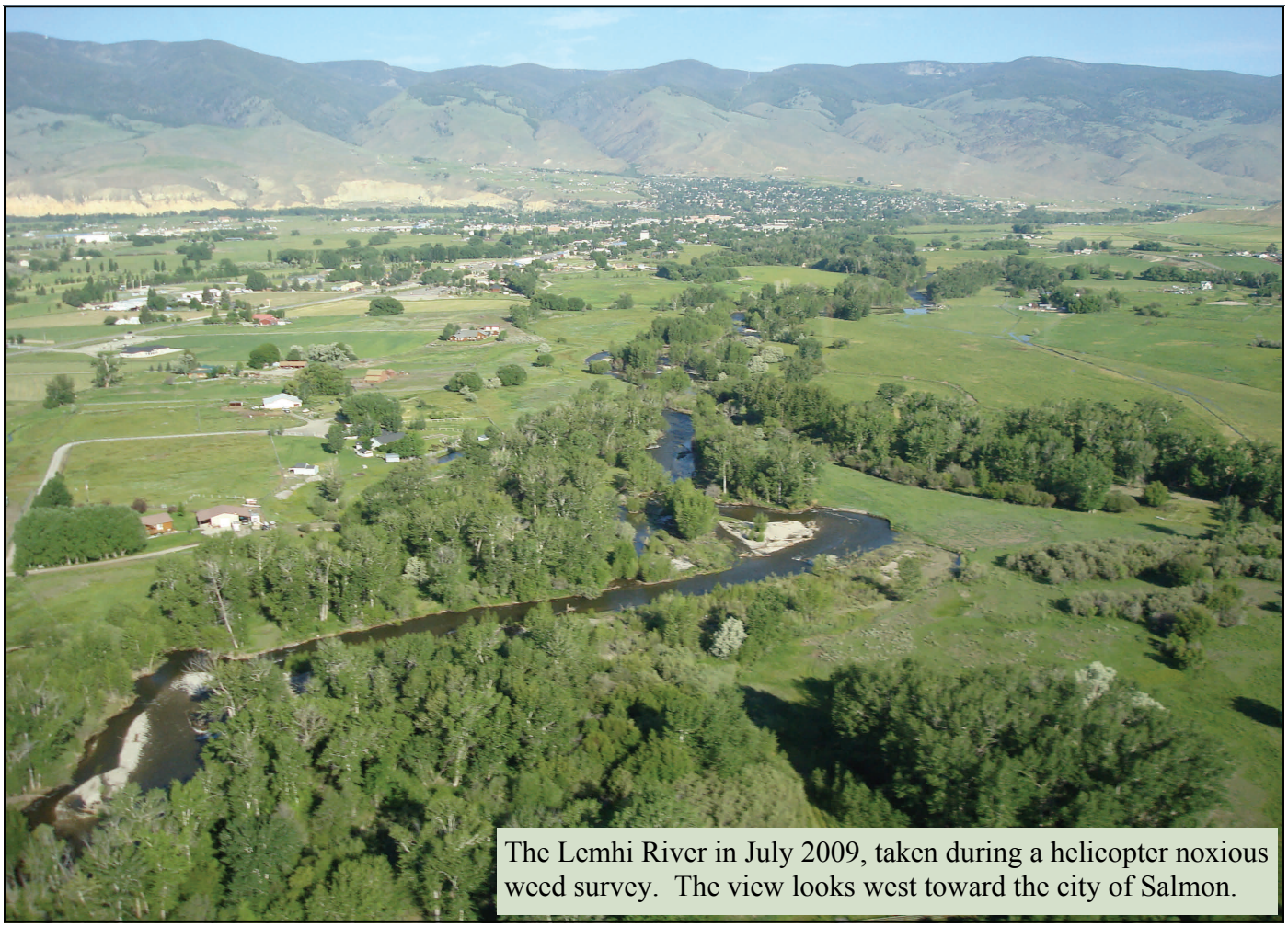
Upper Salmon Basin Watershed News

NEWS ABOUT RESTORING FISH HABITAT IN CENTRAL IDAHO Spring 2014



The Lemhi River in July 2009, taken during a helicopter noxious weed survey. The view looks west toward the city of Salmon.

SPRINGTIME FLOODING

A higher than average snowfall typically means an increased risk of flooding in the Upper Salmon Basin Watershed. This year, only the snowpack in the Lemhi drainage has an above-average flood potential. In our area, causes of flooding may include flash floods, ice jams, or snowmelt. Warm rain on even a modest snowpack can cause significant flooding, even on a lower than average snow pack.

