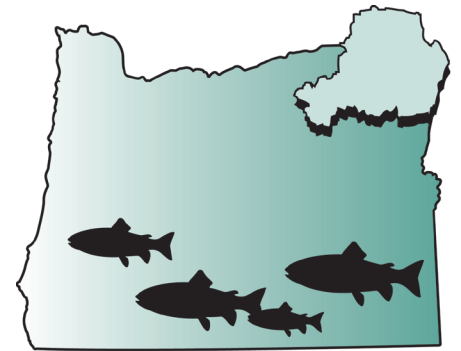


RIPPLES IN THE GRANDE RONDE



SUMMER
EDITION 2015

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

Outdoor University

OSU Beavers get to work on Catherine Creek

by Jesse Steele, GRMW Staff

Earlier this year, staff from the Grande Ronde Model Watershed (GRMW), the Oregon Department of Fish and Wildlife (ODFW), and Oregon State University's (OSU) Eastern Oregon Agricultural Research Center met to assess the problem of Catherine Creek migrating laterally through a side channel to threaten the integrity of State Highway 203. If you're a fan of fish, then you don't really want native salmonids trying to set up house in a side channel immediately adjacent to the highway. If you're a landowner, then you

really don't want the liability of having the river move from your property onto a state-owned highway. If you're

the state, then you really don't want the flow of the side channel eroding the highway. The solution: call an expert.

Dr. Desiree Tullos from OSU's Biological and Ecological Engineering Department is just that expert. In April 2015, Dr. Tullos arrived at the Hall Ranch with nearly 50 students from her River Engineering class. These aspiring engineers and geologists spent a day surveying and evaluating alternatives, looking for a solution that would meet

the needs of the landowners, the Oregon Department of Transportation (ODOT), and the three Endangered Species Act (ESA)-listed fish species that call Catherine Creek home: steelhead, spring Chinook, and bull trout.

Hall Ranch long has been a valuable teaching asset to scholars in the state. It was originally purchased by OSU in 1941 and has been the subject of many different kinds of research to answer questions about natural resources and livestock production. The research that has been conducted on the ranch and in Catherine Creek has lent itself to cross-departmental collaboration to solve real-life problems related to timber, grazing, and riparian life. OSU's collaboration with non-academic partners on research projects such as this effort allows students to network with potential employers and develops valuable interpersonal skills.

The involvement of Dr. Tullos and her students expands a long-standing partnership between OSU and GRMW by contributing the insights of both an academic expert and the prized resource of young minds, eager to solve puzzles. Typically, the work that is being completed by these engineering students is done by GRMW's restoration partners (state and federal agencies and tribal groups) or consulting firms. This type of work often is expensive and time-consuming; however, in



Above: Tim Delcurto (OSU) talks with the group about how Catherine Creek has changed in recent years. Also pictured in the reflective vest is Paul Kennington from ODOT. (Photo: GRMW)

Continued on page 3, **OSU**

Meet the Board Member Jed Hassinger

by Jeff Oveson, *GRMW Staff*

Jed Hassinger and his brother, Seth, are the namesakes for Hassinger Farms, LLC, a legal name for another link in a long chain of family farmers. They represent the fifth generation of the family to operate their thousand acres of Grande Ronde Valley farm ground, producing mostly the traditional crops of mint, alfalfa, wheat, and grass seed. Jed is one of the newer members of the Grande Ronde Model Watershed (GRMW) Board of Directors, and he recently shared some of his thoughts about the roles and responsibilities of agriculture in managing and conserving natural resources while also feeding the world and supporting farm families.

Jed said the long-term goal is for their operation to be sustainable throughout and beyond their stint as caretakers of the family legacy. Jed and his wife Amy have two sons (Rowan, age 9, and Cale, age 6). Jed would like it if his sons wanted to farm this same land someday and knows that sustainable management is necessary to enable his sons or any future generations to viably assume that task.

