#### WINTER/SPRING 2024

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# Lower Mainstem Restoration



We chose to highlight lower mainstem restoration work as the focus of this edition of the newsletter because a lot of the work we do takes place in these portions of our watersheds. This is due to a variety of reasons, some of the primary ones being that these areas are essential for aquatic species, and a majority of our population lives there.

As the rivers on the south coast flow out of the mountains and hills and hit the coastal plain, their floodplains widen and they tend to slow down and spread out. This creates complex low flow habitats that provide nutrients and protection to juvenile salmonids as they out-migrate to the ocean. These types of habitats were likely more abundant historically, and the lack of juvenile rearing habitats has been identified as a primary limiting factor for salmonid population survival in a number of our rivers. These portions of the rivers also feel the cumulative effects of many issues that occur further up in the watersheds, as everything flows downstream. Restoring habitat in these lower watersheds is a great way to often get the most bang for our buck and have a large positive impact on salmon populations.



These lower mainstem areas are not only critically important to salmon, they're also very important to us and our communities. They provide us with food and water, many of us work these lands and waters and rely on them as a primary source of income, and even more of us recreate in these spaces in any number of ways. We work so much in these areas because that is where our communities are and we want to ensure that both the ecological and community aspects of these areas are healthy and thriving.

We're doing things a little differently for this edition of the newsletter. Since so many of us at the Partnership work in these lower mainstem areas, we've chosen to highlight a number of those efforts from our different programs in this section. The usual Reports from the Field section will instead be an extended highlight of our new Youth Education Program Coordinator and all of the excellent work they're already doing.

# Elephant Bar Restonation

On the south shore of the Rogue River at river mile 2.6, Elephant Bar is a fairly stable river bar, where we have been focusing our work on increasing access to off-channel habitat. This area contains an active gravel operation and we have been working with both the landowner and the business owner over the last 10 years to begin developing a cooperative project to add additional rearing habitat into the Rogue estuary by further excavating an existing gravel pit, and adding in features that increase habitat complexity. In addition to this partnership, we are also developing deeper relationships with members of the Confederated Tribes of the Siletz Indians to work towards ecocultural restoration goals.

Lack of instream complexity and floodplain connectivity is highlighted as a key stressor for all Coho populations in the Rogue. This limiting factor also impacts suitable habitat for steelhead, Chinook, amphibians, reptiles, and beaver in the Rogue Basin. Our goal is to increase suitable year-round habitats for all freshwater life stages of Coho and other native salmonids by approximately eleven acres, while also supporting channel and floodplain processes that will benefit other native aquatic species such as migratory waterfowl, red-legged frogs, and beavers.

> We are now working with a contractor on designs to improve the quality and quantity of rearing and refugia habitats within the Rogue River Estuary. Stay tuned for the next steps!







Aerial view of the restored river bank sections (two on the right bank, and one on the left bank at the corner) after fall rains brought the water level up.



(above) Aerial view of logs installed in the bank. The logs are angled upstream to reduce velocity of the incoming flow and redirect it back out into the middle of the channel.

(right) Bank erosion along the Cape Blanco State Park side of the river prior to restoration.



# Sixes Bank Restoration

Over this past summer we worked to address severe erosion along the mainstem banks of the lower Sixes River. A total of over 1,500 ft. of the river's banks have been heavily eroding in three separate locations over a number of years. Two of those sections are along a private ranch, and the other is on Cape Blanco State Park land. This erosion has been contributing large amounts of fine sediment to the lower river and estuary, and eating into working pasture lands.

In order to address these issues, we implemented a large restoration project that included recontouring the banks and installing roughly 330 large trees and over 200 root wads into the banks. These actions will help to prevent further erosion and add a large amount of quality rearing habitat for salmon. We also collected pre-restoration monitoring data, and will continue to collect data to evaluate the effectiveness of our work and how the site develops over time. We're now gearing up to plant the riparian area during this wet season, which will also help to stabilize the banks and increase habitat for a number of different species over time.



(above & front cover) Our Technical Coordinator Erin Minster collecting survey data of the river's thalweg (deepest part of the channel) as part of our pre-project monitoring efforts.

# Hydraulic Modeling Mainstems

We recently worked with a restoration engineering firm to develop a 2-dimensional hydraulic model for the lower Pistol River mainstem and its floodplain to help understand existing conditions and guide potential restoration activities. The model was created in HEC-RAS (computer software developed by the US Army Corps of Engineers) using detailed terrain (topographic and bathymetric) and hydrologic data. After ensuring that the model outputs accurately depict existing conditions on the ground, some aspects of the terrain data set were altered to mimic the implementation of potential restoration actions. This helps us to see what these actions may look like in the real world!



Contractors operating an Acoustic Doppler Coupled Profiler to measure stream discharge in Pistol River.



Model results showing water velocity in Pistol River at a discharge of 24,000 cfs.

