

Spring 2016

The Confluence

Newsletter of the Rogue River Watershed Council

Bear Creek: Urban Watershed, Healing Watershed

by Dan Vandyke

Flowing into the Rogue River and eventually to sea in Gold Beach, Bear Creek is the most urbanized stream within coastal watersheds in Oregon. A quick check of census records finds over 123,000 people living in the towns of Central Point, Medford, Phoenix, Talent, and Ashland. More people live in this valley than live in most counties of coastal Oregon!

Bear Creek officially begins its 27-mile course to the Rogue River at the confluence of Emigrant Creek and Walker Creek, visible at a bridge crossing on Dead Indian Memorial Road. But I consider the “headwaters” of the creek to be all the streams in the Talent and Ashland area—Wagner, Ashland, Neil, Emigrant, and Walker Creeks. With snowmelt from Mount Ashland and Wagner Butte, these streams historically delivered cold, clean water well down the valley. Cold, clean water is synonymous with salmon and steelhead and a healthy watershed.

Few people think about cold, clean water when they see Bear Creek flowing sluggish and brown in summer in Medford. Even so, the worst days for Bear Creek are behind us. Improved riparian habitat along the greenway and wastewater treatment plant upgrades have helped. Cities and counties have rules guiding development that, if enforced, are key to continued improvement.

Everyone can help. Best management practices for streamside landowners include: conserving water; protecting native trees and shrubs; managing bare soil to avoid erosion; and keeping toxic chemicals out of the streams. Residents in Ashland and Talent have added responsibility for stewardship.



Confluence of Emigrant and Walker Creeks

Photo by Dan Vandyke

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We also have a momentum for restoration that is significant and building. Projects in Bear Creek don’t always rank as the top priority compared to other tributaries of the Rogue, but more work can be done here.

Restoring fish passage remains a need. Habitat quality affects the number of fish a stream can produce, but no fish are produced if fish cannot reach available habitat. Videos of some Bear Creek barriers can be viewed at: <http://dfw.state.or.us/news/2013/april/040113.asp>.

Did you know that in Ashland Creek adult winter steelhead can be seen unsuccessfully jumping at the Granite Street Dam in late April and early May



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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

Merriam Webster's online dictionary offers the following definition for the word migration: "to pass usually periodically from one region or climate to another for feeding or breeding." May is a time of year when migration ought to be in the fore of our minds here along the Rogue River. As an avid birder, now is the time of year that I shift my eyes from those things in the water to those swimming on the surface, teetering along the shore, and flitting through the treetops. Warblers and flycatchers get most of my attention though I have been known to spend hours trying to figure out which shorebird is in my binoculars when I run across one of these difficult-to-identify brown and gray birds.



While birds are heading north, spring Chinook Salmon are cruising upriver, heading for the deep pools and cold water of the Rogue between Eagle Point and William Jess Dam. While these adult salmon have the attention of anglers, there is a much grander, reciprocal migration happening at the same time, as all of the juvenile anadromous¹ fish are coursing downstream to the Pacific Ocean in enormous, silvery throngs. These young, snack-sized salmon smolts and Pacific Lamprey macrophthalmia take incredible risks by venturing into the ocean; but the wealth of food and the cool, stable temperatures of the Pacific are perfectly suited for these fish to grow large and develop the strength they need to reverse their journey as adults.

This issue of *The Confluence* is full of stories about bird, fish, and even plant migrations. Rogue River Watershed Council has our own migration story...though an alternate definition is required: "to move from one country, place, or locality to another." Our offices will be remodeled over the summer to allow our staff to be housed together in one space. Our migration will not take us very far physically, but it will help us be more effective and efficient. We are grateful to everyone that has helped make this project a reality, particularly the Jackson Soil and Water Conservation District. Please take note that from May through October, RRWC staff are not likely to physically be at the 89 Alder Street office. If you need to meet with someone, please give the staff member a call to arrange for a visit.