Though the focus is often on the hazards of flooding and the damage it can cause, flooding is an important natural event with many benefits to a riverine ecosystem. When high water exceeds bank capacity and spills onto a floodplain, nutrient rich sediment is deposited, creating favorable conditions for the establishment of 'shading' plants, such as cottonwoods and willows. Large woody debris is often carried downstream during a flood event, creating shade and slow water refugia for fish when it lodges in the streambank. Flooding also plays a part in altering a river channel's physical features, such as meanders, and provides crucial spawning gravel for salmonids.

Floodplains themselves serve an important role. They provide flood storage and erosion control and recharge the groundwater. They also provide water quality maintenance and provide habitat for a variety of plant and wildlife species. *Continued on page 5*

Terms You Should Know:

Flood Watch - Flooding is possible. Tune in to local radio or television for information.

Flood Warning - Flooding is occurring or will occur soon; if advised to evacuate, do so immediately.

MERRILL BEYELER RECEIVES A NATIONAL AND REGIONAL CONSERVATION AWARD AND IS NAMED RANCHER OF THE YEAR

PEOPLE IN THE NEWS

Merrill is a well-known conservationist and spokesman for landscape-scale conservation and the important role that private lands and the ranching community play in maintaining and conserving it. Merrill has found partnerships where others thought none were to be found in order to complete numerous projects on his ranches, improving the bottom line, fish habitat, and range condition. These partnerships range from working with non-governmental organizations such as The Nature Conservancy and the Lemhi Regional Land Trust, to state and federal agencies. The Governors Office of Species Conservation administered financial assistance for some of the projects through Bonneville Power Administration and NOAA Fisheries Pacific Coast Salmon Recovery Funds.

As a founding member of the Central Idaho Rangeland Network, Merrill has worked hard to improve the federal range permits that he controls. The results of his efforts are measurable both in anadromous fish populations and range condition. In 2013, he was honored with both the BLM National Rangeland Stewardship Award and the Pacific States Marine Fisheries Commission Annual Award.

Merrill and Sharal Beyeler (in photo) with their sons, Bryant, Curtis, and Douglas, own and operate Beyeler Ranches LLC in Leadore. Their operation consists of three ranches – the Max Beyeler Ranch, which has been in the family since 1959, the adjoining McRea Ranch, and the Cottom Ranch. They also operate two leased ranches – the Bob Amonson Ranch and the Snyder Ranch, and run 750 – 800 Angus cows on about 2,400 acres of private land and 45,000 acres of BLM and USFS range.

Their story is not a typical ranch success story. Merrill graduated from Leadore High School and Boise State University with a degree in education. He taught and coached in Richfield for four years before returning to Leadore as a teacher and coach in 1973. He started ranching with four Hereford heifers and a dream. In 1981, he purchased his folks small ranch and in 1991, he cashed in his teachers retirement to make a down payment on the McRea Ranch. Since his sons wanted to ranch and Beyeler didn't have a large enough operation, as the boys returned home they leased nearby ranches. In 2002, when a neighbor wanted to sell his cattle and range permits, the Beyelers purchased them. After leasing another neighboring ranch and cattle for several years, the Beyelers also purchased those cattle and range permits. In 2010, Merrill negotiated a conservation easement with The Nature Conservancy on the Max Beyeler Ranch and McRea Ranch to leverage his purchase of the Cottom Ranch.

Part of the Beyelers success is the use of non-traditional and creative financing to build the ranch. The other part is reliance on good business and livestock practices and hard work. From four Hereford heifers and a start in the registered Hereford business, the Beyelers have built one of the four reputation herds of commercial Angus cattle in Central Idaho.

In Leadore, he has always been known as a problem solver and consensus builder in community issues. ***He believes that being engaged in the issues, listening to and respecting the visions and values of others, and developing partnerships with others are the only ways to solve and resolve community and industry problems.***

OFF-CHANNEL BANK STABILIZATION

The Watershed Program does many projects that enhance fish habitat. Bank stabilization and riparian plantings are one type of fish habitat project that benefit both fisheries and the private landowner. Bob and Ginny Chewning own over two miles of land along the Pahsimeroi River, and in 2012 donated a conservation easement on their entire property to protect fish and wildlife values.

Construction of the off-channel bank stabilization

In 2013, the USBWP began a bank stabilization and riparian planting project on multiple sections of the river on the Chewning's property. River movement and bank instabilities from lack of vegetation can lead to increased sedimentation and stream temperatures, which negatively impact resident and anadromous fisheries. Many times, a bank stabilization project is done directly instream to protect the existing property and fish habitat, and develop new fish habitat. Doing instream work involves a state and federal permitting process.