Of particular interest to this modelling effort was conceptually testing restoration activities that could potentially reduce bank erosion along the south bank and deposition of sediment upstream of the Pistol River Loop Road bridge. To that end, the terrain data set was altered to mimic actions that would 1) increase floodplain connectivity in multiple locations, 2) add large wood structures at an eroding location on the south bank, and 3) lengthen the span of the Loop Road bridge. Model outputs of existing conditions and potential future conditions were then compared for differences that may indicate a positive response from the "actions". Of all the actions modelled, results indicate that only bank restoration would result in a discernible effect on conditions in Pistol River.

# Lifecycle of a River: Lower Floras Creek CREP Project

As upper hillside drainages coalesce into tributaries, water moves soil and rock downhill through erosive and transport zones to become mainstem rivers. In these lowlands the land flattens, gravity loosens its grip, and velocity slows. As energy dissipates, the river drops its burden of boulders, gravel, and sand in lower mainstem "depositional" reaches.

During higher velocity flows, a sediment-hungry stream with energy and volume to spare picks up new loads, carving back and forth across soft river deposits to form a wide belt of abandoned channels. Where side-to-side meanders in the lowlands are constrained, high energy flows cut downward, and destabilized and abandoned banks become terraces underlain by rich alluvial soils. Below those terraces the stream cuts new riverbanks for a fresh new channel. Working with the dynamic forces of mainstem systems to enhance riparian function takes years of adaptive management.

Working with the dynamic forces of mainstem systems to enhance riparian function takes years of adaptive management. Once established, riparian willows, trees, and shrubs create a spongelike buffer to reduce the fire hose effect of a simple channel, dispersing the stream's energy and allowing banks to stabilize. On lower Floras Creek, where a foredune blocks the river's exit to the Pacific Ocean for months of every year, hydrology is especially complicated. Riparian setbacks here create not only habitat, but also an operational cushion to protect against yearly flood damage to pastures and fences and just a little bit of predictability for our hardworking ranchers.



Dissipating the immense power of moving water is one of the superpowers of a diverse riparian corridor. The lifecycle of a river plays out across time and the landscape on a lower Floras Creek CREP project.

# Get Involved

Local Board Meetings Please contact us for information on how to join.



Curry Soil and Water Conservation District Last Tuesday of the month at 7:00 pm at the Curry Watersheds Partnership Office.

Contact Liesl Coleman for more information: <u>liesl.coleman@currywatersheds.org</u>



Lower Rogue Watershed Council 3rd Tuesday of the month at 5:00 pm at the Curry Watersheds Partnership Office.

Contact Kelly Timchak for more information: <u>kelly@currywatersheds.org</u>



South Coast Watershed Council 2nd Monday of every other month, starting in March rotating location between Port Orford, Gold Beach, and Brookings.

Contact Robbie Lascheck for more information: robbie.lascheck@currywatersheds.org

# **Upcoming Events**

#### MAR 8

APR

13

#### Friends of Curry Campus & Lifelong Learning

The CWP Team will be presenting at the "Friends of Curry Campus and Lifelong Learning" event located at SWOCC (Brookings Campus) on March 8th at noon.

Our staff and dedicated network of volunteers are focused on improving our watershed health through community based restoration efforts, scientific monitoring, and educating the public through local schools and community presentations. Join us on March 8th to learn more about what we are doing in your community!

### Oregon Otter Beer Festival

3rd Annual Oregon Otter Beer Festival April 13, 2024 OMSI, Portland OR Presented by the Elakha Alliance and Oregon Zoo. Oregon Museum of Science & Industry 1945 SE Water Ave., Portland OR

Visit the official Oregon Otter Beer Festival page and purchase tickets.



### SAVE THE DATE!

June 1st, 10:00am.: Rogue River Cleanup.! Join us for a day of trash cleanup and stewardship on the Rogue River, followed by a celebration BBQ at Quosatana Campground with fun activities to boot! This community is committed to keeping our rivers clean so we can protect and restore them for not only ourselves, but also for future generations.

# Reports from the Field

### Education & Outreach

### Youth Education Program

Curry Watershed Partnership's (CWP) Youth Education Program (YEP) is a hands-on, outdoor based education program that engages K-12 students across Curry County. YEP meets students in their classrooms to prepare for outdoor inquiry and align topics with grade-level standards. Students steward school gardens, visit local beaches, rivers, wetlands, farms, forests, and ports within their watershed.

Experiential outdoor learning inspires the next generation of citizens, scientists, landowners, and explorers to prioritize stewardship and appreciation of the lands and waters we interact with. The YEP program increases the efficacy and longevity of other CWP programmatic components (such as monitoring and habitat restoration) by engaging our communities early in their lives, and recognizing them as a critical part of the important work in our environment!



Showing the array of colors grown in the garden.



Working hard during harvest season to provide the cafeteria with fresh veggies.

### YEP, we are looking into the future!

Now more than ever, it feels that teachers are short on time and could always use an extra hand or six. To that end, YEP has been working diligently on the creation of lesson plan databases. These databases are designed to make educating outside more attainable and less stressful for all classroom educators. Nevertheless, this does not mean YEP has stopped taking classes on excursions into the wild. YEP first and foremost will always deliver quality inquiry based outdoor science education. The shift in focus is to empower educators as well as students in the creation and exploration of their outdoor learning environment. Additionally, this shift will not be conducted in isolation, but instead through a joint professional development that allows teachers throughout Curry County to work in partnership and work together.

