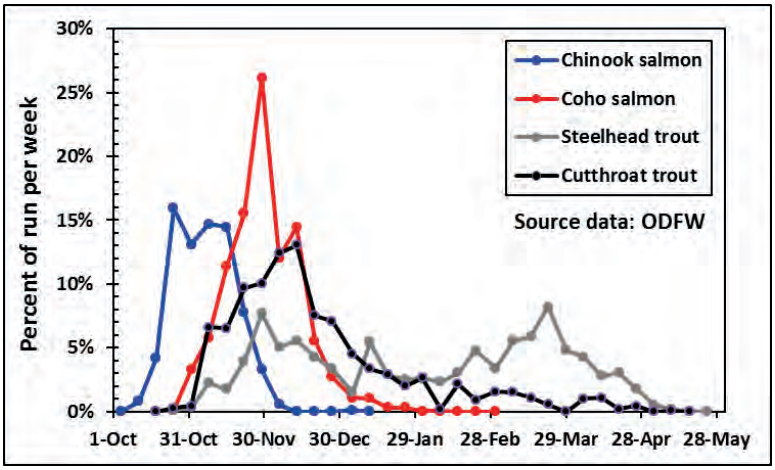
Elk Creek -- A High Priority Watershed

by Chuck Huntington

Elk Creek (northeast of Shady Cove) and its tributaries are considered a high priority for habitat and water quality restoration work by the Rogue River Watershed Council (RRWC), as well as numerous other agencies and organizations. Elk Creek flows from its headwaters on federal public land, through properties of mixed ownership and use, then into the Rogue River along the western edge of Rogue Elk Park, a little over five miles downriver from Lost Creek Reservoir.

So, why do we think this stream is so special? There are multiple reasons, of course, but two of them relate clearly to what we, the RRWC, hope to achieve within our geographic area of influence.

First, both the water and fish produced in this watershed contribute to the relatively high-quality environment we enjoy here in the Rogue Basin; we want to maintain and enhance these for the benefit of the ecosystem and our community members.



Annual spawning runs of wild Coho Salmon into the Elk Creek watershed often exceed a thousand adult fish. The watershed also supports runs of up to a thousand or more steelhead trout, a run of migratory Cutthroat Trout that has recently numbered in the hundreds, and a small run of Chinook Salmon. Past Oregon Department of Fish and Wildlife monitoring has shown that these fish enter Elk Creek during periods of elevated runoff, with the seasonal timing of runs varying among species (*see graph).*The fish spawn, hatch, rear (rearing lasts for weeks for some species and years for others), and then leave to grow larger in downstream waters before returning to spawn. Although salmon and steelhead are anadromous fish that grow large at sea, Cutthroat Trout do so in the mainstem Rogue River.

Inside this issue

Second, every local, state, and regional scientific assessment of Rogue Basin-related conservation opportunities conducted during the last 20-25 years has highlighted the Elk Creek watershed as being of particular importance. This includes the recovery plan for the Endangered Species Act-listed (threatened) Coho Salmon found in the Rogue Basin. Because efforts to maintain or improve ecological conditions within the basin are going to be most effective when informed by science, we can be confident that our focus on Elk Creek is not misplaced and has the potential to yield meaningful results for water quality, native fish populations, and all the aspects of our communities that rely on healthy watersheds.

Water quality and fish habitat improvement projects have been completed within the Elk Creek watershed by state and federal agencies, private landowners, and the

Continued on page 3

ROGUE RIVER WATERSHED COUNCIL

The Confluence
Winter 2016

Design & Layout: Judith Tharp

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RRWC'S mission *is to promote stewardship of the Rogue River watershed through restoration, education, and community involvement.*

RRWC *is tax exempt under section 501(c)(3) of the Internal Revenue Code and a recognized watershed council. Watershed councils were authorized by the Oregon Legislature in 1995 to promote and implement voluntary cooperative conservation actions.*

Notes from the Executive Director's Desk

by Brian Barr

Ahh, winter on the Rogue. Coho Salmon and summer and winter steelhead are heading upstream and rocks are heading down-stream. The importance of the later for the former is much greater than a lot of people likely realize.

