



# THE REDD

*Dedicated to Restoring Salmon for Future Generations*

THE NEWSLETTER OF THE SKAGIT FISHERIES ENHANCEMENT GROUP

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## Fish Passage for Everyone *Salmon, Trout, and Salamanders, Oh My!*

By Yuki Reiss, Restoration Ecologist

The summer of 2023 brought new experiences for the Habitat Team at Skagit Fisheries as we worked through a construction season of removing fish barriers. I began in the Restoration Ecologist position starting full time in June, and in early July we hired Myrriah Crowley (our 2023 AmeriCorps Restoration Associate) as a Habitat Specialist. Both of us have a strong conservation background. Myrriah studied botany and ecology. I have worked many years as a fish biologist, but have been working on ecosystem restoration projects in Hawaii for the past 11 years. But for both of us, the logistics of managing a construction project was a new experience.

The first project of the summer was



Yuki with a cutthroat trout

replacing some very ugly culverts on Lower Day Slough with some beautiful new bridges. A slough is slow water

habitat that is a backwater to a larger water body, in this case the mainstem Skagit River in the highly productive Ross Island reach. These habitats are important to juvenile salmon during their freshwater rearing life history phase. During construction we saw a large number of juvenile coho salmon schooling in pools, as well as larval Northwestern salamanders.

The two bridges were installed on adjacent properties, working with willing landowners. Through grants from the WA state Salmon Recovery Funding Board (SRFB, often pronounced "Surf Board") and Puget Sound Energy (PSE) the entire project was funded at no cost

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**BEFORE:** Undersized culverts at Day Slough

**AFTER:** New bridge at Lower Day Slough



**REDD:** A female salmon uses her tail to dig a nest in the gravel. After she deposits her eggs the male fertilizes them. The female then covers the fertilized eggs and the resulting nest is called a redd.

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PRESENTED BY SKAGIT FISHERIES ENHANCEMENT GROUP



# WILD & SCENIC® FILM FESTIVAL

where activism gets inspired



October 12th, 2023

6pm Reception • 7pm Program Begins

**LINCOLN THEATRE** One night only at the Lincoln Theatre • Mount Vernon, WA  
General Admission \$20 • \$40 "Become a Member" Special  
Incl. Admission and a Skagit Fisheries Membership  
Music from Whiskey River Mudflats • Raffle • Beer & wine

a benefit for  
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**FISH PASSAGES: – CONTINUED FROM  
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to the landowners. These projects benefit landowners and salmon!

During the month of August we also spent three days helping out Skagit County on fish rescue for the Barrel Springs dam removal project. Prior to working in a stream channel, the site must be dewatered to make it safe and feasible for instream construction. During the dewatering process, all fish and amphibians living in that stream are physically removed and placed in wetted habitat above or below the work zone. Block nets are installed to keep fish out of the work zone for the duration of the project.

Barrel Springs is a spring-fed creek with cold, clear water flowing year-round. We were not sure what to expect in terms of fish presence, but during the fish rescue we found a healthy population of resident coastal cutthroat trout (*Oncorhynchus clarkii*). In total, we rescued 180 trout from ~300 ft of stream habitat. This included trout of all size classes, from small fry only 1 inch long to resident adults 6-8 inches long.

But the real surprise of the week was

a crazy abundance of salamanders! Though they are reported to normally be solitary creatures, in the short stretch of habitat below the dam we found 48 salamanders. Sixteen of them were the large (8-12 inch) Pacific Giant salamanders (*Dicamptodon tenebrosus*). The remaining 32 were smaller (3-5 inches). All of the salamanders had visible external gills, though likely the smaller

## *These projects benefit landowners and salmon!*

ones were still in a larval state and the larger ones were “gilled adults”. Pacific Giants can become sexually mature in this aquatic stage, while other adults metamorphosize into a terrestrial stage.