¹ Species that spawn in freshwater but reach maturity in salt water

...and from the Board Chair

After growing stronger, a young salmon joins with others on a long and perilous journey toward a transformed life of one to six years in the open ocean. Then comes an ancestral urge to return to the stream of birth to start the next generation and pass on minerals collected in its body.

We observe this most complicated and dispersed migration without knowing exactly why it works that way. We measure numbers and types and sizes of migrants to predict population trends, much like weather forecasters study mid-ocean heat to predict land rain patterns.

These studies indicate declines in salmon runs from loss of habitat, water quality issues, and increased predation by all who feast on salmon from eggs to adults.

Want to reverse these trends? Volunteers are always appreciated. Please contact us if you'd like to get involved.

*Bear Creek: Urban Watershed, Healing Watershed
(Continued from page 1)*

most years? Below Reeder Reservoir, 11 dams and poor culverts have affected fish passage for years. Five dams have been removed, including a Talent Irrigation District diversion last year, but opportunities remain.

On Wagner Creek fish have faced at least eight dams over time. Three have been removed, but good projects remain, including unscreened irrigation diversions.

Keeping more of the snowmelt flowing in Ashland Creek and far down Bear Creek will pay dividends. Riparian restoration, especially along Neil, Walker, Wagner and their tributaries, will help fish.

Local historian Ben Truwe sent me this photo of Medford anglers with a catch of what appears to be steelhead from Bear Creek. We may not have as many fish as in 1912, but summer steelhead and all other migratory fish native to Bear Creek persist to this day. Bear Creek is doing better; let's keep up the good work.



Dan is District Fisheries Biologist for Oregon Department of Fish and Wildlife (ODFW), where his diverse career has also included stints as a hatchery worker at Cole Rivers, fish biologist in Coos Bay and Eugene, wildlife diversity biologist on the coast, and coordinator of ODFW's Salmon Trout Enhancement Program.



UNDER THE SURFACE

Spring Migration is a Two-Way Street (...Stream?)

by Jay Doino

Springtime! Birds are chirping, flowers are blooming and salmon are swimming! Spring Chinook Salmon, that is. A fanatically sought after gamefish in the Rogue, springers (their abbreviated moniker) begin their upriver migration from the Pacific as early as February but won't show up in earnest in the Grants Pass/Medford area until May and June. They'll continue trickling into upper river holding areas through July, where most individuals find a deep mainstem pool to wait out long, hot summer days before doing what they came to do – spawn. More on that in a later edition.



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

Springers aren't the only fish migrating in spring. In fact, some portion of all Rogue anadromous populations are migrating – they're just smaller and going the other direction – downriver. Juvenile steelhead, Coho Salmon, Pacific Lamprey, and Chinook Salmon out-migrate from spawning and rearing areas throughout springtime. Many of these juveniles are smolts – that life stage when anadromous fish are preparing to enter the marine environment – and some have been rearing in the river and its tributaries for several years. Note that most Chinook Salmon out-migrate to the ocean during their first six months of life and actually begin their downriver journey as fry.



Steelhead Smolt

Photo by Jay Doino

And finally, in the spring-like spirit of renewal, spring is the time of emergence of young fish from their watery nests (called redds). Upon emergence, of immediate importance is cover as these newly emerged fish are tiny and make excellent prey for a variety of predators. Also of critical importance is water. Some fish spawn in streams that dry up – especially summer steelhead. So if streams dry up before young fry can out-migrate to a larger stream, then... well, I really don't like to talk about it! See how these fish are faring in the next edition of *The Confluence!*

Jay Doino is a biologist with Oregon Department of Fish and Wildlife (ODFW) and has been working in fisheries in the Rogue Basin since 1999.