Anyone familiar with Grande Ronde Valley agriculture already knows of the Hassinger family's commitment to being not only good agricultural producers but also careful stewards of the land. It's a tradition for this property to be managed for optimal production while concurrently serving as a home to a wide variety of aquatic and terrestrial species. Jed believes that agriculturists have a clear role in the conservation of natural resources and that being a GRMW Board member offers him a chance to be "part of the solution" instead of just an observer. Jed's service is an

example of how the axiom "think globally, act locally" takes on real meaning. Previous generations have operated this farm as a traditional, extended-family farm, yet non-traditional practices always have had a place. Hassinger Farms was one of the first privately owned operations to voluntarily build and maintain fish passage facilities at their irrigation diversion. The Hassinger family also built a viewing platform on part of the property set aside for bird habitat to accommodate bird watchers as they observe the comings and goings of avian species. Additionally, Jed's family erected raptor poles to provide kestrels with a chance to be part of the operation by controlling the population of rodents in the fields.

Lately, Hassinger Farms has experimented with some other non-traditional crops such as quinoa, camelina (an oil seed), and teff (an African cereal grain). A typical challenge to raising these crops is the lack of infrastructure necessary to transport, process, and market them. Jed believes that as the climate changes, other alternative crops that require a lot of sunlight and heat, such as

soybeans and corn, are likely to come into production locally.

Jed and Seth have been working to be "part of the solution" for some time, including participating in Irrigation Water Management. Through the Environmental Quality Incentive Program (EQIP), the Natural Resources Conservation Service (NRCS) provided incentives for farmers to use soil moisture monitors so they could get a better handle on crop watering needs. Hassinger Farms took advantage of



Above: Jed Hassinger, pictured next to a tractor equipped with Global Positioning System (GPS) to allow more precise application of pesticides and fertilizers, reducing waste and expense. Jed and Seth installed the system themselves.

the program, and even though the federal incentives are gone, they still use the soil moisture monitors to schedule irrigation. Jed said that having empirical sensor data allows them to use less water because they now have accurate information about crop water use.

"You don't do yourself any favors by over-watering," Jed continued. "You leach out nutrients, waste water and electricity." Recognizing this waste has caused a

paradigm shift for the Hassingers, meaning that moving wheel lines on the traditional 12-hour sets is no longer the standard. If a crop calls for less water applied on a more frequent schedule, then Jed and Seth aren't hesitant to switch to 7-hour sets. Although this arrangement calls for more labor, it offsets this investment of time with savings in electricity and improved production. Jed reported that they are using less water than they were three years ago because of the

changes in management they have made based on readings from their soil moisture monitors.

Jed isn't afraid to address the more controversial topics of agriculture, such as genetic engineering. He makes the case that it would be a mistake to totally disregard the potential "incredible gains" achievable through genetic modification. He believes the possibility of breeding crops that are more nutritious yet require less water

and fewer chemicals is too beneficial to ignore. At the same time, he recognizes the objections that some people have to genetically modified crops.

Farming in the Grande Ronde Valley has a rich history and a vibrant existence today. For the future of farming to be as bountiful as it has been in previous generations, it will take the foresight and imagination of people like Jed Hassinger who are always willing to be part of the solution. ■

OSU, continued from front page...

this arrangement, the work provides a cost-effective opportunity for Dr. Tullos to expose her students to a real-life problem for which they are tasked with finding a real-life solution.

Unlike most college students on an average Saturday morning, these students were on the road from Corvallis to Union at 5:00 a.m. After a quick review of the history of the property and introductions, the students began gathering technical information about the riparian area and highway. Biologists designated steelhead redds to assure they would remain undisturbed while the students



Above: Dr. Desiree Tullos (center, plaid shirt) convenes the group, introduces the stakeholders, and discusses the agenda for the site visit. To the right of Dr. Tullos are Matt Saladin, Colleen Fagan, and Winston Morton, all of ODFW. (Photo: GRMW)

collected data. The students collected stream flow measurements of both Catherine Creek and the troublesome side channel, performed

pebble counts to understand sediment transport through the reach, surveyed cross-sections of the channels, and much more. After spending more than five hours traveling and six hours surveying, the students wrapped up the day by camping at Catherine Creek State Park. The following day, most of the class floated a short stretch of the Grande Ronde River while others entered the data from the previous day into computers. Back at OSU, they began processing the data they had collected, identifying problems and developing solutions to this complex interaction between nature and human infrastructure. Based on estimates of ecological benefits and engineers' cost estimates for construction, students identified a range of alternatives that would meet project goals to varying degrees.



