed

Katie Lazich

Wallowa Resources ran two pilot projects this spring and summer in natural history education. The Swamp Creek Friday Field Studies Program provided eight high school juniors with a hands-on learning opportunity. The students traveled to Swamp Creek, in the Joseph Creek Watershed, every Friday for eight weeks and learned about natural history, participated in restoration efforts, and completed a research project which will provide data to be used for future studies. Eric Dinger, an intern with Wallowa Resources, wrote the grant, developed the program, and taught the courses with assistance from Forest Service biologists Cindy Erickson, hydrologist Dana Orick, and Gretchen Sausen of the USFWS. Students learned about velocity, turbidity, macro invertebrates, plants and hydrology. The students were paid for restoration work they accomplished and completed a plant survivability study. The program was designed to encourage students to learn to think critically, to ask questions, and to



Steve instructing



McLain & Bellows rafting

explore possible careers relating to natural resources. To learn more about this project, explore the Wallowa Resources website at www.wallowaresources.org to view a student generated page about their experience.

The Journeys training workshop provided teachers with the opportunity to learn about natural history and how to incorporate place-based education principles into their curriculum. Ten teachers from all grade levels participated in a three day trip down the Grande Ronde River. The training was lead by Steve Archibald, of Open Door Learning, who developed the Journeys curriculum in 1996 while working for the Teton Science School. The Journeys curriculum is a philosophy and methodology for encouraging teachers to utilize their school yard and surrounding outdoor areas in practical and efficient ways that help the students better understand their homes. Additionally, teachers were able to learn about watershed science and local natural resources, specifically noxious weeds, hydrology, geology, and macro invertebrates. Penny Arenson, a Teton Science School graduate with a MS in Watershed Science and Mark Porter of Wallowa Resources attended the trip and Ellen Bishop, an author with a PhD in Geology, helped develop the natural history curriculum. The focus for teachers was to look at what they are already doing in the classroom and augment their lessons with local natural history. The trip down the Grande Ronde provided the teachers with information and time to brainstorm and connect with other teachers. Wallowa Resources will continue to support these teachers throughout the school year, by providing resources, community contacts, and answering questions. For more information about the Journeys philosophy, please see www.journeysschool.org.

Both of these programs were offered free of charge to the participants. Both grants were written by Eric Dinger. These programs will continue in the future and it is hoped that they will grow to a larger scale in the years to come.

Teachers, Here are a few web sites to get you headed in the right direction.

Getting Started

Tips for teachers who want to begin watershed education in their classrooms this fall.

- Remember start small and do something you will enjoy!

- River of Words – A great project/contest. Poems and art due in February www.riverofwords.org (lots of links)
- Green Teacher – www.green.org/resources - Has watershed basics and activities, mapping your watershed, and background information.
- Need supplies? Take a look at the Acorn Naturalist catalogue on-line – www.acornnaturalist.com.
- Bring the expert in. Find a guest speaker in the “Directory of Natural Resource Specialists” which can be downloaded from the Grande Ronde Model Watershed Program from the *Education Outreach* section www.fs.fed.us/pnw/modelwatershed/.
- Have a curriculum party! Invite all the teachers from your school to your classroom and ask everyone to bring all the curriculum books they have related to water or natural history. I’ll bet there are lots of Project WET and other guides “floating” around. Also, check your school library.

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Mark instructing



Riparian Management Techniques Union Soil & Water Conservation District

Submitted by Steve Lindley

In recent years, science has shown us the importance of riparian areas to watershed health, and as a result, management of those areas has undergone many changes. Most of the changes, such as the installation of riparian exclusion fencing, have worked out well. In some circumstances, however, total exclusion of the riparian area may be impractical due to cost and maintenance issues.

The Union Soil and Water Conservation District, in conjunction with the Oregon Department of Agriculture, is about to implement a new study in the Starkey area of Union county. The study area covers approximately 25,000 acres where they hope to install 10 ponds/ watering systems.

The objective is to determine if this alternative to fencing is effective in restoring proper riparian conditions, as building ponds would allow the landowner to avoid having to invest hundreds of man-hours to fence off areas, or maintain those miles of fence. All that is required is a bit of maintenance on smaller enclosed areas, near springs and ponds, and the setting of stock tanks. The tanks will be filled via a pipeline from the ponds, and the stock-watering areas are to be located well away from riparian zones to draw the animals to uplands so that grazing distribution can be more evenly dispersed, and forage utilization be more balanced. By utilizing existing springs, developing ponds, and strategically placing minerals, landowners hope to keep the livestock from congregating in one area for extended periods of time.

Starting this fall the Union SWCD will conduct a two-week intensive data collection program to establish baseline information. Riparian plant communities can then be measured and analyzed comparatively in future years. The data



New dip / stock pond, McIntyre Creek
© Rock Rabbit Photo

will show the type of plants in the area and divide them between forbs, grasses, sedges and trees.

