



LONG TOM WATERSHED COUNCIL

April 2018

Action
Through
Understanding

Public Meeting Invitation

Long Tom Watershed Cutthroat Trout Migration Study

Tuesday, April 24, 6 - 8 p.m.

Long Tom Grange, 25832 Ferguson Road



Photos: Volunteers tag and release a cutthroat collected at Shafer Creek, a small tributary to the Long Tom south of Monroe. (Photo by Ephraim Payne)

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Meeting Topics:

- Overview of study’s purpose, goals, and approach
- How this study fits into the broader geographic and conservation priorities of the council
- Results! What we’re seeing so far from 5 years of data
- Further questions, and next steps with data analysis

LTWC Public Meetings are free and open to everyone

Light refreshments are provided

LTWC Listserv:

Interested in receiving our newsletter electronically or joining our listserv? Email Rob, operations@longtom.org

The Long Tom Watershed Council serves to improve water quality and watershed condition in the Long Tom River basin and surrounding drainages through education and collaboration among all interests, using the collective wisdom and voluntary action of our community members.

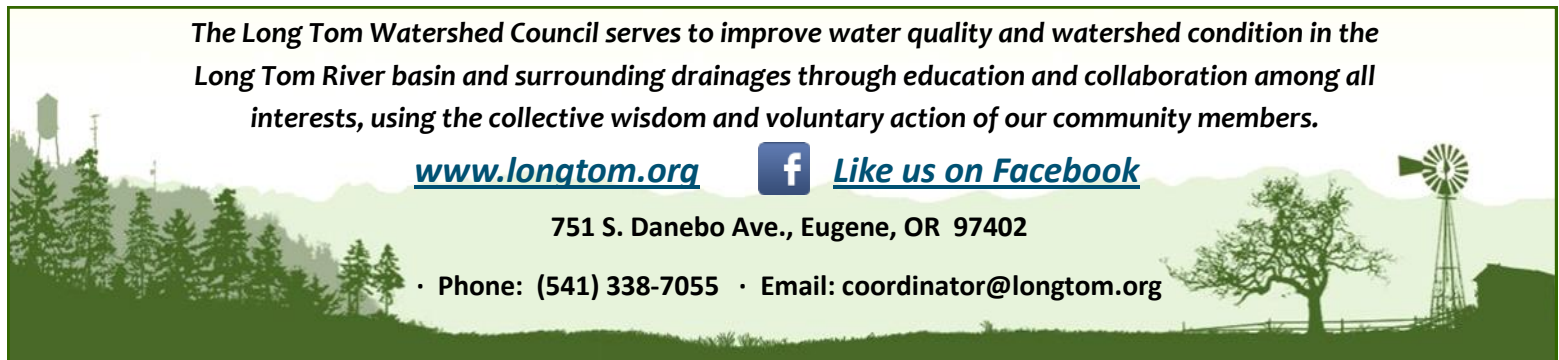
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Long Tom Watershed Cutthroat Trout Migration Study

April 24th Public Meeting

Nearly eight years ago, with initial seed money from an ODFW Fish Restoration & Enhancement grant and a lot of support from community landowners and volunteers, the council began a research study to learn more about cutthroat trout in the Long Tom. Not much is known about the population of cutthroat trout in our watershed and how they use migration corridors. We already know that cutthroat trout need clean, cool water, gravels for spawning, and variable habitat that includes both deep pools and shady places to hide. But we wanted to know more information that would help us prioritize restoration projects to improve both habitat and connectivity, so we started asking questions. How many fish are there? How far do they travel? What triggers their migrations? And why do some fish largely stay put (resident life history) and others migrate (fluvial life history) upstream from the Long Tom and Willamette Rivers?

Under the guidance of two tremendous fish biologist partners—Karen Hans at ODFW and Rebecca Flitcroft at the U.S. Forest Service, the council designed a research study, called the “Cutthroat Trout Migration Study,” that would tag cutthroat trout and then track the timing and location of their movements in the watershed. Fish 120 mm and larger were tagged with 22 mm Passive Integrated Transponder (“PIT”) tags, which are similar to microchips for pets. Teams of volunteers were trained to anaesthetize the fish and insert tags by making a small, careful incision in their underside with a surgical scalpel. Volunteers followed a regular schedule to set and check traps (usually 6-foot-long rebar frames wrapped in mesh), and would also measure and weigh each fish, and clip a small piece of the tail fin to preserve in alcohol for future genetic analysis. Five antenna stations, strategically placed in the Bear and Ferguson Creek basins, detected when tagged fish swim by and the direction they’re heading. Over five years (fall 2010—May 2015) nearly 600 trout were tagged.

