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NOOKSACK SALMON ENHANCEMENT ASSOCIATION

We believe that salmon are an essential part of our environment, culture and economy.

FISH TALES

Volume 26, Issue 3 • Spring/Summer 2019

THE NEWSLETTER OF THE NOOKSACK SALMON ENHANCEMENT ASSOCIATION

River Stewards Enlighten Visitors on Trials of Salmon



Intern, Sarah Cailotto, helps community member determine the pH of the Nooksack River during NSEA's weekly guided River Walk along Horseshoe Bend Trail.

**By Kendra Krantz
Program Coordinator**

Let's all admit it. Summer crept up on us this year.

One second, we were all buried in

an early March snow, begging the weather to have mercy on us, and the next second, the lilacs are in bloom and rain feels like a distant memory.

One of the staples of the Pacific North-

west is our four clearly defined seasons, but 2019 has proved that climate change makes seasons unpredictable and erratic. Alas, here we are, feeling like spring never happened.

Salmon Seasons

As humans, we quickly adapt to enjoying the warm sunny days, but what about our local rivers?

Maybe you are thinking that salmon are just as adaptable – heck, they've been around for at least 50 million years – or possibly you reason that salmon season is in the fall and we need not worry.

The problem is that 50 million years is a long time to adapt, but climate change has moved in on us quickly, not unlike this summer.

What's more? Every season is salmon season. The Nooksack River is home to all five Pacific salmon species, including pink salmon, which spawn in late summer, and spring Chinook, which can remain in our river systems for up to six months before they start spawning in March. What does this mean for NSEA? It means we are combatting salmon declines with the compounded challenge of climate change, but if you know anything about NSEA, you know that we strongly believe that every challenge is an even greater opportunity. Climate change is no exception.

This is an opportunity to engage with the community, including you and your family as you venture into your summer recreation and travel plans.

Ways to Engage

Every year, NSEA hosts the Nooksack River Stewards Program to engage residents and visitors of the Nooksack River and help them recognize human impacts to the river, specifically to the salmon that dwell in it throughout each season.

This summer, thanks to the generous support of the Whatcom Community Foundation, a variety of free, fun, family-friendly, educational and outreach programs will be offered throughout the watershed, bringing to light the challenges and opportunities faced by salmon and our community.

Join NSEA in salmon recovery efforts this summer: Explore the Nooksack River on a guided river walk, discover the history of human presence along the Nooksack River around a campfire, take action at a community work party, witness the unmatched beauty of the biennial return of pink salmon along Thompson Creek, or connect with The Confluence Fly Shop, DRYFT, Fourth Corner Fly Fishers, Recreation Northwest and Wild Whatcom at our annual Fishtival!


However you choose to participate, challenge yourself to find the opportunities in the trials that our fishy friends face this season by stewarding this cherished land and watershed we call home.



Locals observe the biennial pink salmon returns at NSEA's Salmon Sighting event along Thompson Creek in 2017.



Intern, Taylor Pearson, teaches Wild & Scenic Rafting group about the Nooksack spring Chinook and their journey from birth to death.

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FISH TALES

Fish Tales is a biannual newsletter of the Nooksack Salmon Enhancement Association (NSEA).

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John Stockman

NSEA board meetings are open to the public. Meetings are scheduled for 6:30-8pm on the last Tuesday of each month and are held at NSEA.

NSEA Staff:

Molly Adshead, *Habitat Restoration Technician*

Eli Dewitt, *Project Coordinator*

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Darrell Gray, *Project Manager*

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Nathan Zabel, *Education Program Coordinator*

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Sarah Brown, *Environmental Stewardship Coordinator*

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From the Director:

Reflecting on Our Work Leaves Me Full of Hope

Last weekend, I spent some time with an old friend who worked here before she moved away. She asked me what is new at NSEA. I paused, because while our mission to help salmon has remained steadfast, time flies and there are so many things that are new and exciting. This work gives me reasons to be hopeful, and gives me hope for our future.