The percentages of each type and the location of each species will be plotted for comparison during the 5-year span of the study. Density, height, diameter, and canopy percentage for each species will be noted. This fall’s baseline information will establish which plants and/or parameters are best to study.

Other data gathered might include information on the stream channel itself. The channel width to depth ratio, flow rates, and stream gradients will be measured. Other information to be gathered might be such items as, bank stability, degree of overhanging vegetation, the temperature of the water, how much wood is in the stream, its size and condition, and the amount of gravel for possible spawning grounds.

Similar studies in other parts of the country have indicated cattle can be trained to avoid riparian areas, but intensive management is needed by the operator to move congregated cattle out of riparian zones and on to surrounding uplands where new water developments exist. Locally, there have been few studies to date that have looked at riparian plant succession after changes in management techniques, such as the development of off-site watering facilities.

When completed, this study will provide the knowledge of what has worked, what does not work, and new things to try in revitalizing our riparian areas.

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View of dam and beyond, McIntyre Creek
© Rock Rabbit Photo

Swamp Creek: Restoration, Grazing, and Social Experimentation

By Jeff Oveson

Swamp Creek, a tributary of Joseph Creek in the northern end of Wallowa County, has been and will continue to be the site where a new way of doing business will be evaluated over the next few years. Once a very productive steelhead stream, fed all summer by the stored water behind beaver dams and the wet meadows they sustained, the human activities geared to production over the last 100 years or so have had a less-than-desired affect on the hydrological function of this stream. Much of the bottomland in the Swamp Creek drainage was acquired by the Forest Service in 1994, and an emphasis on sustainable management began to unfold.

Meadows that were once the location of numerous sedges, rushes, and wetland dependant terrestrial species are mostly dry now, gradually but certainly turning to conifer forest where there was once a variety of riparian species such as willow, alder, aspen, red ozier, and hawthorn. All of these are symptoms of an ecosystem undergoing change that is not necessarily for the better.

The challenge facing the land managers on Swamp Creek, specifically the US Forest Service and it's grazing permittees, is to recover the historic function and complexity of Swamp Creek while



Swamp Creek -valley
© Rock Rabbit Photo

maintaining the 18 different pastures that make up the grazing allotment shared by four permittees. They are, Mack and Tom Birkmaier, Rod Childers, Jack and Scott MacClaran, and Rocky Dixon. Birkmaier, Childers, and MacClaran are all familiar names in Wallowa County and beyond, all individually and collectively recognized for their work in natural resource issues serving as spokesmen for their industry and searching for ways to balance their utilization of natural resources while participating in the restoration of watersheds designed to accommodate the recovery of endangered fish. Chris Cunningham, managing the Dixon portion of the permit, is a long time Wallowa County resident with a history of good natural resource stewardship, as well.

As part of their permit responsibilities associated with grazing this ground, the permittees are now charged with monitoring the condition of riparian species as they graze, trying to identify that elusive “trigger” that, tells them and the Forest Service when grazing practices are beginning to have an undesired effect. Learning to recognize this point will enable permittees to move cattle at the right time, assuring both the continued recovery in Swamp Creek and the continuation of their permit to graze the allotment.

The Forest Service started restoration work in Swamp Creek 20 years ago, with construction of log weirs in a section of the stream. The “Swamp Creek Restoration Project” was started in 1999 because of the realization that there is a great deal of work yet to do, work that cannot be completed without the collaborative efforts of both the natural resource specialists from the Forest Service and the grazing permittees. The railroad that ran along Swamp Creek to haul logs is gone, grazing and timber harvest activities have changed so they don't have the negative impacts on watersheds that they once did, and still, a return to beaver swamps with lush and diverse wetland vegetation is a long way off.

With a long term vision in hand, both cattlemen and the Forest Service are working toward the common goals of stream restoration and sustainable levels of utilization in Swamp Creek. The Forest Service and permittees believe that this can be achieved through continuing the hard work that a number of community partners have committed to this little stream that was, and hopefully, will be again.

The Forest Service effort in Swamp Creek is led by a number of people. Ken Bronec, fish biologist; Dana Orrick, hydrologist; Cindy Erickson, plant specialist; Teresa Smergut and Rick Smith, range conservationists; and numerous other technical and support staff from the Wallowa Mountains Office of the Forest Service have been involved in the Swamp Creek Restoration. Volunteers from several organizations, youth from Oregon Youth Conservation Corps, the National Riparian Service Team and others have provided both work and guidance, while organizations such as Bonneville Power Administration and Grande Ronde Model Watershed have provided funding beyond the Forest Service appropriated dollars.

It's just a beginning, there is a long way to go, and a lot of people will be watching how this combination of social, economic, and environmental practices develops. One thing is sure: this effort is being led by people dedicated to natural resources, to their communities, and to collaboration.

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Swamp Creek from the Highway, a healthy watershed restoration underway
© Rock Rabbit Photo



Swamp Creek restoration underway, grass and brush regrowth
© Rock Rabbit Photo