RIPPLES in the GRANDE RONDE

SPRING 2004 | RIVERS UNITING NEIGHBORS | VOLUME 3, ISSUE 1

Imnaha Fish Facilities

Richard W. Galloway

LIKE A FEW OTHERS, MY FAMILY AND I LIKE TO HAVE PICNICS NEAR THE IMNAHA SPRING CHINOOK SALMON FACILITY, OPERATED BY THE OREGON DEPARTMENT OF FISH AND WILDLIFE. THE COMPLEX IS ONLY SEASONAL THOUGH SO THERE IS ONLY SOMEONE THERE FOR PART OF THE YEAR TO GREET US AND ANSWER OUR QUESTIONS. THE GUMBOOT FACILITY IS A SHORT DRIVE DOWN STREAM FROM THE JUNCTION OF FOREST ROAD 39, THE WALLOWA MOUNTAIN LOOP ROAD, AND THE IMNAHA RIVER. THE OLLOKOT CAMPGROUND IS APPROXIMATELY 3 MILES AWAY.

THIS INSTALLATION FALLS UNDER THE HEADING OF A SATELLITE FACILITY FOR THE LOOKINGLASS HATCHERY NEAR ELGIN. PERSONNEL ARE PULLED FROM THAT LOCATION OR A TEMPORARY PERSON IS HIRED TO RUN THE IMNAHA FACILITY FOR A FEW MONTHS. THE NEZ PIERCE TRIBE HAS SHARED THE DUTY IN THE PAST.

GENERALLY THERE IS SOMEONE ON SITE FROM JULY TO EARLY SEPTEMBER TO WORK ON COLLECTION OF ADULT SALMON, AND TO GREET THE PUBLIC. EARLIER IN THE SPRING, STARTING ABOUT MARCH 5TH TO APRIL 15TH OR SO, SMOLTS ARE HELD AT THE FACILITY FOR RELEASE INTO THE STREAM. HATCHERY PERSONNEL ARE ON SITE TO MONITOR AND FEED THE SMOLT DURING THAT TIME PERIOD. THE YOUNG FISH ARE KEPT THERE TO ACCLIMATIZE THEM TO THE IMNAHA STREAM WITH THE PLAN THAT ON THEIR RETURN THEY SEEK OUT THEIR HOME WATERWAY AND SPAWN THERE.

DURING AN UNEXPECTED EARLY FLOOD A FEW YEARS AGO THE FLOATING WEIR SYSTEM WAS HEAVILY DAMAGED. WITH BIG TREES AND LARGE BOULDERS BEING PUSHED DOWN STREAM IN THE FLOW THE PVC AND TUBULAR STEEL SYSTEM WAS JUST NOT ABLE TO WITHSTAND THE FORCES OF NATURE. THIS HAPPENED DURING AN, ABNORMAL, EARLY WARM SPELL DURING JUNE WHEN WATER LEVELS WERE ALREADY SEASONABLY HIGH. SINCE THAT TIME THEY HAVE NOT PUT THIS FLOATING WEIR SYSTEM IN THE STREAM UNTIL AFTER THE SPRING HIGH WATER PERIOD. NOW THEY WAIT UNTIL AFTER THE MAJOR HIGH WATER FLOWS OF SPRING.

BRAD SMITH OF THE ODFW OFFICE IN ENTERPRISE ADDED THAT THE AMOUNT OF FISH COMING UP STREAM INCREASES WITH THE SLOWING OF THE WATER ANYWAY, SO THEY ARE NOT MISSING MANY FISH BY WAITING. BRAD ESTIMATES THEY MISS APPROXIMATELY 30-TO-40 PERCENT OF THE RETURNING FISH ON AVERAGE, OVERALL. THERE IS A "LOWER LIKELY HOOD OF BLOW OUT" IF THEY WAIT FOR FLOWS TO SUBSIDE. BOTH SYSTEMS WERE REMOVED IN SEPTEMBER SO NOTHING IS IN PLACE ON A PERMANENT BASIS TO DISTRACT FROM THE BEAUTY OF THE STREAM.

HE ALSO TOLD ME ABOUT A RECURRING SUMMER FLOOD PROBLEM CALLED A "HOSE OUT" INCIDENT. THESE HAPPEN DURING THE WARM MONTHS OF JULY AND AUGUST WHEN HEAVY THUNDERSTORMS CAN POUND THE HIGH ROCKY PEAKS AND THAT IT IS SOMETHING THAT CAN HAPPEN ANY SUMMER. HE FEELS THE NATURALLY OCCURRING TERRAIN OF THE REGION CAUSES THESE FLOWS. WITH MASS AMOUNTS OF WATER DUMPED IN STEEP UPPER COUNTRY THAT HAS LITTLE PLANT COVER TO HOLD IT THERE IT NATURALLY HEADS DOWN STREAM, FAST. OBVIOUSLY, SINCE THIS IS A WILDERNESS AREA, IT IS NOT A LOGGING OR ROAD ISSUE, BUT SIMPLY A FACT OF THE GLACIAL FORMATION OF THE LAND.

FOR 2004 THE IMNAHA FACILITY OPERATIONS ARE STATUS QUO, BUT IN 2005 THERE ARE PLANS TO UPGRADE THE FACILITY, ADD AN IMPROVED WEIR, AN ADULT FISH LADDER AND HOLDING FACILITIES. UNLIKE THE LOOKINGLASS FACILITY WHERE THEY HAVE A DEEP WATER WELL TO CONTROL THE TEMPERATURE OF THE WATER USED TO HATCH THE SALMON EGGS, THE GUMBOOT HOLDING TANKS ARE STRAIGHT RUN RIVER WATER. THE GUMBOOT FACILITY IS PERHAPS BETTER DESCRIBED AS A SHORT-TERM REARING AND ADULT CAPTURE FACILITY, RATHER THEN A HATCHERY, SINCE THE SMOLT RELEASED HERE WERE HATCHED AND STARTED AT LOOKINGLASS.