Above: An engineering student surveys the main channel of Catherine Creek. (Photo: GRMW)

"The response from students was enormously positive, for many of whom it was their first real-world design experience," said Dr. Tullos. GRMW is excited about the opportunity to work with Dr. Tullos and with OSU's students to address current conditions in critical fish habitat. We are thrilled to offer the valuable chance for students to apply classroom techniques to a real-world problem while benefitting the people and animals that live in the Grande Ronde Basin. ■

**Ripples in the Grande Ronde is jointly funded by
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Investing *in* Oregon

The Oregon Watershed Enhancement Board is Making Restoration a Reality Across the State

Compiled from information provided by OWEB

The Oregon Watershed Enhancement Board (OWEB) is a state agency that provides grants to help Oregonians take care of local streams, rivers, wetlands, and natural areas. Community members and landowners use scientific criteria to decide jointly what needs to be done to conserve and improve rivers and natural habitat in the places where they live. The agency is led by a 17-member citizen board drawn from the public at large, tribes, and federal and state natural resource agency boards and commissions.

Since 1999, OWEB has provided nearly 7,000 grants to local volunteer efforts to keep Oregon's water clean and habitats healthy. The majority of the funds invested go directly to on-the-ground improvements to land and water, such as native plantings, dam removals, irrigation efficiencies, streams and rivers made accessible to fish, and land protected for future generations. OWEB's primary funding sources include constitutionally dedicated State Lottery revenues, congressionally appropriated Federal Pacific Coastal Salmon Recovery Fund (PCSRF), and Salmon License Plate proceeds.

The State of Oregon has an unparalleled capacity for developing and implementing restoration projects that assist in salmon recovery efforts. Oregon's system of locally based project development and implementation through watershed councils (like the Grande Ronde Model Watershed), conservation

districts, and other partners generates high-quality plans and projects that OWEB is able to support with state and PCSRF funds.

With OWEB assistance, Oregonians have treated more than 4,300 miles of streams and have made more than 5,600 miles of habitat accessible to fish across the state. The grants have helped landowners improve nearly 979,000 upland habitat acres and restore, improve, or create more than 43,000 wetland or estuarine habitat acres.

Investing in Oregon Economies

OWEB grants fuel a meaningful restoration economy in local communities. OWEB funds are used to hire the technical experts who design and implement projects. These people then hire field crews and buy or contract goods and services they need to get the job done. According to a recent University of Oregon study, every \$1 million of OWEB investments creates 15-24 jobs in local communities across Oregon. In addition, on average, more than 90 cents out of every OWEB grant dollar supports local businesses, services, and suppliers. Since 1999, OWEB has invested \$5.1 million in Union County and more than \$8 million in Wallowa County for restoration and associated activities.

Investing in the Larger Picture

Oregon is a national leader in the implementation of projects that clearly identify and achieve environmental outcomes. OWEB helps connect the dots between local restoration projects, ecological outcomes, and local economic benefits. OWEB invests in projects through local organizations to implement the Governor's 10-Year Plan in the healthy environment outcome area. In 2010, the OWEB Board approved the agency's strategic plan. In the same year, Oregon voters approved Constitutional Ballot Measure 76, which provided permanent funding through the Oregon Lottery for watershed restoration. These events, along with the Governor's 10-Year Plan, led to the OWEB Board developing a Long-Term Investment Strategy, which includes elements such as operating capacity, open solicitation, focused investments, and effectiveness monitoring. Because of its flexible investment model and strategic focus, OWEB's grant programs are a strong component of the healthy environment outcome goals of the

Governor's 10-Year Plan.