The final construction project of the summer was the installation of a large (16 ft) arched culvert over a small stream in the Upper Skagit, locally called Thompson Creek. This creek

feeds directly into the Skagit River just below the confluence with the Sauk River. Due to culvert barriers the stream is currently home only to resident coastal cutthroat trout, but as barriers are removed, we hope to see salmon and steelhead moving into this stream in the near future. This new fish passage structure was also replaced by working with a willing private landowner who believes in supporting restoration and salmon recovery. Funding for this project was through grants from Puget Sound Energy and the U.S. Fish and Wildlife Service.

The next step for each of these projects is planting native riparian plants this fall and winter. This will help stabilize soil exposed during construction. Planting will also jumpstart the creation of new stream habitat. We will also monitor newly opened habitat to determine if and when salmon begin to colonize newly accessible areas for spawning.

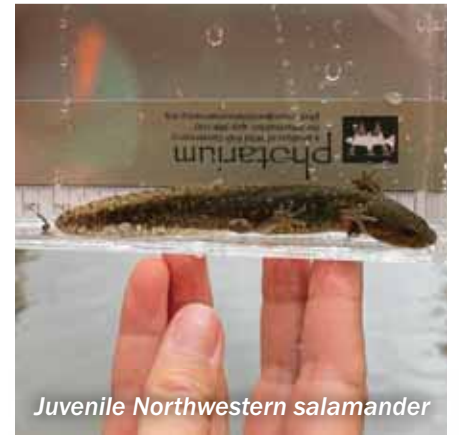
If you are interested in volunteering for planting events this fall or winter, or helping with spawning surveys, please contact SFEG. We are always looking for new volunteers. Thank you to our 2023 willing landowners for making these projects possible!



*Salamander footprints.*



*Myrriah with a trout fry at Thompson Creek*



*Juvenile Northwestern salamander*



*Fish rescue at Barrel Springs*



# A Day in the Life: Knotweed Season

By PJ Heusted, WCC Crewmember

Almost every day of knotweed survey season looks nearly identical on paper. We arrive at the shop, double check the contents of each gear pack, roll out, bushwhack, rinse, and repeat. There's a routine and a rhythm required and now, almost two months into the survey season, the crew has a system for success.

Preserving the health of the Skagit watershed for salmon is a two part project: planting native species in the riparian zone and removing invasive species and noxious weeds. Knotweed, most often either Japanese or hybrid knotweed, is a weed known for its ability to dominate the banks of streams by outcompeting the native species as it spreads quickly and blocks up to over 90% of sunlight. During seasonal high water events, tiny stem fragments are washed downstream and into side channels where they are deposited and left to create new infestations once the water recedes; it takes just ¼ inch of stem to root and start a new colony. Large knotweed colonies contribute to the erosion of streambanks, lack of shade along the river's edge, and long term prevention of the build up of large woody debris, all of which contribute to the gradual degradation of salmon habitat and make it critical to control the spread of knotweed through the watershed.

I want to take you on a journey through what a typical day of knotweed surveying looks like for the Washington Conservation Corps crew at Skagit Fisheries. While things are always subject to change, and often do, this is what I have come to expect when I arrive at the office each morning.

## Arrival

The morning starts with a thorough check of the survey and spray backpacks that come out into the field with us every day. The survey pack holds everything we use for data collection: a notebook, iPad, camera, whiteboard, dozens of pens and pencils, more spare batteries than you think you would ever need, blue and white striped flagging, maps, GPS units, and more. Despite the list being long, every item in that bag gets used every day and is important in collecting our knotweed data. The spray pack on the other hand is the pesticide hub; isolating all items that are considered "hot," or contaminated, and live in their own hot pink backpack. At least one member of the crew sorts through both backpacks checking off each necessary item before the work truck arrives and we load up.