SPECIES SPOTLIGHT

Yellow-breasted Chat: Spring Migrant*by Sarah Rockwell, PhD*

If you've spent time along the Rogue River and its tributaries, you may have noticed a loud collection of whistles, grunts, screeches, and clicks that marks the presence of a territorial male Yellow-breasted Chat. Males of this species go to great lengths to impress females, making slow, stylized flights between perches, their wings flapping vertically, tail spread wide, and legs dangling, vocalizing loudly all the while. Raucous and comical when singing, yet secretive and favoring thick shrubs when nesting, the bright and charismatic Yellow-breasted Chat plays an important role in our region's cultural and ecological heritage.

It is known as "Salmon's Grandmother" in local Native American mythology. Hoopa legend tells of a woman who once stole all the world's salmon and hid them across the sea. A Hoopa warrior travelled there and tricked the woman into releasing the salmon so that all people could enjoy them, and told her that henceforth she would only eat berries. She became Salmon's Grandmother, and still follows the salmon upriver each year, in the fifth month, eating berries and crying for her fish.

*Photo by Frank Lospalluto*

Yellow-breasted Chats still arrive in our region in late April or early May each year, after spending the winter in the dry forests of western Mexico and completing a nearly 4,000-mile round trip. When chats return here to breed, they depend on healthy riparian (streamside) vegetation, which provides habitat for many breeding, migrating, and overwintering birds. In the western United States, riparian zones make up less than 0.5% of the total land area, yet they support the most diverse bird communities in arid regions. Riparian habitats now cover only a fraction of their former range. Their relative rarity on the landscape, yet high biodiversity, makes riparian areas a top conservation priority for populations of Neotropical migrants and resident birds in the West.

Sarah has worked for the Klamath Bird Observatory since 2013, managing research programs that use bird monitoring data to assess and enhance the success of riparian restoration sites along the Trinity and Scott Rivers in northern California.

RRWC Receives OWEB Funding

Oregon Watershed Enhancement Board awarded two grants totaling \$157,835 to the Rogue River Watershed Council at their April board meeting.

One of the grants will allow RRWC to develop targeted efforts to enroll landowners in voluntary habitat restoration efforts in and along creeks and rivers particularly important for steelhead and Chinook and Coho Salmon. This outreach effort will build on the momentum created by a pilot effort conducted over the past three months by RRWC and Jackson Soil and Water Conservation District that has received commitment from 11 landowners along a 0.6-mile stretch of Wagner Creek, near Talent.

The other solidifies a partnership among RRWC, Bureau of Land Management, Oregon Department of Fish and Wildlife, and US Forest Service by funding work to improve instream habitat complexity and streamside forest habitat over 1.4 miles of Sugarpine Creek north of Trail in the Elk Creek watershed on both public and private land. Specific activities include instream log placement, side channel restoration, streamside fencing, blackberry removal, and native tree and shrub planting.

UNWANTED MIGRANT: DYERS WOAD

by Bob Budesa

Dyer's woad (*Isatis tinctoria*) is a non-native, aggressive weed that was originally cultivated as a source of Indigo dye. (I know some people who still harvest it for that purpose!) Where I see it mostly is along Rogue River gravel bars and river banks, and adjacent open flats. Many invasive plants like dyer's woad can do quite well in soils that are too poor for other plants to grow.

Dyer's woad is a winter annual, biennial, or short-lived perennial, ranging from 1 to 4 feet tall, with a 3 to 5 foot long taproot. The basal rosette, found in March and April, produces bluish-green, lance-shaped leaves up to 7 inches long, and has a light-colored mid vein.

The flowers are small and yellow, about 1/8 inch wide and just over 1/8 inch long. Flowers grow in an umbel form, in terminal clusters on the branch tips.

I was out in April pulling along the Rogue below Takelma boat ramp, and the plants were in full bloom – seed production is not far away! (continued right)



Photos by Steve Dewey, Utah State Univ., Bugwood.org



Seed pods are approx. 3/8" long and 1/4" wide, winged, and slightly pear shaped. Initially the pod is green, but it matures to a black or dark purplish brown.

The plant, like other invaders, emits a substance into the soil that prevents other plants from growing, except its own kind. This is known as allelopathy.