OWEB and Agriculture

In Oregon, OWEB grants and funds through the Conservation Title of the Farm Bill combine to provide significant conservation investments in rural communities.

The Regional Conservation Partnership Program (RCPP) promotes coordination between the Natural Resources Conservation Service (NRCS) and its partners to deliver conservation assistance to producers and landowners. Currently, the NRCS and OWEB are partnering at a landscape scale to design and implement conservation work in the Klamath Basin and eastern Oregon Sage-Grouse habitat. These collaborations are an example of OWEB's focused investments that financially empower well-organized groups to work together in order to accomplish meaningful restoration projects.

OWEB investments in permanent conservation easements often are connected to nearby NRCS work through the Environmental Quality Incentives Program (EQIP). Oregon encourages the continued use of EQIP and the Conservation Stewardship Program (CSP), allowing for prioritization of areas where landscape-scale outcomes can be achieved. OWEB's open solicitation grant program is well-designed to match EQIP and CSP investments on private lands throughout the state. In addition, through the Farm and Ranchland Protection program, OWEB and NRCS have been co-investors on properties that meet the goals of both organizations.

Oregon supports the Agricultural Conservation Easement Program and the Healthy Forests Reserve Program. Both can play a critical role in farm, forest, and grassland protection while providing an example of how working lands and habitat can co-exist. As these programs are implemented, the state of Oregon supports the freedom to work with NRCS to identify which lands are most critical for permanent easements. This freedom gives states the same opportunity to protect sage-grouse and spotted owls on private lands as they do wetland bird habitat, ensuring that the Farm Bill invests in high-priority restoration, regardless of the environment.

The Conservation Reserve Easement Program (CREP) is an exceptional example of

Continued on page 8, OWEB

Still Waters that *Run Deep*

Food, Rest, Refuge: How Pools Keep Fish Afloat

by Jesse Steele, GRMW Staff

You may have noticed that *Ripples* has been highlighting the important components of fish habitat that the Grande Ronde Model Watershed (GRMW) and partners try to incorporate into restoration projects. Last summer, we explored the significance of the floodplain and its connection to the river. In our Spring 2015 issue, we explained the use of large wood in the creation of valuable fish habitat. With this June's record-setting heat, there is no time more fitting to examine the importance of pools in a riverine ecosystem.

Because of the recent heatwave being experienced in eastern Oregon, many folks are taking refuge at their favorite swimming holes. Whether at the Blue Hole on the Imanaha River or the Perry Swimming hole on the Grande Ronde River, popular summer spots usually are deep, slow-moving bodies of water, which also are great places to fish. The importance of these pools extends beyond their value as good places to take a dip or cast a fly.

Biologists often categorize a river into habitat "units" when surveying the quantity and quality of habitat. A unit is a section of stream that is similar in channel bed shape, flow characteristics, and slope. An individual habitat unit can be anywhere from a foot to hundreds of feet long, depending on the size of the stream and the type of unit. The most common habitat units are riffles, rapids, glides, and pools. Less commonly observed units include alcoves, backwater pools, cascades, steps, and others. All of these individual segments of a stream play important roles in overall stream function and are vital to the various species of organisms that live in and around the river.

The function of a pool in the riverine ecosystem is vital to ensuring productive fish populations. Oftentimes, a pool will be located directly downstream of a riffle. A riffle generally will be wide and shallow, and it will flow swiftly over submerged or partially submerged gravel or cobble. The shallow water of a riffle allows sunlight to easily penetrate the water to the rocks below. The penetration of light starts a very

productive process where periphyton (often referred to as algae) begins to grow using the sun's energy. The periphyton is a primary food source for many aquatic insects. As the insects forage on the periphyton, they can be dislodged by the swift water and shifting rocks in a riffle. Located directly downstream from the feeding insects is a pool where juvenile fish are waiting for those insects to be swept off the rocks and delivered to them. Pools are the perfect place for fish to wait; the slow-moving, deep water requires little effort from a fish to remain stationary. Historically, many of the streams in our area were dominated by riffle-pool sequences, meaning there would be long stretches of the river where the habitat units would rotate between riffle and pool and create a series of "feeding stations" for fish.