## The Commute

This year our designated survey section is in the upper sections of the Skagit watershed including areas of the Sauk between Darrington

and Bedal as well as sections of the Skagit far up valley outside of Newhalem. In other words, it's a long haul from the SFEG base out to our survey sites and a drive often made to feel even longer with construction delays and long stretches of pothole ridden Mountain Loop Highway to access the Sauk. While the drives have been great for giving me long hours of independent reading time, usually the crew passes the time by chatting or taking a stealthy nap while our fearless leader, Mitchell Biggs, safely drives us all throughout the watershed. And every day, without fail, the sign for the Darrington IGA appears in the distance and the promise of delicious snacks, caffeinated beverages, and a clean bathroom bring everyone back to life.

## "Survey On!"

Once we are out in the field things start to get interesting. In order to find knotweed, one must put themselves in the types of places that knotweed likes to grow; this means crashing through dense underbrush, wading through murky back channels, and crawling over half-rotten log jams to seek out places where stem fragments may have gotten caught in previous high water events. It's similar to hiking, but if hiking was done exclusively off trail and in sections of the forest most often changed and impacted by seasonal flooding and weather events. We get to see sections of the river that most people only access by boat or raft and walk on gravel bars where the only prints come from mountain lions.

It tends to be slow, sweaty work consisting of trying to find the path of least resistance through the woods, but the survey marathon is broken up by shouts of "KNOTWEED!" carried down the survey line. When you hear "knotweed" in the woods, everything changes; all members of the crew "Marco! Polo!" their way to the stem(s) of knotweed and treatment begins. All those tools and gadgets that were previously inventoried in the backpack at the start of the day get pulled out and dispersed amongst the crew while our designated pesticide sprayer gears up with gloves to do the herbicide treatment. Stems are counted, photos are taken, GPS coordinates

are marked, flagging is hung, and data is recorded in at least three separate places before blue dyed herbicide is sprayed on the knotweed in question. You have to work fast because it is almost guaranteed that mosquitoes will sense your presence and start swarming once you stop moving; so, once every box has been checked everyone quickly attempts to retrace their steps to reform the survey line. Then we rinse and repeat until it's time to eat.

## Most Beautiful Cafeteria in the World

Some people may say that breakfast is the most important meal of the day, but during knotweed season I think that award must go to lunch. Not only are we treated to a riverside lunch spot nearly every day of surveying, but we are often put up front and personal with many classic Cascade peaks. Depending on our exact location, we often enjoyed clear views of Whitehorse Mountain, Sloan Peak, Mount Pugh, Mount Forgotten, Mount Baker, Sauk Mountain, and so many more that lined the horizon. Aesthetics aside, lunch gave us a moment to cool off by soaking hats in the river, fuel up with an assortment of IGA snacks and homemade meals, and to rehydrate with the day's chosen electrolyte mix. If the morning felt long and hot, lunch helped to refill our batteries to power through the rest of the day.

## Finishing Strong

The thing with a knotweed survey is that once we've hiked out to the survey site and stomped through woods to reach the end of the area being surveyed, we're only halfway done. I found that the hardest moments in the day were already being hot and exhausted and then having to turn around and do it all again in a slightly different area to work back towards the truck. The work flow remains the same as the trip out, but everything feels harder when you've got a belly full of lunch and the sun beating down on your neck. Eventually things start to look familiar and I'll realize that we're getting close to where we started in the morning which means that the only thing between us and the air conditioned truck is retracing our hike down to the river. Suddenly my pack will feel lighter and my legs feel stronger, and before I know it, we're back in the truck and heading down the valley towards the Skagit Fisheries office once more. The truck ride home often features much less stealthy naps and much more powerful air conditioning, but once we get back, we unload and say goodbye to enjoy an evening of rest before we wake up and do it all over again the next day.



Materials needed for a day in the field



A photograph of three people standing in a dense, green forest. On the left, a person with purple hair wears a black hoodie and an orange safety vest. In the center, a person with braids wears a plaid shirt and a tan cap. On the right, a person wears a blue hoodie and an orange safety vest. They are all looking towards the camera.