WHEN ASKED ABOUT THE INCREASE IN SALMON AND STEELHEAD NUMBERS OVER THE PAST FEW YEARS BRAD WAS RELUCTANT TO GIVE CREDIT TO JUST THE WORK DONE AT THE STATE HATCHERIES AND WATERSHED ENHANCEMENT WORK DONE BY THE ODFW, THE NRCS, FOREST SERVICE, SWCD AND GRMWP. IT IS A COMBI NATION OF FRESH AND SALT-WATER CONDITIONS SINCE THE LATE 1990S THAT HAVE HELPED BRING THE FISH BACK IN GREATER NUMBERS. *Continued Page 2*

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Imnaha, continued

HE SPECULATES THAT 50-70 PERCENT OF THE RETURNING FISH ARE HATCHERY PRODUCED, BUT THE WILD STOCK IS STRONG AS WELL. WITH THREE TO SIX THOUSAND HATCHERY AND NATIVE FISH RETURNING OVER THE LAST THREE YEARS AND ANOTHER SIX THOUSAND EXPECTED IN 2004 THINGS ARE DEFINITELY LOOKING GOOD FOR OUR FISH RUNS.

HE ADDED THAT THERE WAS "ROOM FOR IMPROVEMENT IN THE BIG SHEEP SYSTEM" BUT THAT NOT MUCH MORE COULD BE EXPECTED FROM THE IMNAHA. "GROUSE CREEK ALSO HAS POTENTIAL FOR IMPROVEMENT FOR STEELHEAD WITH SOME RIPARIAN CONDITION ISSUES." THERE IS LITTLE TIMBER HARVESTING ACTIVITY IN THE AREA, NO NEW ROADS ARE PLANNED AND THE OLD ONES PRODUCE LESS AND LESS SEDIMENT AS TIME GOES ON. IF, AND IT'S A BIG IF, THERE ARE ANY TIMBER SALES IN THE AREA OVER THE NEXT FEW YEARS THE FOREST SERVICE WILL HAVE A PLAN IN PLACE THAT MINIMIZES THE DAMAGE TO THE WATERSHED.

WHEN ASKED IF HUNTERS OR HIKERS IN THE AREA WERE OF ANY CONCERN, HE SAID THAT AS A GENERAL RULE THE NUMBERS WERE TOO LOW TO BE MUCH OF AN IMPACT UNDER NORMAL CONDITIONS. "THERE ARE SOME HARASSMENT ISSUES WITH THOSE CAMPED NEAR THE CHINOOK HOLDING PEN, BUT IN GENERAL IT IS NOT A HUGE ISSUE. THAT JUST COMES WITH THE TERRITORY AND PEOPLE AROUND BIG FISH."

SO, NOW THAT YOU KNOW A LITTLE BIT MORE ABOUT THE GUMBOOT FACILITY, PUT IT ON YOUR LIST OF PLACES TO VISIT THIS SPRING WHEN YOU ARE OUT FOR A SUNDAY DRIVE OR WANT A PLACE FOR A PICNIC. THE STAFF ALWAYS WELCOMES COMPANY, AND THE KIDS WILL REALLY LIKE WATCHING THE ADULT SALMON IN THE HOLDING PENS.

(ADULT MEN ARE CLASSIFIED AS KIDS WHEN AROUND BIG FISH).

AN EXAMPLE OF GOOD RIPARIAN CONDITIONS

Angie Johnson and the Community Fire Plan

Richard W. Galloway

ANGIE JOHNSON IS THE NATIONAL FIRE PLAN PLANNING COORDINATOR AT THE OREGON DEPARTMENT OF FORESTRY IN LA GRANDE. HER JOB AT PRESENT IS WORKING ON THE 10-YEAR COMPREHENSIVE STRATEGY THAT WILL IMPLEMENT A COLLABORATIVE APPROACH TO REDUCING WILDLAND FIRE RISKS TO COMMUNITIES AND THE ENVIRONMENT.

THERE ARE FOUR GOALS OF THIS 10-YEAR LONG PROCESS:

1. IMPROVE FIRE PREVENTION AND SUPPRESSION.
2. REDUCE HAZARDOUS FUELS
3. RESTORE FIRE-ADAPTED ECOSYSTEMS
4. PROMOTE COMMUNITY ASSISTANCE.

ALONG WITH THOSE GOALS ARE THREE GUIDING PRINCIPLES:

1. PRIORITY SETTING TO EMPHASIZE THE PROTECTION OF COMMUNITIES AND OTHER HIGH-PRIORITY WATERSHEDS AT-RISK FOR FIRE.
2. COLLABORATION AMONG GOVERNMENTS AND BROADLY REPRESENTATIVE PEOPLE FROM THE COMMUNITY.
3. ACCOUNTABILITY THROUGH PERFORMANCE MEASURES AND MONITORING FOR RESULTS.

THE END RESULT OF ALL THIS WORK WILL BE THAT WE, AND WE MEANS FROM EACH INDIVIDUAL TO A REGIONAL BASE, WILL HAVE A "COMMUNITY FIRE PLAN" (CFP) IN PLACE. FIRST THERE WILL BE A "RISK ASSESSMENT AND STRATEGIC PLANNING" PROCESS. THIS IS WHERE ANGIE ENTERS THE PICTURE.

SHE IS THE PERSON THAT IS COORDINATING WITH THE FOUR COUNTIES IN THIS REGION. UNION, WALLOWA, BAKER AND UMATILLA ARE ALL WORKING WITH HER TO GET THEIR OWN COMMUNITY FIRE PLAN IN PLACE. WHILE IT IS A NATIONAL PLAN, IT IS SET UP TO WORK AT REGIONAL, STATE AND TRIBAL LEVELS. FOR THIS WORK, IT HAS TO HAVE THE COLLABORATION OF PEOPLE ON A LOCAL LEVEL. THE PARTICIPANTS NEED TO BE DIRECTLY RESPONSIBLE FOR MANAGEMENT DECISIONS AFFECTING PUBLIC OR PRIVATE PROPERTY. THIS LOCAL INVOLVEMENT IS CRUCIAL TO THE PROJECT AND ALL PRIORITIZATION, RESOURCE ALLOCATION AND COORDINATION HAS TO COME FROM, AND GO TO, THIS LEVEL.

WHAT DOES THIS COMMUNITY FIRE PLAN MEAN TO YOU, THE AVERAGE CITIZEN? WELL, IT WILL SHOW YOU AREAS AT RISK IN YOUR AREA: THE INFRASTRUCTURE, NATURAL RESOURCES, AND YOUR WATERSHED AND IN TURN YOUR MUNICIPAL WATER SOURCE. THE PLAN WILL RELATE THE RISK OF FIRE TO YOUR HOME, YOUR JOB AND YOUR RECREATION AREAS. A WELL-RESEARCHED PLAN WILL SHOW THE AREAS AT GREATEST RISK AND DESCRIBE HOW TO REDUCE THAT RISK, LIST THE CONDITIONS, AND COORDINATE BETWEEN THE ENTITIES WHAT NEEDS TO TAKE PLACE TO MITIGATE THOSE RISKS.