Once you've recognized the plant, hand pulling is the recommended control. I've used a weed whip to sever green flowering stalks from the remaining plant, thereby eliminating the seed source, but they can grow back given enough moisture. If you can't pull the root out, at least sever the upper portion below the root crown. Application of systemic herbicides is also very effective, and less time-consuming. Consult the [PNW Handbook](#) for information regarding herbicide use for control.

Once seed pods have turned black, carefully cutting and bagging the flower heads is required. Seed pods will fall easily from the plant if disturbed, so gentle handling is required.

Bob retired from the Bureau of Land Management (BLM) after 38 years, most of them overseeing the noxious weed program with the Medford District. He is still involved with noxious weed education and awareness, primarily through the Jackson Coordinated Weed Management Area he helped start in 2006.

What People are Saying about the Rogue River Watershed Council

"I raised two boys on my property along Wagner Creek; we spent most of our time playing down by the creek. It's very special to me. I'm honored to help in any way I can to restore Wagner Creek to make it healthier for the fish, wildlife, and us! Rogue River Watershed Council staff are great people and very easy to work with. They've got fantastic ideas to make Wagner Creek better. I'm looking forward to the improvements and excited to get started! Thank you RRWC, we are lucky to have your expertise and enthusiasm."

Brent Warner

Small Grant Program for Landowners

Landowners looking for financial help to prevent erosion along streams, improve instream habitat, or upgrade bridges or culverts that will improve fish access should consider applying for a grant tailored for these and similar small projects.

- ◆ Four application periods remain this year (May, July, September, December)
- ◆ Grants of up to \$10,000
- ◆ Funding provided through funds from the Oregon Watershed Enhancement Board (OWEB)
- ◆ RRWC submits application on landowner's behalf

For more information, contact Donna at 541-664-1070 x431.

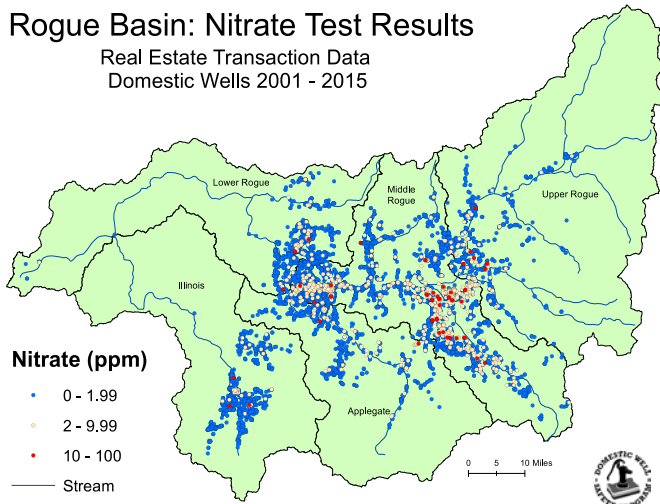
Nitrate in Groundwater – An Indicator of Contaminant Migration

by Amy Sager Patton, M.S., R.G.

Groundwater quality investigations in the Rogue Basin over the years have identified areas of elevated nitrate contamination¹ in groundwater north of Medford, between Central Point and White City, west of Medford, and in various rural lands around Phoenix, Talent, Ashland, Gold Hill, and Grants Pass.

Rogue Basin: Nitrate Test Results

Real Estate Transaction Data
Domestic Wells 2001 - 2015



The presence of nitrate in groundwater is an indication that contamination from surface activities has migrated through soils or along the casing of an unused or active well and reached the aquifer.

If nitrate is found in a well water sample, then other contaminants might also be present. Other contaminants such as pesticides, fuel, or heating oil from surface activities, or bacteria or household chemicals from septic systems, could be following the same migration pathways, and also impacting water supplies.

Recent studies show the presence of “emerging contaminants” such as flame retardants that wash off clothes, pharmaceuticals that escape the body unprocessed, and even veterinary pharmaceuticals that enter the groundwater through seepage from concentrated animal waste areas.