Two years into the Migration Study, Dick Evans, a Junction City High alum with family ties to the Ferguson Creek area, and his wife, Gretchen, made a significant private investment. Their generous donation and passion for local fisheries gave the council the capacity to continue this important work and finish the data collection. Without the support of the Evans’ family, the council would not have the quantity, and certainly not the quality, of data we do today. The watershed thanks you, Dick and Gretchen!

From the start, the community was very enthusiastic about this research study. Long-time residents would often tell us stories about catching large cutthroat out of the Long Tom and its tributaries when they were kids. They were interested in seeing these fish thrive again and wanted their kids to have the same opportunities to enjoy this fishery that they did. Many of these folks ended up hosting fish traps or tag detection array stations on their property. The interest from the dozens of volunteers was incredible, and almost all of the data was collected entirely by volunteer teams.

Thanks to some initial analysis from Karen Hans, volunteers Dao Tran and Talbot Bielefeldt, and board member David Thomas, we’re beginning to piece together a more complete picture of cutthroat trout in our watershed! Of the 598 cutthroat trout that were PIT tagged, 100 (16.7%) were recaptured at least one time. Many fish were recaptured multiple times, including one fish that was recaptured a whopping 12 times! Approximately 18% of tagged fish were detected at array stations at least once. Many of these fish were detected multiple times at array stations around the watershed. The high number of recaptures and detections allowed us to track fish movements and see the wide variation in how fish moved—one fish moved 28 kilometers! We are also able to track rates of growth from recaptured fish, and survival from recaptured and detected fish.



Volunteer inserts a PIT tag into the abdominal cavity of an anaesthetized cutthroat.



*This data wouldn't have been possible without the dozens of volunteers who participated!
(Bottom photo by Reilly Newman)*

We've also learned that there are still some large trout in the basin, and the biggest by far were found in Rattlesnake Creek south of Monroe at Diamond Woods Golf Course (18 over a foot long!). Our hypothesis is this tiny stream's proximity to the Long Tom's confluence with the Willamette likely makes it an attractive spawning ground for fluvial fish. Schafer Creek, just slightly to the north of Rattlesnake Creek, appeared to be a popular winter refuge and juvenile rearing site.



This bridge represents the removal of the last priority fish passage barrier in Owens Creek! We're so incredibly grateful to the Owens Creek neighbors for making fish passage connectivity in this important stream a reality!

The Cutthroat Migration Study, combined with the culvert barrier inventory in 2009 (when we surveyed nearly 300 culverts in the watershed), has enabled the council to make some important decisions on where to focus our efforts for the greatest impact to local cutthroat trout and other aquatic species that benefit from connected creeks and rivers and access to headwater spawning, juvenile rearing, and cool water refuge habitat. This work has resulted in significant accomplishments. Just this last summer, we celebrated an important milestone in removing the final priority fish passage barrier on Owens Creek!

As we move forward with data analysis for the Migration Study, we're excited to begin finding out what else the data can tell us about cutthroat in the Long Tom, including the size of the population, how fast they grow, how long they survive, and the genetic relationships between different populations and life histories. Perhaps most importantly, we'll look to this data to illustrate how the council's work is benefiting cutthroat trout populations in our watershed.

Thank you to the watershed community for your incredible support of this research!