This spring, hundreds of thousands of juvenile salmon are emerging from redds in restored sections of streams and heading to areas of deeper water or estuaries. I hope they have a safe and productive journey and that they return to their natal stream full of marine nutrients in a few years.

NSEA's restoration team is gearing up for another exciting instream season (10 projects are currently on the calendar). These projects will take place during the late summer and early fall, so the adult salmon coming back to spawn will have higher success.

This past year, we have been able to increase riparian restoration with more plants planted and better maintenance thanks to two new crew members joining our team last year. This spring, hundreds of fourth-grade students spent a day at a local

creek studying the site and analyzing the quality of the habitat for salmon, and then completed a restoration project to leave it better than they found it. I hope they keep what they have learned close to them as they grow into the leaders of our future.

The community work party season has wrapped up, and we owe a great deal of thanks to the hundreds of volunteers who donated their spare time to plant thousands of trees. The crew will be out all summer maintaining those trees to help ensure high survival rates. I hope that the rains come when the trees need them to and that those trees will grow to provide shade to keep the creeks cool and the water clear.

We continue to be incredibly grateful to our community for supporting this important work and for this amazing facility from which to work. More funding and more space means more room for people, and we are glad to have added two additional program staff in May. The results from this staffing change will mean more students, more community volunteers and more opportunities to learn about salmon and do something to help them. I hope that this amazing team of dedicated people



Rachel Vasak and her son at a community work party planting trees.

thrives as we grow and change together.

As summer approaches, we know we'll be saying some difficult goodbyes: Four full-time AmeriCorps members, five Washington Service Corps crew members and more than 40 college interns will be taking what they have learned this past year at NSEA out into the world. I hope that they will use the knowledge, skills and abilities that they got from their time here to make our world a better place.

While there are many things that are new and exciting in our work, NSEA's mission to help salmon has remained steadfast. Thank you for your commitment to NSEA and salmon recovery. This work gives me hope for our future.

— Rachel Vasak
NSEA Executive Director

Meet the New Board Members



Asa Kelly in La Push, WA.

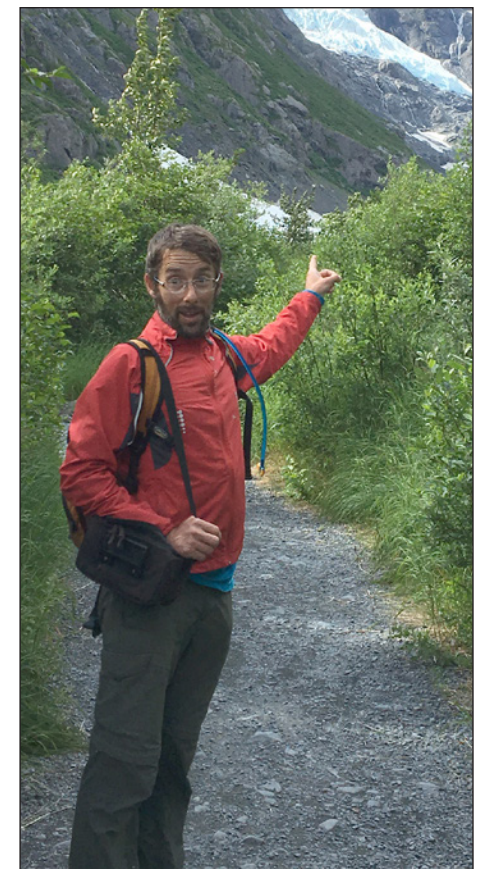
Asa Kelly, Operations Manager

Salmon are an important part of the history, culture and ecology that makes Whatcom County so uniquely wonderful. NSEA's mission to promote healthy salmon populations is a critical way we can preserve that wonder for future generations.

I'm grateful for the opportunity to do my part with a community of people who feel the same.

John Stockman, Teacher

I have enjoyed working with a diversity of people from around the county at NSEA work parties because, at the end of the day, we can see all the work we have accomplished together. NSEA brings people together to work toward a common goal of improving habitat for our iconic salmon. Simply put: Hard work, done well, feels good. There is a lot more to do for salmon, and I am grateful for the opportunity to do my part.