Back in mid-December (and again in mid-January), our streams rose very quickly. Even the mighty Rogue itself swelled from 3,100 cubic feet per second to a whopping 36,000 cubic feet per second in less than 12 hours. Standing on the banks of the river or its feeder streams, it is understandable to think that it is solely destructive for fish and their habitats. To be sure there is disturbance, but not really *destruction.*

One process these high flow events trigger that is really crucial for salmon is the movement of rocks. From boulders to sand, a lot of substrate moves during floods. These particles all get picked up and moved downstream in the heavy flows. As rock, sand and silt particles encounter places where water moves more slowly (because of a bend in the river or as the flood waters shrink), they stop moving. Most of the time, similar sized rocks end up in the same place. There is a term for this among river geologists, and it is called "sorting."

Go to a creek or river near you and find a large bar of exposed rock. Chances are you will find a lot of rocks of similar size on that bar. When you find a bar that has a lot of gravel a little bit smaller than a golf ball, then you have just found the very spot that a Coho Salmon or steelhead would like to find during their spawning periods. Large expanses of the "just right" sized rocks is an essential ingredient for successful salmon spawning. Flood events are *the* way that these gravel beds form and are "cleaned" of fine sediments like silt and sand.

In this issue of *The Confluence*, readers will learn how to check on the flow conditions of their favorite creeks and rivers, and you will understand a little more about the sorts of activities Rogue River Watershed Council is developing to make sure the rocks are where the fish need them so that the next generations of Chinook and Coho salmon, steelhead and Pacific Lamprey are more bountiful. ~

. . . and from the Board Chair

RRWC exists to help restore a healthy, productive, and beautiful Rogue River Watershed. How can we do this? By engaging you and others in voluntary stewardship within our surrounding habitat. With hundreds of stream miles within our area, we must recruit many people to engage in the wide array of activities necessary.

For example, recently volunteers from many organizations including ours joined together to fling fish carcasses into a tributary of the Rogue below Grants Pass. The minerals from the sea carried upstream by salmon will help not only to continue their life cycle, but also help over 130 different trees, plants, and animals living along the stream banks. This is just one way short-term efforts can improve long-term habitat conditions which in turn help maintain a healthy, productive Rogue River Watershed.

We need your help to make progress toward this goal, including feedback from you on the value of the mission and what you see as important future work for which you might be willing to share your time and treasure. Please write or call us with your thoughts and suggestions. We hope you will join us in an ongoing partnership to enhance the watershed for all of us now and those who will follow us in the future.~

Elk Creek -- a High Priority *(continued from page 1)*

Upper Rogue Watershed Association (one of our founding watershed councils). The projects yielded successes but important work remains to be done in the area. RRWC is currently reaching out to rural-residential landowners, agricultural landowners, and other potential partners with interests in the Elk Creek drainage to join us in the continuing effort to improve conditions in this regionally special place. ~

Chuck is a mostly retired aquatic biologist and a member of the RRWC Board.

New Board Members

Bela Toledo

Bela Toledo is a CPA partner in a small accounting firm in Grants Pass. He grew up in Lincoln City on the Oregon coast and then moved inland to attend the University of Oregon in Eugene and Southern Oregon University in Ashland. He holds a BA in English and a post-baccalaureate certificate in accounting from Southern Oregon University. It was in Eugene that Bela first became interested and active in watershed issues. In fact, he met his wife Julie in Eugene while they were both canvassing for the Clean Water Act in 1991.

In his free time Bela enjoys running, golf, camping, hiking, and various volunteer activities including coaching cross country at Fleming Middle School in Grants Pass. He has two sons, one in high school and the other attending the University of Oregon.

Rachel Werling

Rachel Werling is the coordinator for Jackson County's Land Steward program offered through Oregon State University (OSU) Extension. Rachel has enjoyed a long affiliation with OSU Extension directing and coordinating many different programs including the Master Gardener program and a water quality community outreach program that served school children and community members in Southern Oregon from 2011 through 2015.

Rachel has also worked as a contracting botanist for agencies and industry in the Pacific Northwest and New Mexico, surveying for plants, mammals, and birds.