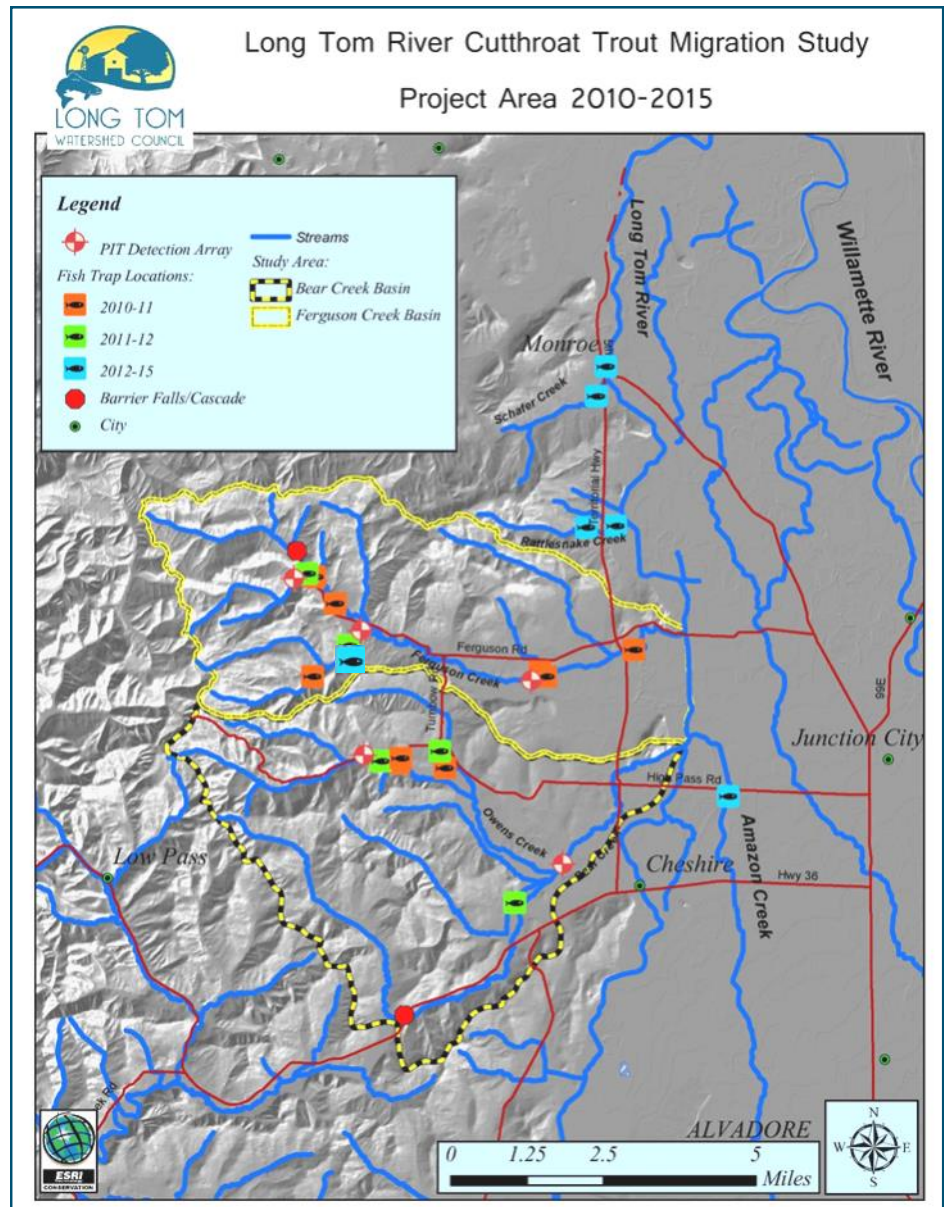
April 24th Speakers



Karen Hans - ODFW Salmon Trout Enhancement Program Biologist



Jed Kaul - LTWC Fish Biologist and project lead for the Migration Study



Long Tom Community Raises \$100,000!

Last month, we announced that we exceeded our original \$60,000 goal for our 20th Anniversary Campaign by \$20,000, and then a number of community businesses recognized how close we were to an even *bigger* milestone and pitched in another \$16,000—bringing us only \$4,000 away from \$100,000!

So we asked the community if you would help us reach that \$100,000 milestone, and **you delivered!! Thank you so much to all the amazing community members and business partners** who helped us **reach our \$100,000 stretch goal for the watershed!**

Your support for this campaign has truly been inspiring and represents the opportunity for significant impact in the watershed. Thank you!!

What are we doing with your gifts? Sign up for our email newsletter or check in on Facebook every Friday for our **#LearnYourLongTom** update to see how investments in your watershed are already being put to work and achieving impact in the watershed right now!



Recent Gifts - Thank You for Your Support!