It is prohibitively expensive to test for all of the potential pesticides and other chemicals that might have reached groundwater, yet nitrate is tested in most groundwater studies. Nitrate is highly soluble, persistent, and inexpensive to test. Its presence can inform as to where better agricultural practices or septic system maintenance might be needed, and it can assist in defining areas where additional water quality studies may be needed.

¹ Elevated nitrate concentrations are defined as over 3 milligrams per liter (mg/L) nitrate, a level considered sufficiently above background to demonstrate contamination from surface sources. Nitrate is not naturally present in the groundwater. The Environmental Protection Agency (EPA) drinking water standard for nitrate is 10 mg/L. Well water above 10 mg/L can present a serious health concern for infants, pregnant and nursing women, and the elderly or immuno-compromised.

Patton Environmental LLC provides Environmental Site Assessments, water, soil and air sampling, drinking water protection and public education. Previously, Amy managed DEQ's statewide groundwater protection program and conducted environmental site remediation in eight states.

If We Could Just Build a Wall...

Whereas no one here is suggesting that we build a fence or wall around the watershed, one has to admit that of our area's many migrants, it's the human ones that wreak the most havoc on our watershed.

Consider the following:

- ◆ Oregon has been the most popular state for in-migration for three years running (2013-15). In-bound migration has increased 10% over the past six years.
- ◆ The Pacific Northwest is predicted to become a climate refuge for people as the planet continues to warm.
- ◆ Five towns in our watershed (Central Point, Eagle Point, Grants Pass, Shady Cove, and Talent) more than doubled their populations in the 30 years between 1980 and 2010, with Eagle Point more than tripling its numbers.
- ◆ The average annual population growth rate for Jackson County was 1.4% for the 1980-2010 time period. This compares to the U.S. rate of 1%, Oregon's 1.2% rate, Grants Pass's 2.8%, and Eagle Point's 3.7%.
- ◆ In the 1990s, over a million new houses were constructed in ex-urban areas in Oregon, Washington, and California. This comprised over 60% of all new home starts in the region.

With no let up in sight, it's fair to say that RRWC is going to be busy restoring habitat as well as educating watershed migrants (and current residents!) about best management practices to help protect water quality, fisheries habitat, and ecosystem function.

SHOUT OUTS

Transitions and Thanks

Steve Mason: It's with mixed emotions that we bid board member Steve Mason goodbye; we're sad to see him "retire" from the board, but we're delighted that he's going to have more time to devote to his family and other interests after nearly 20 years of watershed council service!

Steve has been a highly visible and influential player in the world of Rogue Basin watershed council work since the late 1990s when he began serving as a board member of the Middle Rogue Watershed Council. In the early 2000s he authored or contributed to the initial watershed assessments for three local watershed councils (Little Butte Creek, Williams Creek, Middle Rogue) and served as the program manager for the Rogue Basin Fish Access Team. After a move "upstream," Steve became a board member of the Bear Creek Watershed Council, and oversaw many restoration efforts for that organization.

Recognizing that Rogue River watershed restoration efforts could be more effectively implemented by one merged watershed council, Steve worked tirelessly to help negotiate the formation of the Rogue River Watershed Council. And now after an additional 15 months of helping guide policy formation for the newly formed Council, Steve has decided he needs a break! So, the Rogue River Watershed Council gains a volunteer field hand, but loses a visionary and a steady voice for efficient and effective watershed council work. Thank you for everything you've done, Steve.

Judi Tharp: If it weren't for super-volunteer Judi Tharp, you probably wouldn't be reading this newsletter...at least not in its current configuration. Judi is the talent behind the "look" of *The Confluence*, developing the design and layout with the newsletter's initial issue in fall of 2015.

RRWC staff have taken over all of the duties of developing and creating the newsletter (well, other than the printing function!) with this current issue, but we've relied heavily on the model that Judi so graciously created for us. It's with great appreciation that we thank her!