Rachel has a BS in environmental biology with a minor in botany from Humboldt State University and a MS in plant biology from Arizona State University. She is fluent in Spanish, serving in the Peace Corps in Ecuador and living in Oaxaca, Mexico for twelve years while operating an eco-tourism company. ~

What People are Saying about the Rogue River Watershed Council

"Our goal as property owners is to be good stewards of the land. We want to improve habitat for wildlife, make our section of Sugarpine Creek healthier for fish and wildlife, and make the forest safer from wildfires. The RRWC is exactly the group we need to work with on our riparian restoration goals. They have the expertise, contact, and enthusiasm we need!"

Linda Piehl and David Schorran ~

You Like Tomato and I Like Tomahto…

Ira Gershwin was definitely on to something here…there truly are different strokes for different folks. That's why you have the option of receiving The Confluence in either electronic or hard copy format. The newsletter will always be available online via our website (www.rogueriverwc.org/publications), and hard copy issues will be available in various outlets across the watershed (e.g., the local Oregon Department of Fish and Wildlife office, the BLM-USFS Interagency Office in Grants Pass); however, we'd like to make sure we provide it to you in the most convenient form possible, whether it be via the U.S. Postal Service or e-mail. Please call Anna (541-664-1070 x432) or e-mail us (info@rogueriverwc.org) to let us know your preference! ~

Did you know we are on Facebook? Search Rogue River Watershed Council and follow our Facebook page. You will be kept up-to-date with events and happenings in the Rogue River watershed. ~

Staff Profiles

In the last issue we introduced the Rogue River Watershed Council Board of Directors; here are the staff.

Brian Barr, Executive Director

I wound my way to the Rogue River and Gold Hill from Chicago, with stops at Miami University (Ohio), Virginia Tech, Boise, and Portland along the way. I have spent a good bit of the past twenty years thinking about and restoring stream habitat here in the Rogue, working on many fish passage improvement projects. I am particularly proud of a restoration project on Little Butte Creek where I helped Jay Doino and the Oregon Department of Fish and Wildlife return the creek's flow to a historic channel meander.

There hasn't been a lot of time to squeeze many hobbies in since January of 2015, as I've been balancing both executive director and restoration project management duties. In years past, however, I used skills gained in my professional life to ply the Rogue for steelhead, back a horse trailer into show grounds up and down the west coast, and write large checks (the last two directly tied to my daughter's horseback riding).

Donna Chickering, Program Manager

An Iowa farm girl, I have always loved the outdoors and the rural lifestyle. College spirited me away to the big city but I escaped by focusing on natural resource studies. My first professional "gig" after graduate school was as a Cooperative Extension faculty member at the University of Arizona in Tucson, specializing in environmental education. Tired of the city, heat, and desert, I made a break for Oregon to become the first coordinator of the Middle Rogue Watershed Council from 2000 to 2004. After several stints working for various non-profit organizations, primarily in fields related to organizational development, I'm thrilled to be back in the watershed council "biz!"

Fortunate to be living rurally once again – though on a much smaller scale – I share two acres with my beautiful palomino Quarter Horse (three-quarters demon!) and devoted Chesapeake Bay Retriever.

Sarah Sauter, Program Manager

Growing up in rural Wisconsin, the outdoors has always been in my blood. I caught my first fish in summer camp and have been hooked on water ever since. The resolve stuck with me through college and graduate school where I researched the impacts of water diversions on Hawaiian mountain streams at the University of Dayton and investigated invasive toxic algae blooms at Indiana University. After receiving dual master's degrees in public affairs and environmental science, I packed up my Jeep and headed west in pursuit of my dream to live in a small Colorado mountain town. In Colorado I worked as a community science organizer, watershed coordinator, executive director, and even town council member.

Spending the last ten years in the arid southwest gave me a new-found appreciation for clean and flowing rivers. As a relatively new Oregonian, I am looking forward to paddling the Rogue, exploring the coast, and geeking out over salmon.

Anna Johnson, Administrative Assistant

I started "life on the water" growing up in a sailing family in the tiny state of Rhode Island, but became a westerner "...at ten-years of age…" when my family moved to Colorado. As a lover of wildlife I pursued a degree in environmental biology at the University of Colorado, and got to put it to use as an animal control officer, where one of my more interesting duties was to relocate bears, porcupines, and other wildlife from the downtown streets of Boulder! Most of my professional working life, however, has been in the field of business administration and management as I was a co-owner of an agricultural-related construction company for almost fifteen years.