Business League: Mountain Rose Herbs

Individual Gifts: Allen Dong, James Kaul - In honor Jed Kaul's work, Pat & George Miller, Linda Modrell

Traditional Ecological Knowledge Project: Linda & Doug Carnine

Taste the Watershed: Party Downtown

Urban Office Space Rent Contribution: Lee & Veronica Davis

Thank you also to the community members who anonymously raised \$555 for a **"Welcome to the Long Tom Watershed"** sign on Hwy 126 in Noti!



*Female Anna's Hummingbird
(Courtesy of Vaughan Photography)*

Support LTWC through the Faith Community Fund!

The **Faith Community Fund** was created in 2017 to support the values of people of faith in the greater Eugene-Springfield area for the stewardship of creation through partnerships with local organizations. This fund, and a similar one at McKenzie River Trust, will support activities and materials for planting, plant establishment (maintenance of plantings), and plant conservation in the Long Tom Watershed Council's service area and provide much needed local match funding for the council's important work in the watershed. **Many thanks to those community members who have already donated through this fund!**

Learn more about the Faith Community Fund and other ways to give to the council at longtom.org/donate



Project Spotlight: Coyote Creek South

For the past four years LTWC has been working with the Oregon Department of Fish and Wildlife (ODFW) at their recently acquired Coyote Creek South property to plan and prepare for 116 acres of vernal pool, wet prairie, and upland prairie restoration. Formerly under agricultural cultivation, the site's hydrology was altered to increase drainage and reduce standing water that would damage crops. However, the wetland and wet prairie habitats that once existed are extremely important to many rare and endangered species native to the Willamette Valley, including grassland birds such as the streaked horned lark and amphibians like the red-legged frog. LTWC and ODFW, with significant input and design help from Jarod Jebousek at the U.S. Fish and Wildlife Service (USFWS), created a plan to restore more of the original hydrology and native plant composition through years of site preparation, earthwork, and seeding.



Last summer, ODFW crews completed the earthwork phase of by using a wheel tractor-scraper, or “belly scraper,” to rearrange large volumes of soil. After temporarily removing layers of topsoil, crews “borrowed” clay substrate from the future pools and deposited it across berms to hold back winter rains and retain more water on site. The use of this heavy equipment came from significant in-kind contributions from USFWS. This scale of earth moving would not be possible without these machines, and without the in-kind assistance, would likely be too expensive to execute on this project. These kinds of partnerships and sharing of capacity are critical for accomplishing shared local goals!

This October, after earth moving was complete and the rains had just begun, we seeded the entire project area with a diverse array of species native to our wet prairie, upland prairie, and vernal pool habitats. A total of nine different seed mixes were drilled and/or broadcast across the mosaic of habitat types with the restoration seeding expertise of RTF Consulting and plenty of help from our partners at ODFW.

Now the freshly built vernal pools are filled with water, and more seed is germinating with each sunny day. We'll be monitoring plant growth and pool depths carefully over the next few years, and experts will help us track use of the new habitat features by amphibians and grassland birds. The restoration area is currently closed to public use while the new plants establish, but some of our work is visible from the site's entrance.

While the majority of the council's work still happens on private lands, this is another example of a large scale project with a public landowner that your investments have helped support our involvement in. Projects of this scale on public land support habitat connections on adjacent private lands and are essential to weaving the public and private matrix of habitat to enhance connectivity and habitat quality watershed wide!



This project is a great example of a valuable public-private partnership in ODFW working with a local nonprofit partner to accomplish habitat enhancement priorities in the watershed. Our ability to engage with these kinds of projects depends upon resources to coordinate and participate in them long term - thank you for investing in your watershed and making these kinds of projects possible!

Monitoring Spotlight: Pesticide Stewardship Partnership Data

The council began collecting data on pesticides in the Amazon Creek watershed in 2011 as part of the Pesticide Stewardship Partnership (PSP), a collaborative effort that includes support from multiple partners and stakeholders, including the Oregon DEQ, Oregon Department of Agriculture, the City of Eugene, SureCrop Farm Service, and Meyer Memorial Trust. Amazon Creek is currently one of nine PSP programs statewide, and is the one with the largest urban influence. As with all of the council's work, the PSP program's approach is non-regulatory, and is helpful in guiding our voluntary approach to have meaningful conversations with area landowners and community members.