ALL THIS COMES ABOUT FROM A REPORT ON THE FIRES OF 2000 THAT WAS SENT TO, THEN PRESIDENT CLINTON. THE NATIONAL FIRE PLAN AND COLLABORATIVE 10-YEAR STRATEGY ARE AN ONGOING WORK IN PROGRESS. ALL OF THIS COMES AS A PART OF THE HEALTHY FOREST RESTORATION ACT. PART OF THE PROJECTED GOALS ACCOMPANYING THIS ACT WERE TO; RESTORE LANDSCAPES AND REBUILD COMMUNITIES, (ONES THAT SUFFERED FROM THE 2000 WILDFIRES- EXTENSIVE, COSTLY DAMAGE TO PROPERTY AND RESOURCES,) INVEST IN PROJECTS TO REDUCE FIRE RISK, WORK DIRECTLY WITH COMMUNITIES; EXPAND THEIR PARTICIPATION (ENCOURAGE GRASS ROOTS; EXPAND OUTREACH AND EDUCATION), BE ACCOUNTABLE (INTEGRATED MANAGEMENT TEAMS IN THE REGION SHOULD TAKE PRIMARY RESPONSIBILITY FOR IMPLEMENTING FUELS TREATMENT, RESTORATION AND PREPAREDNESS). THIS IS FROM SLIDE # 6 IN AN ODF POWER POINT PRESENTATION BY ANGIE JOHNSON.

IT STATES IN PUBLIC LAW 106-291 THAT "SECRETARIES SHALL WORK WITH GOVERNORS ON LONG-TERM STRATEGY..." AND THAT "KEY DECISIONS SHOULD BE

Continued: Page 3

Editor's Note

Welcome to the seventh 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

Send your Letters to the Editor to:
Grande Ronde Model Watershed Program
10901 Island Avenue
La Grande, OR 97850
Phone: (541) 962 – 8599
Fax: (541) 962 – 6593
ripple@eou.edu

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

Johnson: Continued

MADE AT LOCAL LEVELS." WHILE IT IS A NATIONAL FIRE PLAN, THE MAIN OBJECTIVE IS THAT THERE BE PLANS IN PLACE FOR THOSE AFFECTED THE MOST BY WILDFIRE, THOSE ON A LOCAL LEVEL. BY ACTIVELY SEEKING INPUT FROM A LOCAL CITIZEN BASE, THOSE IN CHARGE KNOW THAT THE WORK THEY ARE DOING WILL BENEFIT THOSE THAT MOST NEED THE CFP.

THE COMMUNITY FIRE PLAN IS THE BASIS FOR A WORKING NATIONAL FIRE PLAN. IT CAN BE USED TO SET PRIORITIES FOR MONIES SPENT ON RELATED PROJECTS. IT IS ONE STEP IN THE PROCESS OF ENVIRONMENTAL ASSESSMENTS FOR THE US FOREST SERVICE AND OTHERS. IT WILL IDENTIFY AND PRIORITIZE LOCAL AND REGIONAL PROJECTS FROM A COUNTY TO NATIONAL LEVEL.

WITH A PLAN IN PLACE COMMUNITIES WILL KNOW WHERE FUEL LOADS ARE TOO HIGH, WHAT IT WILL TAKE TO REDUCE THOSE LOADS AND HOW IT BEARS ON AN OVERALL HEALTHY FOREST. IT WILL HELP IN THE DEVELOPMENT OR CHANGES IN, EMERGENCY RESPONSE PLANS. ALL PARTNERS FROM LOCAL LANDOWNERS TO GOVERNMENT AGENCIES SUCH AS THE ODF AND USFS GAIN WITH A CFP. IT WILL SUPPORT FUELS REDUCTION PROJECTS ON PUBLIC AND PRIVATE LANDS. IT HAS PROVISIONS FOR WORKING WITH/ STARTING NEW RURAL FIRE DEPARTMENTS.

WHAT ANGIE IS WORKING ON NOW IS A TEMPLATE TO BASE THE FINAL FORM OF THE LOCAL PLAN. THERE ARE SEVERAL STATES THAT HAVE CFPS IN PLACE FOR COMPARISON. A PRIME EXAMPLE IS THE STATE OF UTAH PLAN THAT YOU CAN VIEW FOR YOURSELF AT HTTP://WWW.NR.UTAH.GOV/SLF/FMCOMMUNITYFIREPLN.HTM TO GET A GOOD OVERALL IDEA OF HOW THIS WILL BENEFIT YOUR COMMUNITY. ON A LOCAL LEVEL THERE IS THE APPLEGATE FIRE PLAN, APPLEGATE PARTNERSHIP IN JACKSONVILLE, OR. IT IS AVAILABLE AT HTTP://WWW.GRAYBACK.COM/APPLEGATE-VALLEY/FIREPLAN/INDEX.ASP THEY ALSO HAVE A BROCHURE AVAILABLE THEY WILL SEND TO YOU ON REQUEST.

FOR MORE INFORMATION, OR TO SEE ABOUT WORKING ON THE COMMUNITY FIRE PLAN CONTACT ANGIE JOHNSON AT THE OREGON DEPARTMENT OF FORESTRY, 541-963-3168 OR YOU CAN EMAIL HER AT AJOHNSON@ODF.STATE.OR.US

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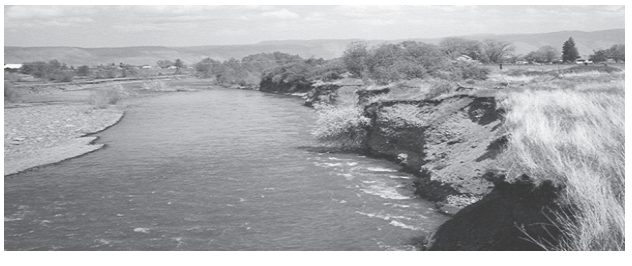

AN EXAMPLE OF BAD RIPARIAN CONDITIONS

Darrell Dyke

Introduction

Richard W. Galloway

DARRELL DYKE IS THE PROJECT LEADER WORKING UNDER A SPECIAL PROGRAM FOR THE BUREAU OF RECLAMATION IN LA GRANDE. HE HAS BEEN WORKING FOR THEM SINCE 1990, STARTING IN DENVER'S ENGINEERING AND RESEARCH CENTER OFFICE AS A HYDRAULIC ENGINEER. AFTER SEVERAL SUCCESSFUL POSITIONS INVOLVING CONDUCTING NUMEROUS HYDROLOGY STUDIES, DEVELOPING MULTIPLE HIGH TECH WATER MANAGEMENT PROJECTS AND SERVING AS RECLAMATION'S SENIOR ENGINEER EVALUATION WATER CONSUMPTION DARRELL TRANSFERRED WEST IN THE FALL OF 1999. THIS WAS THE FIRST YEAR THE BUREAU OF RECLAMATION HAD AN OFFICE IN LA GRANDE.