I currently live on a small horse farm outside Grants Pass with my two teenage sons and Shetland pony, Jet, whom I compete with in combined driving carriage events. ~

Shout-Outs

Transitions

Welcome Anna Johnson
On January 4th, we welcomed staff back from a well deserved winter respite and added a new member to our family – administrative assistant Anna Johnson. Anna worked with the Bureau of Land Management's Wild and Scenic River recreation permitting program before joining the Rogue River Watershed Council. (Read Anna's profile on page 4.)

Bon Voyage Natasche O'Brien Legg
Natasche O'Brien Legg, the Rogue River Watershed Council's first administrative assistant, relocated to Central Oregon in December. Natasche had been with the RRWC since its inception, and was instrumental in getting the new council "up and running," tirelessly pulling together elements of the merger financials, setting up many of the administrative procedures, establishing and maintaining the website, tracking memberships, and even developing the RRWC logo! Natasche brought youth, enthusiasm, and professionalism to her job. The board and staff wish her the best with her new endeavors. Thank you for your dedicated service, Natasche.

Welcome Bela Toledo and Rachel Werling
Bela Toledo and Rachel Werling recently joined our board of directors; Bela in October and Rachel in January. We're looking forward to working with them both. (Read their profiles on page 3.)

Farewell Lori Tella
Lori Tella, one of our original board members hailing from the Bear Creek watershed, left our board this past January. We haven't really lost Lori, however, as she will continue to work with us in her capacity as Urban Planner for the Jackson Soil and Water Conservation District. Thanks for all of your hard work on behalf of the organization, Lori!

Special Thanks

RH2 Engineering
We're excited to recognize and thank RH2 Engineering for being our very first Business Member! The RH2 firm, comprised of engineers, planners, and scientists, provides high-quality, tailored services in construction, engineering, transportation, and the environment. With offices in Washington and Oregon, they have been involved in such diverse watershed-related projects as culvert and swale designs for fish passage, wetland mitigation and restoration design, stormwater runoff control, water right impairment analysis, and trail design.

Kohl's Associates in Action
Kohl's Associates in Action program was created to support and recognize their employees' volunteer service in communities across the country. Through this program, Kohl's encourages their associates to volunteer for local nonprofit organizations to enrich the lives of children. This past fall, RRWC benefited from this program, as five Kohl's associates dedicated their Saturday to assist us with our Kids and Creeks event. We appreciate their efforts in helping us educate youth about our local watershed and salute their efforts nationwide!

Jackson Soil and Water Conservation District
The Jackson Soil and Water Conservation District (JSWCD) has been one of our primary supporters and partners since RRWC was just a gleam in the eyes of our four precursor watershed councils. Sharing office space with the JSWCD has allowed both organizations to tap into unique expertise and experience, magnifying our individual and collective efforts to promote stewardship across the watershed. Thank you, to Randy White and staff! ~

Are You an RRWC Member? Is Your Membership Current?

Show your support and commitment to the important work we do to enhance the health and beauty of the Rogue River watershed. You can initiate or renew a membership electronically via our website (click on the "Get Involved" tab), in person at our office, or by sending a check via the mail. Individual memberships are only $20, family memberships $25, and business memberships $100. Memberships are valid for the calendar year. ~

Species Spotlight

Beavers in the Rogue Basin
by Jakob Shockey

Photo by Cheryl Reynolds

In 1827, a fur trapper named Peter Skene Ogden became the first white explorer to document the Rogue Basin. His expedition for the Hudson's Bay Company resolved to create a "fur-desert," killing tens of thousands of beaver and other fur-bearers as they swept through the region. While beaver still live in our basin, they have never recovered from Ogden's legacy and many are still trapped every year.

Beaver are strict herbivores and eat leaves, twigs, and the cambium bark layer from the trees they fell. Their dams back up water into wetland ponds from which they can escape from predators and keep their vegetation cuttings fresh. Contrary to popular belief, these dams do not block fish passage, nor do the beaver live in the dam. Beaver either den in stream banks or construct lodges within their ponds.