Pools are important not only for foraging juvenile fish but also for fish in later life stages. As adult fish return from the ocean to spawn in our local rivers, pools provide important resting areas. Chinook salmon often will congregate in large pools as they make their journey upstream; we refer to this behavior as holding or staging. Ultimately, most adults will end up spawning at the downstream end of pools. At the shallow, downstream end of a pool just before the beginning of another riffle, the conditions are ideal for adults to build redds (nests) to lay their eggs.

Pools also provide the important benefit of cold water refuge during the hottest times of the year. As groundwater elevation decreases throughout the summer, rivers and streams slowly can become disconnected from the water table. However, very deep pools can stay connected to groundwater year-round. Groundwater typically is much colder than the water flowing in-stream; the resulting water temperature in the deepest part of pools can offer a cool sanctuary from surface

water warmed by the sun.

There are many different types of pools, but the most common are lateral scour pools. This variety of pool is formed on the outside of a river meander where the thalweg (or main section of flow) bangs against the bank or an obstruction, such as a rock or log. The force of this water hitting the embankment, large wood, or boulders scours a pool near the edge of the stream. Other types of pools include plunge pools, beaver dam pools, and straight scour pools.

Regardless of the category of pool, they play an essential role in river ecology. So, the next time you're out swimming or fishing in your favorite spot, consider the many functions of that pool and how it contributes to your wellbeing and the environment around you. ■

Grande Ronde Model Watershed

UPCOMING BOARD MEETINGS

The public is welcome to attend.

■ Tuesday, August 25th
5:00pm
Elgin Community Center
260 North 10th St.
Elgin, OR 97827

■ Tuesday, October 27th
5:00pm
Wallowa Community Center
204 East 2nd St.
Wallowa, OR 97885

Meeting dates are subject to change.

Please call (541) 663-0570 to confirm.

Thank you!



by Jeff Oveson, *GRMW Staff*

An Atlas is defined as “a book containing maps and vital statistics relating to geographic regions.” Chances are that the Restoration Atlas (Atlas) is one such collection of maps and information you probably haven’t heard of yet. Although the dictionary definition probably never considered fish, this Atlas’ fish knowledge will guide investment from the Bonneville Power Administration’s (BPA) Fish and Wildlife Program and Bureau of Reclamation (BOR) funding and technical expertise programs in Catherine Creek and the Upper Grande Ronde River for many years to come.

The Atlas has been in development for more than two years. Grande Ronde Basin partners have worked with BPA and BOR to develop this dynamic tool, which supports a strategic, prioritized plan for specific habitat restoration efforts in these two indigenous rivers where salmon and steelhead populations are in peril. Unlike federal dictates handed down to local residents, the Atlas is part of a strategy developed by local biologists using existing scientific data, current research evidence, and firsthand knowledge of Catherine Creek and the Upper Grande Ronde. Staff from Confederated Tribes of the Umatilla Indian Reservation (CTUIR), the Oregon Department of Fish and Wildlife (ODFW), the United States Forest Service (USFS), the Union Soil and Water Conservation District (USWCD), and Grande Ronde Model Watershed partnered with funding, research, and regulatory agencies to develop the Atlas and will work together to

The Restoration Atlas

GRMW Teams Up with Restoration Partners to Answer the Question of “Where?”

implement restoration projects based on Atlas knowledge.