BECAUSE HE IS A "LOCAL BOY," RAISED ON THE FAMILY RANCH NEAR NORTH POWDER THAT HE CURRENTLY OPERATES IN HIS OFF TIME, DARRELL UNDERSTANDS LOCAL NEEDS. HE GRADUATED IN 1979 FROM BAKER HIGH SCHOOL AND HAS A DEGREE IN AGRICULTURAL ENGINEERING FROM OREGON STATE UNIVERSITY. DARRELL TOLD ME, "NOW DON'T GET ME WRONG, I APPRECIATED BEING ABLE TO GO TO OSU. AND I APPRECIATED MY CAREER OPPORTUNITIES IN DENVER, BUT THERE'S NO PLACE LIKE HOME"!

DUTIES.

HIS DUTIES ARE FAR RANGING, HE WORKS WITH SEVERAL AGENCIES IN THE REGION ALONG WITH LOCAL RANCHERS AND FARMERS. HE PROVIDES HELP WITH SURVEYING, ENGINEERING DESIGN, AND TECHNICAL WORK TO IMPROVE WATER DIVERSION, MEASUREMENT AND QUALITY, ALONG WITH FISH PASSAGE AND HABITAT IMPROVEMENTS IN THE GRANDE RONDE BASIN. PROJECT SIZE DOES NOT REALLY PLAY INTO WHAT DARRELL TAKES ON; HE WORKS A FULL RANGE OF PROJECTS IN UNION AND WALLOWA COUNTIES. IF YOU HAVE QUESTIONS ABOUT HYDROLOGY, HE CAN GIVE YOU THE ANSWERS YOU NEED.

DARRELL'S JOB IS PRIMARILY IN THE "THINKING ABOUT" OR CONCEPTUALIZATION AND DESIGN OF THE VARIOUS PROJECTS. SITE SURVEYS, STRUCTURAL ENGINEERING, MITIGATION, FUNDING AND SITE INSPECTIONS ARE THE CENTRAL DUTIES FOR DARRELL. EACH PROJECT HAS ITS OWN PARTICULAR NEEDS AND MUST GAIN APPROVAL FROM EVERYONE INVOLVED. HE EXPLAINED TO ME THAT THERE ARE; FISH PASSAGE CONSIDERATIONS, IRRIGATION NEEDS, AND MINIMUM WATER FLOW REQUIREMENTS FOR EACH PROJECT WITH SPECIFIC STANDARDS FOR EACH PROJECT. OTHER CONSIDERATIONS ARE THE POWER OF HIGH WATER AND OR ICE FLOWS. THE OREGON DEPARTMENT OF FISH & WILDLIFE BIOLOGISTS ARE CONSULTED ON DESIGN ISSUES FOR AN IRRIGATION DIVERSION THAT COULD AFFECT FISH ON THE ENDANGERED AND THREATENED LISTS. THE PROJECTS MUST HAVE ENVIRONMENTAL COMPLIANCE; THEY ARE REQUIRED TO MEET THE REGULATIONS, LAWS OF THE FEDERAL ENDANGERED SPECIES ACT (ESA), THE CLEAN WATER ACT, OREGON STATE FILL, REMOVAL LAWS, AND SOMETIMES MANY OTHERS. THIS PROVISION MAY TAKE UP TO A YEAR TO COMPLETE.

PROJECT SIZE IS NOT A CONSIDERATION IN WHAT DARRELL WORKS ON, THE PROJECTS CAN BE SMALL DIVERSIONS SCREENS TO MAJOR STREAM RESTORATION PROJECTS. ON AVERAGE, THE TIME LINE FROM IDEA TO PROJECT FINALIZATION IS TWO YEARS. THIS INCLUDES THREE TO FOUR MONTHS GOING OVER THE INITIAL PROPOSAL, AND FOUR MONTHS FOR DESIGN. PROJECT INSTALLATION HAS TO ALLOW FOR THE RIGHT CONSTRUCTION CONDITIONS, LOW FLOW OR NO FLOW, PRIOR TO OR AFTER IRRIGATION NEEDS. DEPENDING ON THE SIZE OF THE PROJECT, IT MAY TAKE WEEKS TO MONTHS FOR CONSTRUCTION AND FINALIZATION. LONG-TERM CONSIDERATION MUST INCLUDE RESTORATION AND REHABILITATION OF THE LAND DISTURBED DURING THE WORK.

AS A GENERAL RULE, IN THESE MODERN TIMES, THE VARIOUS PROJECTS ARE MODELED WITH A COMPUTER PROGRAM WHERE MANY VARIABLES CAN BE LOOKED AT IN MINUTES INSTEAD OF YEARS. THIS ALLOWS DARRELL TO DETERMINE IF THE PROJECT IS FEASIBLE AND COST EFFECTIVE. HIS COMPUTER PROGRAMS ALLOW HIM TO MIMIC THE HYDROLOGIC FORCES IN NATURE. IT CAN SHOW; LOW TO FLOOD STAGE FLOWS, ADD IN ICY CONDITIONS, MOVE ANGLES, ADJUST HEIGHTS, REPLACE ONE MATERIAL WITH ANOTHER — ALL TO MATCH THE NEEDS OF THE IRRIGATORS AND AGENCIES INVOLVED.

RECLAMATION'S ROLE.