When beaver move into an area of a stream and begin damming, the riparian ecosystem quickly changes. Water backs up against the dam, slowing its velocity and allowing more to seep into the local water table. With this increased ground water, stream side vegetation multiplies (despite the trees felled by beaver) and ground-cooled water begins upwelling back into the creek. These cool, and often shaded pools become invaluable habitat for fish, especially Coho Salmon. ~

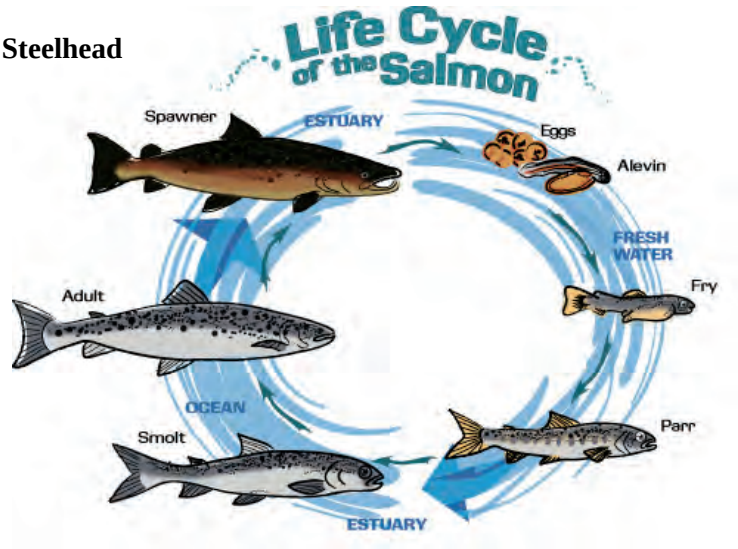
Jakob is a wildlife biologist and owner of Beaver State Wildlife Solutions, a consulting company specializing in resolving beaver-caused flooding issues through design.

Under the Surface

Coho Salmon and Winter Steelhead

Unless you're an angler or fish biologist, the only time you might think about salmon is when adult Chinook Salmon make their conspicuous and spectacular return from the ocean in the fall. So, it may come as a surprise that no matter what season of the year, salmon and steelhead are in the Rogue and its tributaries; that's right, 24/7/365!

In the next few issues of The Confluence we're going to give you a peak beneath the river's surface, focusing on what's happening with a few key species. But before we take our first look, some of you might want to review the life cycle of anadromous fish (see accompanying graphic).



From *Field Guide to the Pacific Salmon*, by Adopt-a-Stream

Coho Salmon, sometimes called silver salmon, are the only currently threatened salmon species living in our watershed. Winter months find Coho adults migrating from the mainstem Rogue to medium and large creeks to spawn and die. By March, most adults will have died, their eggs incubating in gravel throughout the winter and into spring. Because juvenile Coho Salmon stay in freshwater for one year prior to smolting and migrating to the ocean, they can be found in the watershed year-round. As such, representatives of all stages of the Coho life cycle can be found in February across the watershed.

Steelhead, the anadromous form of Rainbow Trout, are referred to as winter or summer run based on when the adults enter freshwater. Winter steelhead enter freshwater sexually mature (or darned close to it!) during the winter. They make their way upriver to large and medium-sized creeks throughout the watershed where they spawn into the month of April. Unlike other salmonids, not all winter steelhead die after spawning; adults that survive spawning and head back to the Pacific Ocean are called "kelts." Juvenile winter steelhead stay in freshwater one to four years prior to migrating to the ocean. As such, just like Coho Salmon, winter steelhead are found year-round in our area. At this time of year, in addition to juveniles, we can find – in our watershed – migrating adults, spawning adults, and eggs left safely behind in their nests (redds).~

Kids' Corner

Fish and Winter Storm Waters

The Rogue River after a winter storm

Have you been down to see the river this winter, especially after a storm? You might think it looks too brown and is moving too fast for fish. After all, would you like to swim in a river carrying so much dirt and sand (*sediment*) that it is brown?