Of all the assessments and plans completed during the last couple of decades, none but the Atlas has so carefully targeted specific actions and locations for **voluntary** habitat restoration work. The Atlas Implementation Guidelines, a document that might be considered the owner’s manual for the Atlas, provides this list of objectives:

- Establish coordination and collaboration among local natural resource management partners.
- Utilize existing planning documents, assessments, empirical data, and research evidence at the local level to inform habitat restoration.
- Prioritize the location and type of restoration actions needed to address the key factors that limit the productivity, abundance, and distribution of Endangered Species Act-listed fish.
- Implement high-priority, strategic habitat restoration projects that produce measurable results.
- Maintain a living and collaborative prioritization framework that demonstrates objectivity, transparency, and accountability.
- Manage the prioritization framework and associated project implementation adaptively to ensure maximum biological benefit.

In other words, our restoration partners (with support from other agencies outside the basin) work together using the information we already have – ripened with knowledge accrued daily – to establish priorities for habitat restoration. These priorities direct implementation of restoration projects at targeted locations and prepare project implementers to make adjustments to ensure that we are getting the best return on the

restoration investment. Simple, right?

“Hold it,” you might say. “What’s this about ‘targeted locations,’ and what does it mean if one of those locations happens to be on my property?” The Atlas emphasizes voluntary restoration. Many stakeholders have become involved in fish habitat restoration work during the last two decades because they recognized the importance of local input in avoiding government supervision of the daily lives of citizens in a resource-based economy. The Atlas should be able to indicate whether, all things considered, it would be better to complete “Action A” at Bob’s place or “Actions B and C” at Jane’s property. Although the Atlas will serve as our guide, it certainly does not take away Bob’s right to decline participation or Jane’s right to talk about the possibility of only implementing “Action C” and forgetting about “Action B.” In simpler terms, the Atlas will tell us which landowners we should talk to about the potential of implementing restoration work, what kind of work we should ask about doing, and how that work might impact the management of private land. The ideal project will not only create better fish habitat but also serve as a complement to the ongoing management of private property, and, as always, it will be voluntary. In the older bureaucratic vernacular, this scenario would be called a “win-win.”

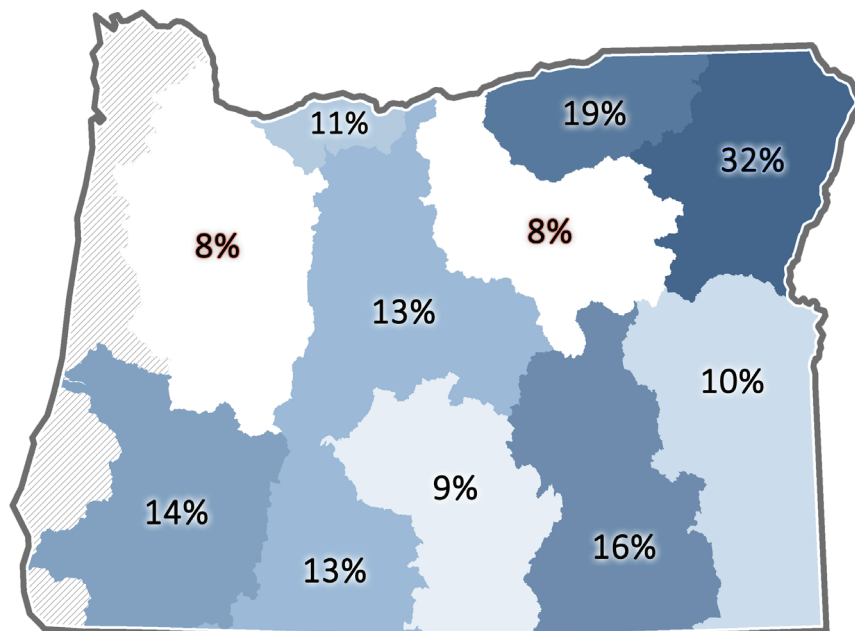
If you’re a landowner, then are you going to be hearing from one of the partners? The information in the Atlas will direct us to specific landowners who can choose to discuss restoration options or simply say “no, thanks.” If you decide to partake in the conversation, then the restoration partners of the Atlas will be transparent and open-minded. It should be known that the funding for this work is “fish money,” meaning that habitat for fish is our first priority. However, we are well aware that a fish habitat project has to be a good fit on an individual operation for a landowner to be able to support it, so the partners work hard to make