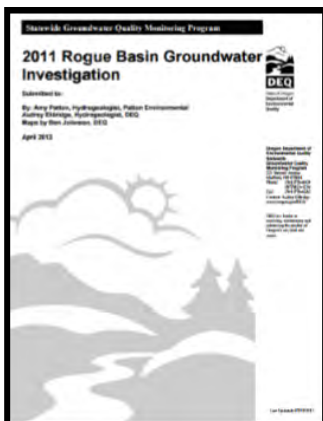
OFF THE RESOURCE SHELF

Investigating Bird Songs, Groundwater, and Weeds

Interested in finding out more about some of the topics covered in this issue of *The Confluence*? There's something here to meet the needs of auditory learners, those who learn best by physically thumbing through a book, those who want just the facts (ma'am), and those who just can't be separated from their smart phones!

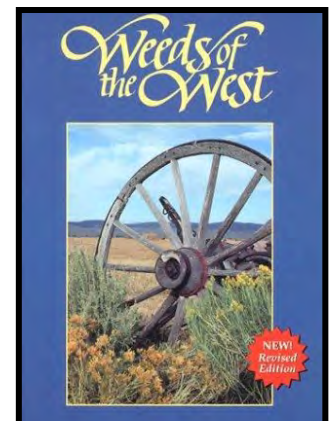
Want to know what a Yellow-breasted Chat actually sounds like? Or see videos of it in its natural habitat? Check out the [Cornell Lab of Ornithology Macaulay Library website](#) for this and much more! (There's even footage of Sockeye Salmon building a redd in Alaska!)

Ready to try your hand at using your smart phone for bird identification in the field? Here's a link to a great review of ten birding apps ranging from free to \$40: <http://blog.nature.org/science/2013/05/27/boucher-bird-blog-apps-smart-birder/>.



What did researchers find when they sampled 52 rural wells in an area stretching from Ashland to Cave Junction? Go online to find out at <https://www.oregon.gov/deq/WQ/Documents/Groundwater/2013RogueGWReport.pdf>.

For the definitive identification guide to weeds found in the watershed, you must have *Weeds of the West*. This book features over 900 color photos that show various growth stages of weeds that make for easy identification.



Support Our Work!

Make a Donation

All donations are greatly appreciated, put to good use, and are tax-deductible. Donate online at <http://www.rogueriverwc.org/get-involved/donate/>.

Fred Meyers Rewards

Help RRWC earn donations by shopping with your Fred Meyer Rewards Card. Link your card to us at <https://www.fredmeyer.com/topic/community-rewards-4>. Search for us by name.

AmazonSmile

Online shoppers can go to smile.amazon.com, click on your account and select RRWC as your charity of choice at no cost to you.

Rogue River Watershed Council and Surrounding Area

Legend:
 Rogue River Watershed Council
 Other Watershed Council

Map labels include: Lower Rogue Watershed Council, Rogue River Watershed Council, Seven Basins Watershed Council, Williams Creek Watershed Council, Rogue River, Grants Pass, Rogue River, Eagle Point, Butte Falls, Sub Fork Rogue River, Little Rogue River, Jack, and various creeks like Grave Creek, Jumpoff Joe Creek, and Events Creek.

Callout Box 1: Would you like to help us by distributing RRWC newsletters or rack cards at your place of business? Give us a call!

Callout Box 2: Have you renewed your RRWC membership for 2016? Get a cool RRWC decal when you do!

Callout Box 3: Stay connected! E-mail us to be added to our e-mail list for the latest RRWC news and announcements. And don't forget to like us on Facebook!
<https://www.facebook.com/RogueRiverWatershedCouncil/>

Logos:
 - Rogue River Watershed Council logo with tagline: Promoting stewardship of the Rogue River watershed.
 - Inset map of Oregon showing the location of the watershed.

Map by: Geos Institute, January 27, 2015. Credits: USGS, EPA, Esri, NOAA