Young salmon (*juveniles* or *parr*) actually do things that help them avoid this fast moving and murky (*turbid*) water. They move to slower-moving and clearer streams, deep pools, and off-channel areas such as beaver ponds, side channels, and alcoves. They also inhabit the small spaces between rubble and rocks (*interstices*) on the bottom of the river (*river bed*) to avoid the faster-moving waters above them.

Salmon eggs are already lodged in crevices and pockets between gravel and larger rocks (*cobble*). This provides protection from the fast-moving water and sediment. However, as the high water decreases, large amounts of sediment can settle on salmon spawning beds (*redds*) suffocating the eggs; and extremely fast-moving flood waters can move rocks that make up the river bed, washing eggs away at the same time.

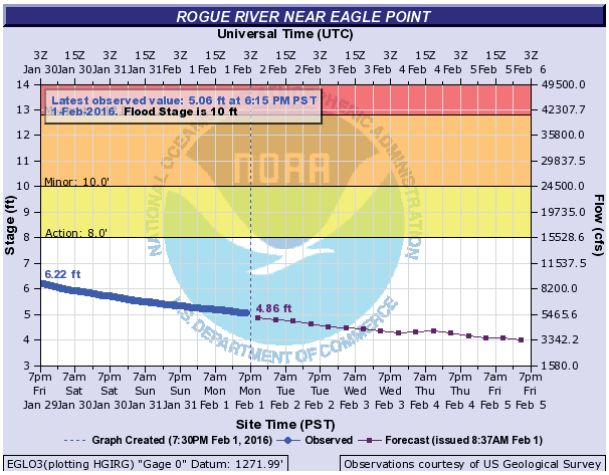
Luckily, most of the sediment you see in rivers and creeks after winter storms keeps moving downstream and does not settle out (*deposition*) until the water slows down–in places like where the Rogue meets the ocean (*estuary*). ~

Off the Resource Shelf

Stream Stage, Stream Flow, and Hydrographs

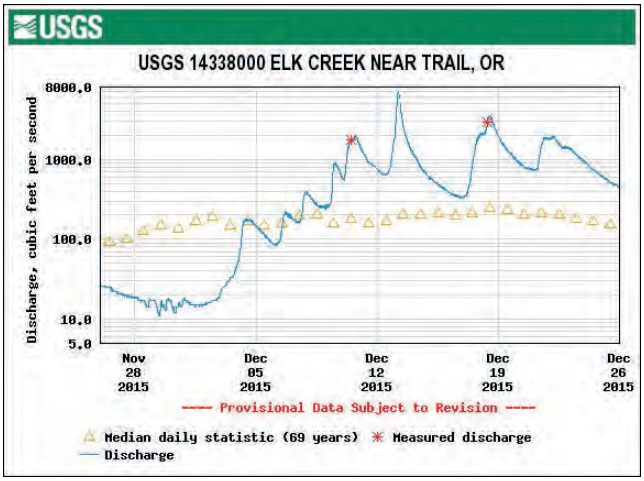
During those earlier drenching winter rainstorms, you may have heard your local weather forecaster say, "The river is expected to crest at 11.6 feet tonight, the flood stage is 12 feet;" or perhaps, "The river's currently flowing at 2100 cfs." But what if you don't have a weather forecaster to rely on; how can you access this information yourself?

For the most current river stages and forecasts, visit www.weather.gov/medford, click on "Rivers & Lakes," then click the gaging station on the map that you're interested in. A hydrograph appears with the stream stage, in feet, shown along the left vertical axis, and the corresponding flow (also known as discharge) provided along the right vertical axis in cubic feet per second (cfs) over a set period of time. (See example at left.)



If you'd like to compare flows over a longer period of time or even across gaging stations, visit the U.S. Geological Survey (USGS) Water Data for Oregon website, http://waterdata.usgs.gov/or/nwis/, or the Oregon Water Resources Department's (OWRD) website, http://www.oregon.gov/owrd/.

For the USGS site, click on "Surface Water," then "Historical Observations." Make your selections for the criteria, site, and data you're interested in, and voilà, you've got yourself a hydrograph! (See Elk Creek example at right.) For the OWRD website, click on "Surface Water," then "Near Realtime Streamflow and Lake Level Data." Select the Rogue Basin and your station of interest and go from there. ~



ROGUE RIVER WATERSHED COUNCIL
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