*Continued on page 8, **ATLAS***

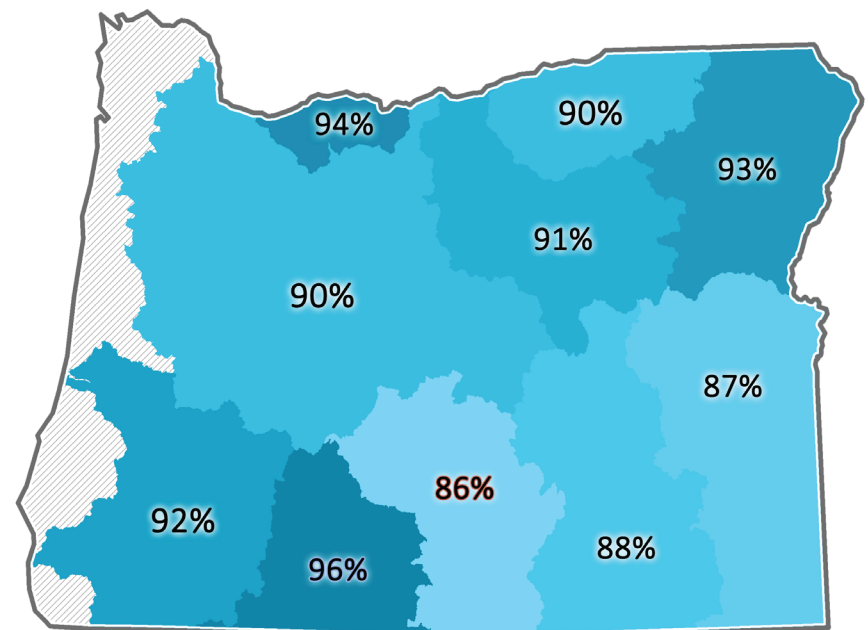
Water, Water, Everywhere, but not enough *for Streams*

Across Oregon, much of the winter's precipitation fell as rain rather than as snow, causing 60 percent of the long-term snowpack monitoring sites to set new records for the lowest and earliest peak snowpack in more than 30 years. Due to the warm mountain temperatures, one-third of snow monitoring sites in the state did not receive enough snow to build any kind of lasting snowpack this year. The current snowpack deficit means that the mountains are missing several feet of water that is normally frozen in the high-elevation snowpack, which usually serves as a natural reservoir to feed streams and rivers throughout the summer. Because of the record-low snowpack, water users depending on streamflow without access to reservoir storage should expect water shortages this summer.

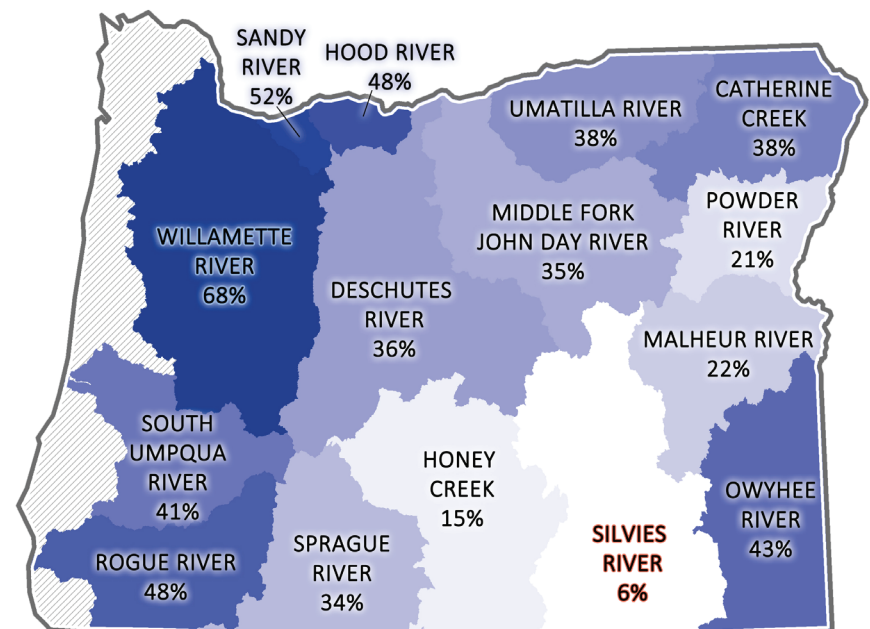
Currently, most of Oregon is included in the severe-to-extreme drought category, according to the National Drought Monitor. Water shortages across Oregon are expected this summer, and Governor Kate Brown has declared a drought state of emergency in 20 counties as a result, with two additional counties requesting drought status as of July 1, 2015. (Union and Wallowa counties have not requested nor been given drought status.)