THE GOAL OF THE BUREAU OF RECLAMATION, VIA DARRELL IS TO DESIGN PROJECTS THAT REMEDY EXISTING PROBLEMS, PREVENT POSSIBLE NEW PROBLEMS AND MAINTAIN LOW MAINTENANCE COSTS. BY UTILIZING NATURAL MATERIALS, WOODY DEBRIS AND VEGETATION OR WITH MODERN MATERIALS LIKE, GEOMEMBRANE, GEOTEXTILE MATERIALS AND SIMILAR PRODUCTS THE STREAMBEDS ARE PROTECTED OR REHABILITATED. STEEL AND WOOD HEAD GATES ARE BUILT TO DIRECT WATER AND PREVENT EROSION OF THE SOFTER MATERIALS ON THE STREAM BANKS. PARSHALL FLUMES, WHICH MEASURE FLOW, ARE INSTALLED IN SOME LOCATIONS TO ENSURE ACCURATE WATER BUDGETING, REDUCING WASTED WATER BY ALL PARTIES. FISH SCREEN SYSTEMS RETURN FISH TO THE MAIN STREAM TO PREVENT ENTERING CANALS AND

Darrell: contunied Page 5

Russ McMartin

Wallowa County Public Works

Wildcat Culvert enhancement

By, Richard W. Galloway

Many of the projects that benefit fish species the most are the least noticed by the general public. Enter the Wildcat Creek project that was done in the fall of 2001 by the Wallowa County Publics Works Department.

This was the first project for Russ McMartin, the new head of the WCPWD. While new to the job he was not new to the construction process, having a background in bridge maintenance. The work of changing the culverts from the old style, full circle culverts to the newest designed open bottom ones took only a month of actual construction work by the contractor; Steve Coats construction from Redmond Oregon. The design work that allowed this to all happen in such short order and to be such a benefit to steelhead passage was done by Anderson-Perry and Associates, Inc. of La Grande and Baker City.

The reason behind doing an open bottom culvert is two fold. First it has to do with improving fish passage for the returning steelhead. Second it increases the culvert's life span.

With the conventional, round or flattened bottom culverts, the streambed often washes out on the down streamside. The hole then only increases in depth with each high water flow event. As the pool gets deeper the edge of the culvert generally gets farther and farther above the surface of the water. This problem will eventually lead to the fish not being able to pass upstream to their spawning ground. Fewer fish are then able to spawn, which reduces the fish returning year by year, a variation on the vicious circle theme. The old culvert system at wildcat crossing was a textbook example of this fault.

The bottomless culvert is best described in laymen's terms, as being like a miniature Quonset hut with a road built over the top. After removing the old culvert the company digs down to a solid base and puts in a set of cement footings on either side of the stream. On these bases they attach the metal part of the culvert before covering the whole system with fill and dirt to make the road base. This leaves the naturally occurring rocks as the streambed and no man-made lip to cause washout at the down stream exit. Fish don't know they are passing through a man-made object and they are not hindered in their upstream passage.

The second reason for this design is that with no metal in the water flow the life span of the culvert is increased to double that of the old full circle design. Where 20 years is considered good for the conventional culverts, the bottomless designs is expected to last 40-50 years.

This project was done quietly and without fan fare because the WCPWD did not do the job seeking public approval although that is always appreciated. They did do it to improve the health of the watershed and to enhance the numbers of returning steelhead in the stream.

Funding for the Wildcat project came from the Oregon Water Enhancement Board (OWEB) and the Bonneville Power Administration. (BPA)

Russ has plans to put in another open bottom culvert at the next upstream crossing of Wildcat creek. The time line is dependant on acquisition of funds, but he is working toward a summer, 2005 construction date.

Another project in the works for the WCPWD is a bridge replacement on Eggleson road between Hurricane Creek road and Hwy 82. The weight limit is down to a mere 13 tons. All the proper considerations will be taken while working in the stream, on the banks and the surrounding riparian area to minimize impact and restoration of the job site will be undertaken when the construction it finished.

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OPEN BOTTOM CULVERT ON WILDCAT CREEK

Richard W. Carmichael

Oregon Department of Fish & Wildlife

Richard W. Galloway

Richard Carmichael has been the Program Director for the Northeast Oregon Fisheries Research and Development Program since 1990. This is a research section of the Oregon Department of Fish and Wildlife; he first started working for the ODFW in 1983.

A high-energy person, Richard's main pursuit in the R&D program is to oversee research, monitor and evaluate projects to assess the success of management objectives, allowing for development of new strategies for protecting, reestablishing and restoring Endangered Species Act (ESA) listed and non-listed salmon and steelhead.

(SEE SIDE BAR for list of projects.)

What follows is an interview I did with Rich recently. The answers are his story in his own words.

What are the main areas in your job that you pursue?

In addition to being the Program Director, I serve on the Interior Columbia Basin Salmonid Technical Recovery Team. The TRT is responsible for defining populations, establishing viability and de-listing criteria for Evolutionary Significant Units (ESU's) and populations, determining causes for decline and limiting factors for seven ESU's above Bonneville Dam.

Can you give me some of the greatest things you have been able to accomplish?

I am not sure I really know what greatness is concerning the fisheries profession, three of the things I am proud of accomplishing in my career include first, overseeing the development and expansion of the NE Oregon Fisheries Research and Development Program. In 1983 there were no ODFW fisheries research projects underway in NE Oregon. The John Day salmon project had wound down. The lower Snake River Compensation Hatchery program was just starting up in the Grande Ronde and Imnaha basins and this program included funds for evaluation. I moved to La Grande in 1984 as a project biologist and hired a seasonal assistant. The program has grown considerably and now has 52 full time and 29 seasonal employees. We conduct work in the John Day, Umatilla, Snake, Grande Ronde and Imnaha Rivers. Offices are located in La Grande, John Day, Enterprise, Hermiston and at the Little Goose Dam. We have numerous projects investigating a broad array of complex scientific questions.

The second accomplishment I am proud of

Carmichael: Continued

is the work I did when serving as president of the Oregon Chapter of the American Fisheries Society. I served a three-year term from 1993-1995. The chapter accomplished many things during this time period because of the work of the officers, committees and volunteers. The Oregon Chapter received the outstanding Chapter of the year award for a number of years in a row starting in 1993.

The third thing I am pleased to be a part of is the research in the Grande Ronde basin and the information we have been able to provide ODFW management allowing them to make effective adaptive management changes.