John Stockman enjoying the view.

NSEA's Newest Team Members



Noah Hanks

Noah Hanks, Stewardship Program Coordinator

Noah graduated Western Washington University with a degree in Environmental studies and a minor in Geography. Growing up on Fox Island, allowed him to have

a classroom and playfield right outside his door, and this is where Noah's passion for salmon conservation began. During his days off, Noah can be found riding his mountain bike on Galbraith Mountain, fishing one of our amazing local waterways, or simply adventuring around Bellingham. Noah is ecstatic about being a part of NSEA's amazing family and looks forward to giving back to the community that has shaped his passion for the environment.

Nathan Zabel, Education Program Coordinator

Nathan grew up among the hardwood forests and abundant lakes of Minnesota, and received a Bachelor's of Science in Environmental Education from the University of Wisconsin – Stevens Point. However, as John Muir said, "The moun-



Nathan Zabel

tains are calling" and he needed to go, so moved to Washington where he fell in love with the mountains, beaches, forests, rivers and lakes which provide him with an abundance of recreation activities. When he isn't working with NSEA to educate people about the importance of healthy salmon populations and habitats, he enjoys spending time with his dogs hiking, camping, backpacking and kayaking.

Proposed Puget Sound Steelhead Recovery Plan



By Dr. Dave Beatty,
Retired NSEA Board President

I wrote a "Salmon Science" article, "Puget Sound Steelhead," for NSEA's Fish Tales Vol. 24, Issue 3 Summer 2016, <https://tinyurl.com/yyxq53oe>.

The article included information on the early development of the Puget Sound Steelhead Recovery Plan. The National Marine Fisheries Service (NMFS within NOAA Fisheries) was responsible for producing this recovery plan because Puget Sound steelhead, the anadromous form of the coastal rainbow trout, *Oncorhynchus mykiss irideus*, was listed in the Federal Registry on May 11, 2007 as threatened under the United States Endangered Species Act (ESA), <https://tinyurl.com/y2nvzcyz>.

This listing applies to the Distinct Population Segment (DPS) of wild, anadromous steelhead originating from rivers entering Puget Sound; from the Elwha River eastward to Puget Sound; and from rivers entering Hood Canal. Subsequently, NMFS prepared the "Federal Recovery Outline for the Puget Sound Steelhead Distinct Population Segment (PSSDPS)," <http://tinyurl.com/zrbg6dz>.

On February 24, 2016, the Federal Registry issued NOAA's (Department of Commerce) final ruling designating critical habitat for the PSSDPS, <https://tinyurl.com/y2wxy4cm>.

Under the ESA, the PSSDPS is a "group of steelhead that is discrete from other groups of the same species and that represents an important component of the evolutionary legacy of the species." Within the policy for listing a DPS as threatened or endangered, the important criteria for ESA listing are a) discreteness (marked separation from other DPSs); b) significance

(uniqueness compared to other DPSs of the same species); and c) status (extent of threat factors).

Major Population Group and Demographically Independent Population: Within the PSSDPS, there are three Major Population Groups (MPGs); 1) Northern Cascades (South Salish Sea); 2) Central and South Puget Sound; and 3) Hood Canal and Strait of Juan de Fuca. There are 32 Demographically Independent Populations (DIPs) of which 16 are in the Northern Cascades MPG and 8 in each of the other two MPGs. Although the historical abundance of the PSSDPS is not known precisely, the current abundance is likely 10 percent of the historical abundance and productivity continues to decline. Some DIPs are likely nearing extinction and these are clearly endangered even though within the MPG's threatened status.

Decreasing Abundance and Productivity: The decreases began at least 80-100 years ago due to a) deterioration of freshwater habitat for spawning and juvenile rearing; before smolting, juvenile steelhead have perhaps the longest residence (up to three years) in freshwater of any anadromous salmonid; b) reduced early marine survival of smolts relating to changing features of the ocean affecting growth and survival; c) effects of hatchery supplementation; and d) the features of a DIP's life cycle: there are stream maturing summer run steelhead that spend several months in freshwater before spawning in early to late winter and ocean maturing winter run steelhead that spawn within a few months of entering freshwater.