Lastly, professional educators should not be the only group to learn from each other. YEP is currently working on an equally exciting possibility of peer-to-peer education opportunities. This prospect would have students of a school host students of the same grade level from a different school and then educate their peers in a series of outdoor education lessons. This would continue to rotate throughout the school year with different schools hosting and teaching various lessons.



High School students conducting an estuary bioblitz.

Weeds

### Rogue River Japanese Knotweed Treatment, Just Keeps on Rolling!

This project has been flowing steady as the Rogue itself since around 2011. As with any watercourse, there's bound to be some rough water, but most recently things have been running quite smooth! Due to the nature of most upriver knotweed sites, we rely heavily on transportation to access them by water. Remote locations like these are best accessed by boat, whether that be under power or a quiet float down river. Thankfully, our partners at the US Forest Service now have the staff to safely navigate the unforgiving waters of the Rogue River. Now that we are running full speed, knotweed is in big trouble!

The fall of 2023 was one for the books. After several trips up and down the river, the knotweed crew knocked out knotweed from Blossom Bar clean to the Rogue River Bay! Unfortunately, there was not enough time to schedule a float to access knotweed sites above Blossom Bar, but next year it won't slip through the rocks. Luckily, we made a short hike up on the Rogue River Trail in 2022 and made a second trip to those above Blossom.

Overall, Japanese knotweed sites on the Rogue are on the recession due to past successful treatments. We did however peel back a few undiscovered layers this year on our assault downriver. Historically, we have easily spotted and treated the obvious patches of knotweed as we scoot our way along the river. This year we were able to dig a little deeper with the help of USFS staff. Pre-scouting efforts are now deemed essential to the efficiency of our treatment plans. With this new strategy and increased support from the USFS, we are excited to ramp up for 2024 and knockout some more knotweed!



(above) Knotweed - a small shrub.

(below) Knotweed - a larger shrub.

# Staff Highlights

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### Welcome our new Youth Education Program Coordinator!

In November 2023, Ma'yet joined CWP's team as the Youth Education Program Coordinator. Prior to coming to the Partnership, Ma'yet spent the last six years as a science educator in Texas and Oregon. Ma'yet has spent numerous years developing collaborative outdoor education and outreach programs. When



not working, you will find them hiking, backpacking, on a beach, and always taking photographs.

Ma'yet hiking along the Pacific always seeking adventure.



Robbie collecting monitoring data this past summer on the Sixes mainstem.

### Welcome our new South Coast Watershed Council Coordinator

Congratulations to Robbie Lascheck on becoming our new South Coast Watershed Council Coordinator! Robbie has been with the Partnership since 2018, when he came on board as the Monitoring Program Coordinator. Over the years he has worked to revitalize and grow the Monitoring Program in order to ensure that we have excellent data to help us better understand the health of our watersheds and the effectiveness of our work. One of his focuses for the program was increased collaboration with our other programs and our communities. This included getting students involved in monitoring activities through our Youth Education Program, working with our restoration staff to monitor some of our restoration projects, and getting citizens involved in monitoring through our Storm Chasers program. He is excited to use everything he's learned over the past 5 years in his new role as the SCWC Coordinator to support all of the Partnership's programs, get our communities more involved in our work, and lead restoration project efforts of his own.



Allison in the field.

### Welcome Allison Dawn. Monitoring Program Coordinator

A self-described "quantitative ecologist," Allison holds a B.S. in Environmental Science with a Marine Science minor from the University of North Carolina at Chapel Hill, and recently completed her M.Sc. in Wildlife Science from OSU. She also has numerous scuba diver certifications and is certified as a drone pilot. How human activity impacts ecosystem health fuels her curiosity, and she is especially interested in promoting habitat resiliency along the Southern Oregon Coast, a region which she learned to call home while conducting her master's degree research in Port Orford. In addition to study design and analysis, she equally enjoys the process of writing reports and proposals for an audience poised to support future work. We are very excited to have her on board!



### Curry Watersheds Partnership Staff & Contractors

Liesl Coleman Curry Soil and Water Conservation District Manager Barbara Grant NRCS Conservation Reserve Enhancement Program (CREP) Technician Drew Harper Riparian Management Coordinator Robbie Lascheck South Coast Watershed Council Coordinator Erin Minster Technical Coordinator Allison Dawn Monitoring Program Coordinator Genevieve Ma'yet Youth Education Program Coordinator Matt Swanson Contracted Restoration Project Manager Kelly Timchak Lower Rogue Watershed Council Coordinator Dustin Williams Vegetation Management Program Project Implementation Manager Tammy Wills Operations Coordinator

### Acknowledgements

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29286 Ellensburg Avenue Gold Beach, OR 97444 Phone: (541) 247-2755 info@currywatersheds.org www.currywatersheds.org Curry Watersheds Partnership includes the Curry County Soil and Water Conservation District, the South Coast and Lower Rogue Watershed Councils, and the Curry Watersheds Nonprofit, working together to support our communities to care for our lands and waters, now and into the future. We rely solely on grants and donations and you can make a donation by visiting our website or contacting us at the information listed above.