Some of the information is related to the straying of hatchery fish, natural life history, diversity status and trends in native Chinook populations. This information has led to decisions that effected major changes in hatchery practices. In addition the information has been critical in identification of population structure, population status and productivity, as well as successful in restoring steelhead fisheries. Much of the work we initiated ten years ago and has now became very important for the future to understand if we can use hatcheries to enhance natural production and to better understand the risks of hatchery supplementation.

Can you give me some of the connections between a healthy watershed and healthy fish?

It is important to understand that salmon and steelhead have very complex life cycles that have varying life stages and that each life stage has some unique habitat requirements. All life stages require high quality habitats. They utilize the entire landscape, estuary and ocean to complete the lifecycle. Because of the complex life cycle, unique environmental requirements and the need to use the entire landscape, salmon serve as an excellent yardstick for environmental quality.

Taking Grande Ronde Chinook salmon as an example: they must navigate through the Columbia and Snake River and pass 8 hydroelectric projects. They reach the headwater holding areas in the early summer to hold until early fall when they spawn. To survive through the summer they must have pools with good cover, flow of cool water and that have good connectivity to the spawning areas. To be successful in spawning and for eggs to be successful through incubation you have to have good quality gravel, adequate flow, temperature and low sediment.

Fry emergence occurs in the spring and complex habitats with diverse riparian habitat and complex in stream structure provide for high survival during early emergence and fry colonization of habitat. Continued on page 7

DARRELL DYKE CONTINUED

WATERWAYS THAT MAYBE DE-WATERED IN THE OFF-SEASON. IN SOME CASES DARRELL INCORPORATES SCREENS THAT MEET THE REQUIREMENTS OF NOAA FISHERIES. THESE ARE THEN INSTALLED BY THE OREGON DEPARTMENT OF FISH AND WILDLIFE (ODFW).

STARTING IN 1999 THE BUREAU OF RECLAMATION HAS BEEN WORKING WITH THE GRANDE RONDE MODEL WATERSHED PROGRAM AND THE SOIL AND WATER CONSERVATION DISTRICTS TO DEVELOP NEW PROJECTS. THE GRMWP AND THE SWCDS THEN IN TURN WORK WITH THE BPA AND THE OREGON WATERSHED ENHANCEMENT BOARD (OWEB) TO FIND FUNDING FOR THOSE PROJECTS. INSTALLATION IS THEN PART OF THE CONTRACTED WORK OR IS DONE BY THE SWCDS. RECLAMATION IS NOT ABLE TO BUILD OR INSTALL ANY PROJECTS BUT CAN PROVIDE ON-SITE INSPECTION, DESIGN AND TECHNICAL SERVICES AS NEEDED. TO DATE, THESE AGENCIES HAVE INVESTED NEARLY $2.0 MILLION IN PROJECTS FOR FISH SURVIVAL AND HABITAT RESTORATION. OFTEN THERE IS A COST-SHARING OR IN-KIND REQUIREMENT OF THE IRRIGATOR OR LANDOWNER. THEY ASSUME OWNERSHIP, MAINTENANCE DUTIES AND OPERATION AFTER PROJECT COMPLETION. GOOD NEWS TRAVELS FAST AND OTHER WATER USERS ARE COMING FORWARD TO DISCUSS PLANS OF THEIR OWN. THE GRMWP CURRENTLY ACCEPTS AND WORKS ON APPROXIMATELY 4-5 SUCH PROJECTS EACH YEAR.

EXAMPLES OF PROJECTS.

A FEW OF THE PROJECTS THAT CAN BE SEEN AROUND UNION AND WALLOWA COUNTIES INCLUDE: THE TEETER RANCH RIVER BANK STABILIZATION ON THE GRANDE RONDE RIVER NEAR ALICEL LANE, THE SWACKHAMMER/ CATHERINE CREEK BANK PROTECTION PROJECT, THE LITTLE CREEK FISH PASSAGE IMPROVEMENTS, THE TULLEY HILL DIVERSION ON THE LOSTINE RIVER, THE LOWER VALLEY DITCH CONSOLIDATION ON THE WALLOWA RIVER, AND THE GATED PIPE PROJECT ON THE CARMAN RANCH.

WHILE NOT ALL OF THESE ARE PROJECTS THAT DARRELL WORKED WITH IN THE PAST THEY ARE ALL PROJECTS THAT SHOW THE WORK HE CAN DO FOR INTERESTED PARTIES WHO LIKE THE PREVIOUS RESULTS. INCREASINGLY, THE CONCERNS FOR LONG-TERM ENVIRONMENTAL CONDITIONS ARE AT THE TOP OF THE LIST FOR RANCHERS, FARMERS, AND OTHER CONCERNED CITIZENS. THESE PROJECTS ARE ONE-STEP IN THE PROCESS THAT WILL ENSURE PRISTINE WATER AND HEALTHY FISH RUNS FOR GENERATIONS. ON THE SWACKHAMMER/ CATHERINE CREEK BANK PROTECTION PROJECT SEVERAL ROCK WEIR STRUCTURES AND A COUPLE OF CONCRETE WEIR WALLS WERE CONSTRUCTED. BY REDIRECTING THE WATER FLOW THESE WILL PROTECT THE STREAM BANK FROM FURTHER EROSION. SEEDING, MULCHING AND SEDIMENT BASINS WERE UTILIZED TO CONTROL EROSION ON THE BANK SURFACES.

DARRELL HELPS LOCAL PEOPLE WHO NEED SURVEYING OR OTHER WORK TO IMPROVE THEIR WATER DIVERSION PROCESS, DITCH QUALITY (LINING SYSTEMS, DELIVERY METHODS, BANK EROSION OR ENHANCEMENT, ETC.), HABITAT IMPROVEMENT FOR WILDLIFE, OR HYDROLOGY QUESTIONS OF ANY SIZE OR SCOPE. -30-

Richard Carmichael and ODFW Current projects:

1. Evaluation of the lower Snake River compensation Plan Program.
2. Evaluation of the success of restoration and enhancement of anadromous fish in the Umatilla basin.
3. Assessment of the success of supplementing steelhead with hatchery fish. (Where?)
4. Investigation of salmon and steelhead life history in the GRB (Grande Ronde Basin.)
5. Smolt over harvesting? Monitoring, passage and survival, at, mainstream, Snake River Dams. (read this line Carefully—hard to read)
6. Chinook salmon escapement monitoring the Grande Ronde, Imnaha, and John Day basins.
7. Monitoring abundance, productivity and salmonid habitat in the John Day basin.
8. Assessment of the Grande Ronde Chinook salmon captive brood stock program.