# Academic Reflections from Summer Field Work

By Charles Rasco, Seasonal Technician

As a summer Riparian Restoration Technician at Skagit Fisheries, I have been able to see and work on SFEG's restoration sites which all aim to re-establish salmon habitat. I grew up in Bay View and have always enjoyed exploring the Skagit Valley. This job has brought me to many new places along the Skagit that helped me grow closer to and better understand the natural processes which we all rely on.

I am currently working on my senior thesis at Western Washington University and am focusing my writing on land conservation and restoration in the Skagit Watershed. Two of the main factors in my thesis are economic expansion and a warming climate, both of which threaten salmon habitat. Little effort to manage these factors would result

in low fish populations and degraded ecosystem services; action to preserve fish populations has become necessary. Conservation properties allow us to maintain ecosystem

*Collaborative  
restoration projects  
have proven to be  
beneficial for people  
and ecosystems.*

services from sites while preventing negative effects that could otherwise come from the private land regime—in other words, people or companies purchasing properties and modifying

the landscape for their profit.

Collaboration among different parties is another critical aspect of successful projects that I have found in my research. The Skagit watershed has a broad range of people and industries that use land to produce important parts of our economy, like forestry and agriculture. Within these unique sectors of our local economy, collaborative restoration projects have proven to be beneficial for people and ecosystems. Notable projects include the Finney Creek and Fisher Slough restoration projects. Collaborative projects like these have the ability to foster long term relationships between stakeholders and encourage productive collaborations in the future.

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# Taking Care of the Environment & Yourself

By Nova Barbieri, WCC Crewmember

In a world focused on challenges posed by money, productivity, and career advancement, being a Washington Conservation Corps (WCC) crew member created a period of calm and introspection for me. Time to care, not just for my community and environment, but also for myself. Nature has always been something that lowers my walls and has made me feel more at home and accepted. There really is something special about going into nature and caring for it that also teaches personal lessons... in nature I am continually introduced to self-growth. Seeing oneself reflected in something else that you care about makes caring for oneself seem much more approachable.

In our season of planting tens of thousands of trees and shrubs, planting was a task that was meditative and calm, especially during days where rain dropped down from the sky and slowly soaked my gloves. Those days, I felt a calming presence knowing that rain was what the plant needed, especially bare root plants that we were planting. I knew that the home I was giving the plant in a particular location in the ground as well as on the planting site in

general would help nurture it to grow.

It wasn't just during planting season where growth was present, I felt like I really experienced personal growth throughout the year. During our travel assignment to Orcas Island, where we did a lot of trail and road maintenance, almost all of our work took the form of removing hazards. Sometimes using brush cutters was in order, and we sometimes came upon huge swathes of brush that needed to be cleared



2023 WCC Crew Members at the SFEG nursery.

that seemed far-fetched to finish even with a crew. Through teamwork and breaking up the workload, sites like Carrie's Wetland were made ready for future restoration activities like later planting activities.

As I write this I am able to reflect on the steps that I have taken this year, both in a sense of growth, and physical footsteps like the ones the crew and I took during countless hours of working outside. But, with pushing boundaries, comes risk. As the year was wrapping up, I fell and was injured. This hurt not just physically, but I was then isolated from the crew that continued to work in the field. This transition has been hard, but in some ways, as much as I'm not in the field with the crew and can't explore on my own as much, it is giving me an opportunity to grow in breadth, understanding the context of what was going on, and maybe how I can contribute some innate skills and experience. My focus is on self-care and getting myself to a place to serve again physically, as well as enriching myself for future employment opportunities, and this I am grateful for.



Seasonal tech Charles covered in blackberry juice after brushcutting.

## ACADEMIC REFLECTIONS: – CONTINUED FROM PAGE 5

Many of the takeaways from my senior thesis are already present in the Skagit Fisheries outreach mission - like the importance of reducing our impact on the environment while trying to conserve salmon habitat. Reading different WWU Masters theses on Skagit River is the most important thing I have done to extend my thinking on the subject. Relevant WWU Masters theses cover polycentricity in the Skagit watershed and ontological dissonance between Skagit fisheries management entities. Comprehending these existing ideas

and using academic writing to connect my thoughts on paper has allowed me to gain a better understanding of how involved groups view environmental issues and prioritize their own goals under the large scale view of climate change.