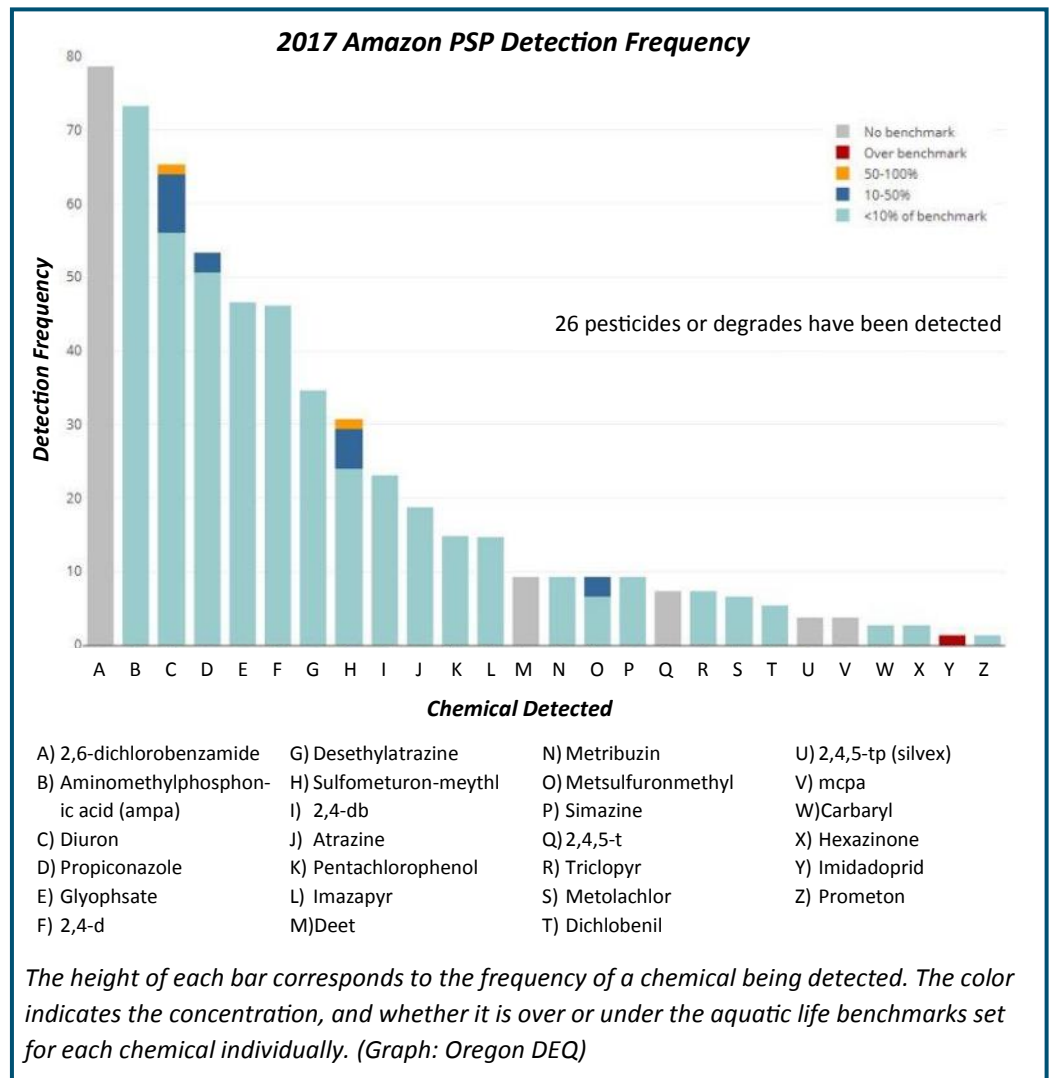
Seven years of data collection have demonstrated that **urban inputs are the most significant contributors of pesticides** to the Amazon Creek watershed. Although pesticides are generally only detected at very low levels in Amazon Creek, pesticides can have aggregate and compounding effects where multiple substances are present in a waterway, meaning that **mixes of compounds may be much more toxic to aquatic life than any one single chemical alone**. This is one of our top concerns in Amazon Creek. In 2017, we detected 26 different pesticides or pesticide degradates (the substances formed as pesticides break down) in water samples throughout the year, and 11 different substances were detected in a single sample from one site (see chart below). Additionally, **chronic (long-term) exposure to chemicals can also be much more harmful to aquatic life than acute (short-term) exposure**, making compounds that are persistently being detected in Amazon Creek a greater concern than those only found occasionally.