Meet the Staff

Cecilia Noyes

Cecilia Noyes started with the Grande Ronde Model Watershed Program 7 years ago. A Master's degree in Wildlife from OSU gave her a start with the La Grande Ranger District. She worked in the Wildlife Department in various areas, mostly databases and Geographic Information Systems (GIS). Her background includes working as a data manager for the Fish Passage Center in Portland and a consulting firm that did fish-passage work on Columbia and Snake River dams.

Utilizing her skills in GIS and data compilation at the GRMWP, she manages a fish habitat restoration database/ GIS system. Noyes says, "I like the people and the small size of the office, and I like the work I'm doing." She brings competence and efficiency to her work while supporting watershed projects.

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Meet Cecilia, she does enjoy her work!

SWACKHAMMER PASSAGE PROJECT

Urban Update – "Don't Forget About Your Neighbors"

Katie Lazich

It's easier to forget about the other species we share our watershed with when the windows are closed and outdoor time has been limited. Just because you are not hearing the chirping and croaking, not feeling little nips on your arm, can not see the fleeing prey through the fog , or smelling (well never mind about that), does not mean that your actions are unimportant. Despite their perceived absence, your attention to making careful consumer choices, being conscience of their habitat, and not wasting resources creates a healthier environment for everyone, including your hairy, feathered and shelled friends.

Where are they?

The painted turtle is usually found in marshy ponds or small lakes, (a resident of Ladd Marsh), but may also be in slow moving streams. During the winter the painted turtle usually hibernates in mud at the water's edge. When the turtles "wake up", they will be looking for just about any kind of aquatic plant and small animals in the water to eat. Young turtles are more carnivorous (eat more animals) than the adults, but both are omnivorous feeders. The adult turtles spend considerable time soaking up the rays during the rest of the year. Be sure to leave their basking sites, logs, branches and rocks in place! If basking spots are limited, adult turtles may be aggressive with one another. Painted turtles may threaten each other with open mouths, if the situation escalates, they may even bite and push.

The common muskrat is active in the winter except on the coldest of days when it is lodge-bound (sounds a little like us). The lodge is a chamber, sometimes up to five feet high, which is reached through a long tunnel which begins at the river's edge. Usually, the muskrat's home is built in deep river and stream banks. The muskrat is a very strong swimmer, has partially webbed hind feet, and can stay submerged for up to 15 minutes. The muskrat relies on clean water to produce its food. The muskrat commonly eats cattails, mussels, snails and young frogs and occasionally consumes turtles, crayfish and grains. (Another omnivore) The muskrat, like the beaver, has a rich brown fur which allows it to spend so much time in the water. Since the common muskrat is rather abundant and relatively easy to capture, it is currently the northwest's most economically valuable furbearer.

Aaahh, the snow bird, literally, not just figuratively. The burrowing owl is believed to leave our area during the cold weather to travel to fairer skies. Although not much is known about the burrowing owls' winter locations, the most commonly accepted theory is that most go to

California. But, some say the burrowing owl digs into its burrow in August and remains there through the winter. Have you ever watched a burrowing owl's hideaway in the Spring? What do you think? The burrowing owl usually does not dig its own home, but rather uses the holes of marmots, badgers, and squirrels in open fields. The habitat of the burrowing owl is often times places where humans grow food. When planning for growth in our watersheds, it is important to leave some places for the birds, pay attention to proposed growth in your watershed. The burrowing owl is a unique owl and one of the smallest species of owl, reaching only nine inches tall and weighing only 4 ounces. It has long legs and is commonly seen on the ground or perched on its burrow during the day. It is diurnal, not nocturnal, very unusual for an owl.

"Having to squeeze the last drop of utility out of the land has the same desperate finality as having to chop up the furniture to keep warm"

Aldo Leopold

Teacher Tips and Liquid Links

Katie Lazich

I don't know about you, but a good book next to a good fire is one of my favorite ways to pass a dreary winter day. Here are some suggestions for good reads at home or at school. Sharing books about water, nature, forests, and environmental issues is an engaging, non-threatening means to encourage students to learn about natural systems and begin thinking about resource management. Even if the book does not pertain directly to the issues in your watershed, discussions about the books will help the students learn to think critically and to understand diverse perspectives. (Note: Below, I use the phrase "children's book" loosely, as many can be enjoyed by older students and adults, but they are written in a typical children book style.)

A Drop of Water, A book of science and wonder, written and photographed by Walter Wick. This beautifully photographed book follows a drop of water for an hour and discusses the water cycle and water chemistry.

Letting Swift River Go, by Jane Yolen. Told from a child's perspective, this tale relates the true story of a town in Massachusetts which was flooded for the building of a reservoir. (Children's book)

Down to the Sea, The story of a little salmon and his neighborhood, by Jay Nichols. This book summarizes the Oregon Plan and has great illustrations.

Swimmer, by Shelley Gill. This book has lots of information about Native Alaskans, salmon and their journey. (Children's book)

Water Dance, by Thomas Locker. The water cycle described with Haiku-like text. (Children's book)

The Lorax, by Dr. Seuss. The story of what happens in this imaginary "watershed" when all the Truffula trees are cut down. (Children's book)

Only Opal, from the diary of Opal Whitely, an orphan born around 1900, introduction by Jane Boulton. This book describes Opal's life and hardships of living in 19 different lumber camps, while also describing the beauty of the northwest and Opal's reverence for it.

Ricochet River, by Robin Cody. This is a coming-of-age novel about 3 boys preparing to escape from their small Oregon logging town. It has good descriptions of northwest salmon issues and dams.

Pilgrim at Tinker Creek, by Annie Dillard. The essays in this book follow the author's foot explorations through Tinker Creek in Virginia.

Desert Solitaire, by Edward Abbey. The author's three seasons of tales about living in the desert in Moab, Utah. Included in the book are dramatic natural descriptions, adventure, philosophy and conservation issues.

A River Runs through It, by Norman MacLean. This novel is well known due to its screen success, but well worth the read even if you've already seen the movie.

Silent Spring, by Rachel Carson. The publishing of this book in 1962 had a major impact on the banning of DDT in the US.

The Earth Speaks, introductions by Steve Van Matre. This is a collection of poems, essays and short stories about the earth by many well known authors.