I am excited to graduate from WWU after fall quarter and am grateful to be a part of Skagit Fisheries Enhancement Group this summer. My thesis combined with experience at SFEG has provided a roundabout way to see the lessons I have learned in the real world—conservation and restoration save land for our future and play a vital role in environmental work.

# Interns and AmeriCorps are vital to Skagit Fisheries



GivingTuesday was created in 2012 as a simple idea: a day that encourages people to do good. Over the past 10 years, this idea has grown into a year-round global movement that inspires hundreds of millions of people to give, collaborate, and celebrate generosity. This November, Skagit Fisheries is asking for your support of our AmeriCorps and intern programs. The young adults engaged in these programs are passionate about serving their communities and making a difference for the future of salmon. Funds are needed to increase the number of opportunities and the diversity of individuals who participate. Unpaid internships can only attract those who can afford unpaid positions. With your help, we can create more opportunities for ALL those interested. Donate now to support future conservation leaders.

Donate now to support future conservation leaders.

**GIVINGTUESDAY**

**NOVEMBER 28, 2023**



[www.SkagitFisheries.org/ways-to-give](http://www.SkagitFisheries.org/ways-to-give)

Scan the QR code above to explore options,  
visit [www.SkagitFisheries.org/ways-to-give](http://www.SkagitFisheries.org/ways-to-give) or call the office at 360-336-0172



## **BECOME A MEMBER**

Members make salmon recovery possible. Help ensure successful salmon restoration efforts continue by becoming a member today.



## **DONATE**

Show your commitment to the future stewardship of our local watersheds by making a donation today. Consider a recurring donation!



## **VOLUNTEER**

We recruit and train volunteers to achieve increased public awareness for salmon habitat restoration. All projects are based on learning through hands-on activities.



## **STOCK / IRA GIFTS**

Make your gift an investment in the future of Salmon.



## **LEGACY GIVING**

Make a lasting impact on the future of Salmon.



## **PLAN A FACEBOOK FUNDRAISER**

Organize a Facebook Birthday Fundraiser in support of Skagit Fisheries.



## **DONATE A USED CAR**

Vehicle pickup and transportation are free. Fill out the form and we do the rest.



## **FRED MEYER**

Shop through Fred Meyer Community Rewards.



*Skagit Fisheries Enhancement Group is a 501(c)3 nonprofit organization.*

*All contributions are tax deductible to the extent that the law allows. Tax ID#: 94-3165939*





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## Events and Volunteer Opportunities



Scan the QR code or visit [www.skagitfisheries.org/events/](http://www.skagitfisheries.org/events/) for more info and registration. Registration is helpful so we can let folks know about event changes and provide more information as it is needed. Parking at some of these sites is ex-stream-ly limited, so please carpool!

### Salmon Sightings

**All events Noon-3pm**

**October 14 Pressentin Park**

*Orca Recovery Day in partnership with  
Skagit Conservation District*

**November 4 Oyster Creek**

*Partnership with NSEA and Taylor Shellfish*

**December 2 Mud Creek**

*at Camp Lutherwood*

Join us at various locations around the Skagit and Samish Watersheds in hopes of seeing spawning salmon! Experts will be on hand to talk about salmon habitat and local restoration efforts.

### Fall Work Parties

**(Saturdays) 10am-1pm**

**October 21:** *Make a Difference Day at Edgewater Park; help remove invasive English ivy along the restoration areas of the Skagit River.*

**October 28:** *Riverfront Park; help remove invasive Himalayan blackberry along the restoration project.*

**November 11:** *Planting native plants along the Skagit River*

**November 18:** *Planting native plants at Debay's Slough  
Help restore native riparian plants in the Skagit Watershed!*