The City of Eugene also collects water quality data in Amazon Creek, and tests for many constituents that LTWC does not. **One major concern arising from their data is high (and steadily increasing) levels of zinc in water samples across all sites**. Frequently the active ingredient in moss-killing pesticides, zinc has a significant and detrimental impact on the olfactory system of fish like cutthroat trout.

What can you do?

1. Try to reduce use of pesticides where possible, and always be informed about the pesticides you do use, being sure to strictly follow pesticide labels.
2. Consider installing stormwater treatment facilities such as rain gardens on your property to help filter contaminant out of water before they enter our creeks. If you own or operate a business, our **Trout Friendly Landscape program** can help!
3. Volunteer to help with sampling on Monday mornings!

For more information about the **PSP program, what you can do, and how to get involved**, visit <https://mailchi.mp/06718b601fbb/learnyourlongtom-ppsp2018>



Welcome, Alec, and thank you, David!

LTWC would like to warmly welcome its newest board member, Alec Hrynyshyn. Al has been a project landowner since 2015. He and his wife, Donna, steward their home property on Owens Creek and have been enthusiastic participants in council activities for around three years. Al is a retired teacher and also serves on the board of the Upper Willamette SWCD. Al is well connected in the watershed and is excited to bring his perspective, his experience, and enthusiasm to our work in communications, fundraising, and neighbor-to-neighbor relationships.



Alec Hrynyshyn

Al was recommended by the board this month to fill David Turner's vacated seat in the Lower Long Tom geography. He will be presented for election, along with the full slate of board candidates, for a full term of board service at the October Annual Celebration.



David Turner

We also want to sincerely thank David Turner for his eight years of service on the LTWC board! Like Alec, David and his wife, Suzanne, are Owens Creek landowners and also have a project with the council. David has been a longtime member of our Resource Development Committee and was instrumental in helping to develop the council's community fundraising program. As a senior instructor at the University of Oregon's Arts & Administration Program, he recently published a book about the history of the Long Tom Watershed—*Along the Long Tom River: Observations from Past & Present*. Thank you, David, for your service to the watershed!

Upcoming Watershed Events

Next LTWC Public Meeting

Owens Creek Project Tour—Tuesday, June 27, 6 - 8 p.m.,
Tour a highly successful riparian planting project on private property along Owens Creek. Also see one of the final culvert replacements next door that helped open up all of Owens Creek for fish passage!

The Long Tom Watershed Council, a local nonprofit, counts on participation from many people and organizations. The local office of the Bureau of Land Management (BLM) donates postage for our mailings. They use the following disclaimer, standard procedure for all BLM partnerships:

BLM Disclaimer: "The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the opinions or policies of the U.S. Government. Mention of trade names or commercial products does not constitute their endorsement by the U.S. Government."

The Long Tom Watershed Council is still a local nonprofit (since 1998) with no government authority. We partner with local people, businesses, and agencies in the interest of finding local solutions and bringing grant funding from private and public sources to do restoration, education, and monitoring work in the Long Tom River basin. We're thankful for the donation of postage expenses!

LTWC Board of Directors

Lower Long Tom

Steve Horning
Alec Hrynyshyn

At Large

Ginnie Grilley, *Vice-Chair*
Darian Lightfoot
Pat McDowell
Jonathan Powell, *Treasurer*