The Chewnings agreed to allow the USBWP to try a different technique to protect sections of the Pahsimeroi River that were unstable and lacked riparian area. Instead of doing direct instream work, involving permits and generally higher costs, a plan was developed to do off-channel bank restoration.

The off-channel restoration technique involved digging a trench just slightly off-channel from the Pahsimeroi River outside of the high water line. Within the trench, posts were installed every ten feet, with two large willow cuttings installed every three feet. Between these series of posts and willow plantings, live-cut willows were woven horizontally throughout the trench, creating a willow fascine wall. The trench was then backfilled.

(Continued on page 5)

Upper Salmon Basin Watershed Program

Homegrown, Common-sense Conservation

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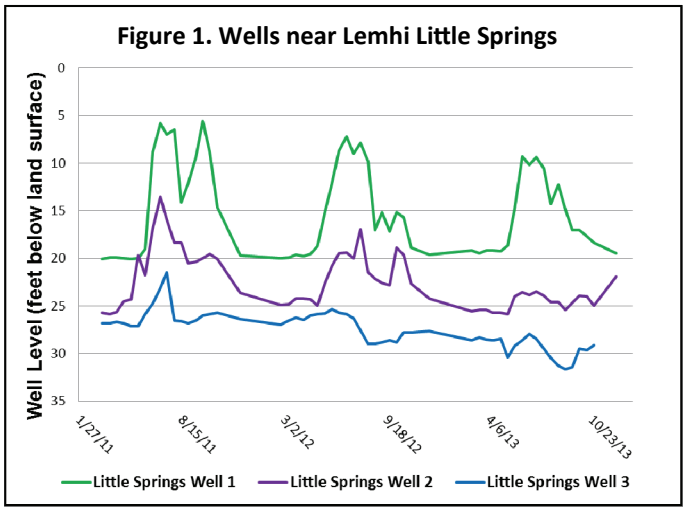
GROUNDWATER SURFACE WATER INTERACTIONS STUDY UPDATE

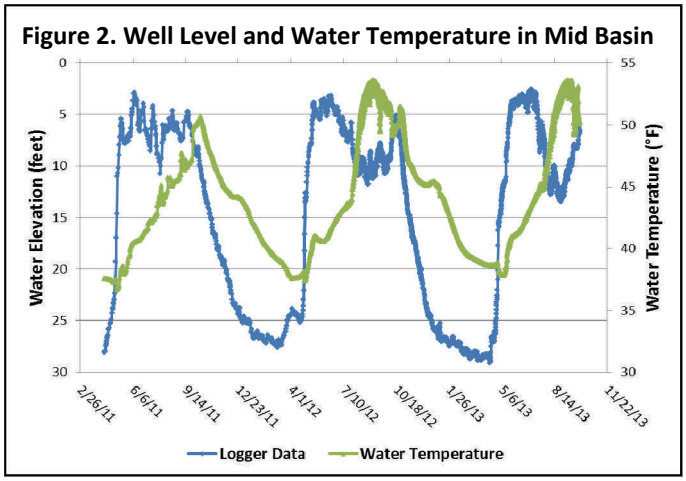
BY ALISON BURNOP

Surface water has been less abundant the last two years, with peak streamflows arriving earlier and with less magnitude, in turn causing diversions across the basin to be shut off earlier. These low water years are affecting irrigators, in how they manage their land, as well as the basin hydrology and overall groundwater surface water (GW SW) interactions. The lack of water and change in timing of peak flows has posed several challenges for the GW SW Interactions Study. Despite the challenges, data collection and analysis efforts have continued over the last two years with three dye releases initiated since 2012, five additional wells being monitored for groundwater levels, and one additional tributary stream being monitored in both the Lemhi Basin and the Salmon River.

Two seepage runs were performed on Lemhi Little Springs and Bohannon Creek. A seepage run measures streamflow in many locations to determine where the stream loses water to the aquifer and where water is released from the aquifer/ground water system back to the stream channel. The three dye releases were strategically located across the Lemhi Basin to capture the differences in water movement between flood and sprinkler irrigated fields. The main purpose of these dye releases is to determine the path that irrigated water takes as it returns back to the stream network and more importantly the timing of these flowpaths. Data collection from these tests is ongoing and more definitive results will be determined once the 2014 irrigation season begins.