Parshell flume on the Wright/ Hempe Ditch

Carmichael: Continued

During summer, temperature and flows of the season appear to be the most important factor influencing survival.

Over winter conditions can be severe, especially in high elevation habitats. Good cobble/ boulder structure, riparian habitat and complex in-stream habitats are essential for good over winter survival.

Smolts begin seaward migration in the spring and there is normally adequate flow for movement from the sub-basin. Primary challenges for the Smolts are the mainstream dams and reservoirs as well as arriving at the ocean at the appropriate time.

Overall high quality habitats are essential for all life stages because habitat quality and diversity are the primary drivers in survival and productivity of salmon and steelhead populations.

Can you share some of the up coming projects that will benefit the fish of Oregon?

Habitat protection and restoration efforts that allow for normative conditions and processes are the projects that will benefit fish the most in Oregon. With regards to the Northeast Fish Research & Development program I am very excited about a new project we are just starting up on the John Day to monitor status and trends in salminoid habitat as well as adult and juvenile steelhead. We are using the Oregon Plan Environmental Monitoring and Assessment Protocol (EMAP) and the project is funded by BPA. This is a long-term project that will provide valuable information about the relationships between salmon and steelhead productivity and habitat conditions.

In addition adult hatchery fish from our Chinook captive brood stock program are returning to Catherine Creek, the Upper Grand Ronde and Lostine River and I am anxious for results on the smolt-to-adult survival rates and the hatchery fish performance in the natural environment.

I hear you have a strong connection to the community; will you share some of these with the readers?

I am active in the community, especially with youth sports. I have served as president for the La Grande youth basketball association for four years, overseeing the competitive AAU traveling 5th-8th grade boys and girl teams Along with that I serve as tournament director for Oregon Youth Tournaments in La Grande each year. Additionally, I have coached youth basketball and baseball for over 10 years. I was fortunate enough to be one of the coaches of the Union County 13-year-old boys youth baseball team in 2003.

Continued on page 8

Karen Leiendecker Oregon Watershed Enhancement Board

RICHARD W. GALLOWAY

Many of us living on the east side of the state have feelings that anything pertaining to the running of the state and allocation of funds has to originate on the west side. While that may be true in some cases, it is not true for the Oregon Watershed Enhancement Board (OWEB). Karen Leiendecker of Enterprise is on the member roster and works with the review team to recommend projects to the board of directors. These are then funded according to a complex set of guidelines based on impact to the watershed, how it compliments other projects and goals. The OWEB mission statement reads, "To promote and implement programs to restore, maintain and enhance watersheds in the State of Oregon in order to protect the economic and social well-being of the state and its citizens."

Karen has worked with the Grande Ronde Model Watershed Program for many of the ten years she has been with OWEB to ensure that the eastside of the state is getting some of the Lottery funds that started this program. Through her, funds for many projects that have helped restore, maintain, or enhance our local watersheds are put to good use. While the Bonneville Power Administration (BPA) only funds projects related to fish mitigation, OWEB follows a "ridge top to ridge top" approach. A few of the citizen groups they have supplied with funds did things like; watershed assessment, hold workshops, provide outreach materials, put together action plans, build and erect interpretive signs and develop student programs. Their grants are designed to implement on-the-ground restoration projects. This could be fish passage improvements, upland improvements, off-stream water development, sediment control, restoration of streamside habitat, water quality impact or wetland enhancement to name just a few of the things they have worked on in the past.

Karen noted that OWEB funds the Small Grant Program for projects under $10,000. These are administered in Salem. Many small projects can be allocated for with the local soil and water conservation districts with the abbreviated application and review process. The 1998 ballot measure 66, passed by a vote of the people, allocated 15% of the lottery revenues for restoring Oregon's salmon runs, watersheds and state parks. Currently it is divided in 7.5 percent to watershed restoration and 7.5 percent to Oregon State Parks. In addition there are federal funds available from the Pacific Coast Salmon Recovery Act. This is a variable amount per grant, but has been as high as $20 million a year in the past.

Karen is a local who worked for Boise Cascade in the late 1970s and early 1990s in Joseph. During the time from 1979-86 she worked in Medford and a limited time for the Oregon Department of Forestry. She understands how important these projects can be to those who live here. A person who lives and works in Salem or on the west side of the state may or may not see things in the same light as Karen.

A visit to the OWEB site on the internet will reveal a wealth of information available just for the asking. Some of the reading I did for this article gave me new insight into the projects they undertake and the results of those projects. Among my readings was a 56-page booklet, "The Oregon Plan for Salmon and Watersheds, 2001-2003 Biennial Report." While not only about the work done here on the east side it does have a lot of information on projects here. They are listed by watershed and the Grande Ronde section gives a break down of the funds spent on projects over the last biennium. The total investment was $4,465,939 with by far, the largest amount going to restoration/protection of our watershed. There are still projects in the works that are not yet completed that account for another $5,797,163 in funding.

There were 141 projects total in that time period, 54 of those were on private lands. There were several channel restoration projects, Milk Creek and McCoy creek for example.

They funded major fish passage projects on Catherine Creek and allowed riparian habitat enhancement projects to take place on other streams in the basin.

If you have been thinking about doing some work similar to any of the items talked about above you can contact the Oregon Watershed Enhancement Board at 775 Summer St. NE, Suite 360, Salem, OR 97301-1290 Phone (503) 986-0181. Or you can contact Karen at 10901 Island Avenue, La Grande, OR 97850, (541) 963-9076 or email at kleiende@eou.edu. To find more information on what Karen and OWEB can do for you take a look at the web site by going to http://www.oweb.state.or.us

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Carmichael: Continued

This team won the State Championship and finished 4th at the North West regional championship. I am also an OSAA head referee for high school soccer.

Can you tell us a little bit about your family?

I have a wonderful family that I am truly proud to claim. I have two daughters in college whom I am very proud of. My oldest child Maria attends Oregon State University studying music. She has a wonderful voice and was lead in OSU's annual opera presentation in 2003. My other daughter, Lindsey, attends OIT studying health sciences. She plays on the OIT basketball team and has had a very successful freshman year. My youngest child, Richie, is in 8th grade and is active in sports all year round. My wife Leovne is a science teacher at La Grande middle school. She does a great job of incorporating natural resources into her teaching.

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GRANDE RONDE MODEL WATERSHED

BEAR CREEK DIVERSION FROM THE AIR