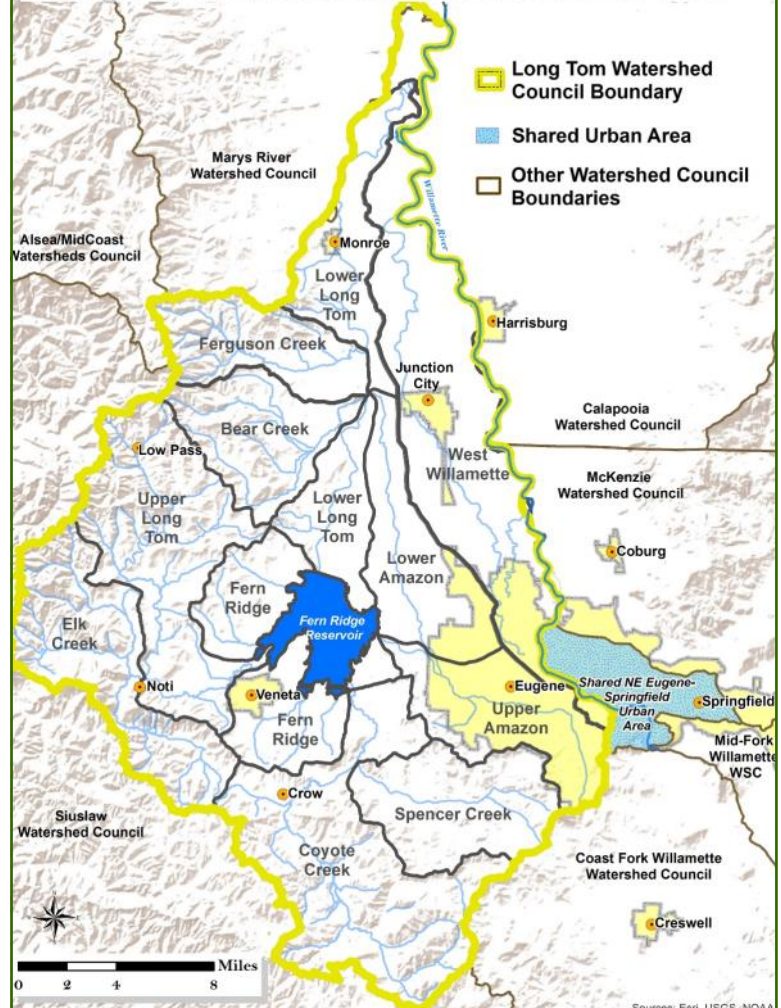
Upper Long Tom

Charles Ruff, *Past Chair*
Jabrila Via

Amazon

Shelly Miller, *Chair*
Dave Thomas, *Secretary*

Long Tom Watershed Sub-basins & Area of Work



Council Staff Contacts

- Clinton Begley, Watershed Coordinator/ED:** 541-654-8965
- Rob Hoshaw, Operations Director:** 338-7055
- Dana Dedrick, Special Projects Lead:** 654-8965
- Jed Kaul, Fish Biologist:** 338-7058
- Katie MacKendrick, Ecologist:** 338-7033
- Sarah Whitney, Urban Habitat & Stormwater:** 654-8965
- Amanda Reinholtz, Habitat & Water Quality Spc:** 338-7060
- Heidi Heisler, Fiscal Manager:** 338-7042
- Sarah Pollock, Administrative Assistant:** 338-7055

Traditional Ecological Knowledge Project

Youth internships have begun!



Team TEK Logo

LTWC is proud to share that the Team TEK (Traditional Ecological Knowledge) internship program has begun! After more than a year of outreach to area Tribes, Native youth organizations, local elders, educators, and others, the internship program has come to life! The program brings Native high school-age youth along with family members and college-age students together to learn about First Foods, traditional weaving materials, and issues of sovereignty, land ownership, tribal relations, the changing landscape, responsible stewardship, and more. Classes will continue through the

remainder of the school year; they commenced with the equinox and will finish with the solstice. Thank you to our curriculum director, Joe Scott, and the TEK Initiative, Valerie Goodness, for being the heart of this program. We also want to thank and recognize our funders and partners, the Spirit Mountain Community Fund, watershed community members and donors, Linda and Doug Carnine and the Andrew Reasoner Wildlife Preserve, the 4J Natives Program, Chifin Native Youth Center, the Confederated Tribes of Siletz, and BEF/MMT. We look forward to sharing more as this program progresses!



Team TEK's first class at the wetlands partnership office



Long Tom Watershed Council

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e-mail: coordinator@longtom.org

www.longtom.org

April 24th Public Meeting

6 - 8 p.m.

Long Tom Grange

25823 Ferguson Road, Junction City

(2.2 miles west of the Territorial Hwy /
Ferguson Rd intersection where the
annual Daffodil Festival is held)