The groundwater level data from the network of monitored wells shows several interesting trends in the response of the aquifer to surface water conditions that have been present the last two years. For example, Figure 1 shows three wells surrounding Lemhi Little Springs that have an overall decreasing water table since 2011 and less of a rise in the water table during the irrigation season. Many explanations for these trends and are currently being investigated. Some of these include the changes to the Little Springs Creek diversions and other nearby diversion consolidations. Another interesting trend is shown in Figure 2, of a well in the mid basin where the water temperature reached higher levels in 2012 and 2013 and the water level shows a drop midway through the irrigation season for these two years which was not seen in 2011. These trends have a variety of variables that are affecting them and they are currently being investigated. Groundwater levels remained stable in other areas of the basin.





The GW SW Interactions Study during the last two years has demonstrated the need for more information and more analysis of the collected data. Funding for continuation and enhancement of this work was secured last fall and plans are in progress for various hydrologic tests during 2014 to characterize the aquifer system and quantify the groundwater surface water interactions across the Lemhi Basin.

FLOODING *(continued from page 1)*

Though we would need an unusual event for this year's snowpack to result in flooding, it pays to be prepared. If flooding does occur in your area, listen to the radio or television for information, secure your home if you have to evacuate, and do not walk through moving water or drive into flooded areas.

Stay safe during and after a flood and don't use the drinking water on your property if there is any potential for drinking water contamination. The Lemhi County website advises that "if the water system has been disrupted, assume the water is impure unless announced otherwise. If you have a well and your property has been flooded your well may be contaminated."

To learn more about flood preparedness and available resources, the following websites have a wealth of information.

In 2009, the Lemhi River flooded its banks causing damage to the McFarland Campground.

Flood Resources:

- **Lemhi County, Emergency Management Department** – www.lemhicountyidaho.org/emergency.htm
- **National Flood Insurance Program** – www.FloodSmart.gov
- **Ready Campaign** – www.ready.gov/floods
- **National Weather Service** – www.floodsafety.noaa.gov

OFF-CHANNEL BANK STABILIZATION *(continued from page 3)*

Once the willow trenches were complete, approximately 100 live cut stakes and one large live-harvest willow clump were planted for every ten feet of trench completed. Overall, 400 feet of off-channel live-willow facine were installed with approximately 4,000 live stakes and 40 large willow clumps. The off-channel stabilization and plantings will allow for exponential willow growth in the coming growing seasons, promoting bank stabilization and shade coverage.

Approximately four working days with one excavator and a four-person riparian harvesting and planting team completed the project. A riparian and bank protection fence was placed approximately 50 feet off of the bank once the project was complete.

The live-willow facine installed in a 4-foot deep trench.

NEWS ABOUT RESTORING FISH HABITAT IN CENTRAL IDAHO

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WE'RE ON THE WEB:
WWW.MODELWATERSHED.ORG

To:

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- Springtime Flooding
- People in the News: Merrill Beyeler
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- Coordinators Comments

WATERSHED CALENDAR

- **May 26 (Memorial Day)** USBWP office closed

Our Mission: Protect and restore the region's significant fish habitats through a partnership approach that respects agriculture and improves our way of life.

Coordinators Comments *By Daniel Bertram*

Spring has sprung throughout the Upper Salmon Basin- the snow is melting, the trees are leafing out and the steelhead season is winding down. Our environment hasn't been the only thing that has been changing over the winter months. We helped Abbie Gongloff and her husband Sean welcome their baby boy Bram into the watershed family in December. In March, we helped Dustin Miller, Office of Species Conservation Administrator, along with his wife Dana, welcome their baby boy Crosby.

Our staff has had some changes this past season as well. Breann Westfall was offered a full-time position with the Lemhi Regional Land Trust leaving her part-time position with us. While losing Breann is a loss for us, we are thrilled to still work with her in her new role. I am also excited to introduce our newest staff member, Adair Muth, who was hired as a planner in late March. The last recent staff change is Andrew Greiner left in March, after completing a successful internship over the past year.

Despite the recent changes in our office, we are ready and poised to have a highly productive year! We are scheduled to implement five restoration projects this year and an additional four projects are in the works for the 2015 season. Projects this year include three irrigation projects, one stream bank stabilization, and one fish passage barrier removal. These projects will result in an additional 16 cubic feet per second of flow, one mile of additional habitat, reduction of sediment, and the creation of rearing habitat within the Salmon Basin.

These are just a few of the projects being implemented within the Upper Salmon Basin this year. All of our partners and many private landowners are also working to recover the iconic fish species in a manner that respects agriculture and the citizens of Lemhi and Custer Counties. After all, it is our children that will either benefit or suffer from our actions.

This picture was taken last fall with my son's first steelhead. I am used to being out-fished by my friends, however, when my six-year-old started to out-fish me, I was overcome with a sense of pride.