Percent of median snowpack by basin (April 1st)



Percent of average total precipitation by basin (April 1st)



Percent of average streamflow forecasts for representative rivers (June 1st)

The information provided in these graphics is publically available on the Natural Resources Conservation Service website on the Basin Data Reports page. Information for snow and total precipitation was generated as of April 1st, 2015, as it better illustrates the end of the water year including snowpack. The information for the forecasts of streamflow in the state was from the June 1 report and predicts the months from June to September.



THE RESTORATION DICTIONARY

SINUOSITY: (sin·u·os·i·ty | *noun*) A curve or serpentine winding in bodies of water. In the study of rivers, the length of the channel divided by the down-valley length (a straight line from upstream to downstream) calculates the sinuosity index.

CHANNELIZE: (chan·nel·ize | *verb*) The reconstruction of a natural waterway to redirect the flow in a different path, often as a more direct canal.

PERIPHYTON: (pe·riph·y·ton | *noun*) Freshwater organisms attached or clinging to plants, rocks, and other objects projecting above the bottom sediments.

SALMONID: (sal·mo·nid | *noun*) Any of various fish of the family *Salmonidae*, which includes the salmon, trout, grayling, and whitefish.

ANADROMOUS: (anad·ro·mous | *adjective*) Born in freshwater, an anadromous fish spends most of its life in the sea and returns to freshwater to spawn. Salmon, smelt, shad, striped bass, and sturgeon are common examples. (Catadromous fish do just the opposite: they live in freshwater but travel to marine water to spawn.)

HYPORHEIC ZONE: (hy·porh·e·ic | *noun*) The hyporheic zone is a region beneath and alongside a stream bed where there is mixing of shallow groundwater and surface water. The flow dynamics and behavior in this zone (termed hyporheic flow or underflow) are recognized to be important for surface water/groundwater interactions as well as fish spawning, among other processes.

MITIGATION: (mit·i·ga·tion | *verb*) This term refers to measures that must be undertaken by an organization to avoid, minimize, rectify, reduce, or compensate for potential adverse impacts to fish or fish habitat resulting from a proposed use or activity.

ATLAS, continued from page 6...

sure proprietors also get something out of the project. If a landowner prefers to work with a specific partner, then it will be seen to that they are the organization with which you work. If the river through a parcel is channelized and a meandering, more natural stream channel is desired, then the partners can make that happen. Likewise, if an individual wants the river to stay where it is and would like to add erosion control (which we can facilitate while adding habitat), then that approach is certainly an option. Every opportunity will be unique, as will every solution. ■

OWEB, continued from page 4...

a federal-state partnership. OWEB and NRCS financially back the people who promote CREP enrollment. Through a contribution agreement, the two agencies provide grants to offer CREP Technical Assistance across the state. These dollars support local practitioners and partnerships to effectively work with landowners on riparian restoration. To date, OWEB has invested approximately \$4.25 million in CREP technical assistance, which has been boosted by NRCS investments of nearly \$1 million. ■

Grande Ronde Model Watershed

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