Habitat: Throughout the period of declining steelhead populations, habitat deterioration has occurred through land use practices that can be broadly assigned to forestry, agriculture, and urbanization, together with an increasing rural human population supporting an increased industrial and commercial base. Additionally, and interrelated, are fish passage barriers at dams and on state, county, and city roads and on private land; surface and ground water withdrawal determining whether there is sufficient stream flow for fish; loss of riparian buffers and the effect on stream temperatures; stream channel modifications including levees that isolate side channels important to juvenile fish; and the reduction of large wood structures within a channel. More recently, the elephant in the room is climate change and all it portends for the future.

Early Marine Survival: The decreased early marine survival of steelhead smolts is of more recent recognition. Depending on the location in one of the MPGs,

70-95% of the out migrating smolts do not survive to reach the open ocean. This amount of mortality cannot be sustained if the PSSDPS is to recover. The Salish Sea Marine Survival Project is supported by over 60 international organizations, coordinated by Long Live the Kings (US) and the Pacific Salmon Foundation (Canada), to study why juvenile salmonid survival has declined so extensively, <https://marine-survivalproject.com/the-project/why/>.

Hatcheries: A significant history of Puget Sound steelhead is the release of hatchery origin juveniles from two hatchery stocks into Puget Sound streams outside the watershed of origin. These are the Chambers Creek (south Puget Sound tributary) winter run stock (releases begun by WDFW in the 1970s or before) and the WDFW Skamania Hatchery (West Fork Washougal River, lower Columbia River) summer run stock (a mixed Columbia Riverstock). The release of the Chambers Creek origin steelhead from WDFW hatcheries has essentially ended and the release of Skamania Hatchery origin steelhead into the Stillaguamish River ends in 2019 and begins to phase out in the Skykomish River in 2020.

Harvest: In Washington, steelhead (the state fish) is a game fish and thus is not subject to commercial harvest (it is farm raised for marketing), unlike commercial harvest of Pacific salmon species (food fish). Allowed harvest of the PSSDPS will be managed to "protect genetic and life history diversity" consistent with the Viable Salmonid Population Criteria.

What is required for Recovery of the PSSDPS? All three MPGs must be viable and specific DIPs in each MPG must be viable and, for a MPG, 50% of

the DIPs must achieve viability. For the North Cascade MPG, 8 of the 16 DIPs must be viable; of these, 5 of 11 winter run or summer/winter run DIPs and 3 of 5 summer run DIPs must be viable.

What does NMFS require for a population to be viable? The four Viability Criteria are 1) Abundance (number of fish, normally as adults); 2) Productivity (long-term population growth rate) 3) Spatial Structure (substantial distribution of individuals among spawning and rearing areas and the extent of the areas connectivity); and 4) Diversity (significant phenotypic and genotypic variation among individuals within a DIP or considering the DPS as a whole).

What does the PSSDPS's recovery mean for Water Resource Inventory Area 1 (WRIA 1)? The Puget Sound Steelhead Recovery Plan requires recovery of the Nooksack River winter run DIP and the South Fork Nooksack summer run DIP. The WRIA 1 Salmonid Recovery Plan was established in 2005 before the 2007 ESA listing of the PSSDPS as threatened and it was centered on Chinook, especially early run fish. WRIA 1 must develop a local recovery plan consistent with the Puget Sound Steelhead Recovery Plan in a bottom up process once the latter is finalized. WRIA 1's recovery plan must be compatible with the other recovery plan chapters within the three MPGs. The challenges we face for the recovery of both Puget Sound Chinook and steelhead are obvious and formidable. The consequences of not meeting them increase with each year of missed opportunity.

Any opinions expressed in this article are those of the author and not necessarily those of NSEA.





FAIRHAVEN WINTER FEST BALL

A BENEFIT FOR SALMON AND ORCA WHALE RECOVERY

SATURDAY, DECEMBER 7TH 7-10PM

Winterfest



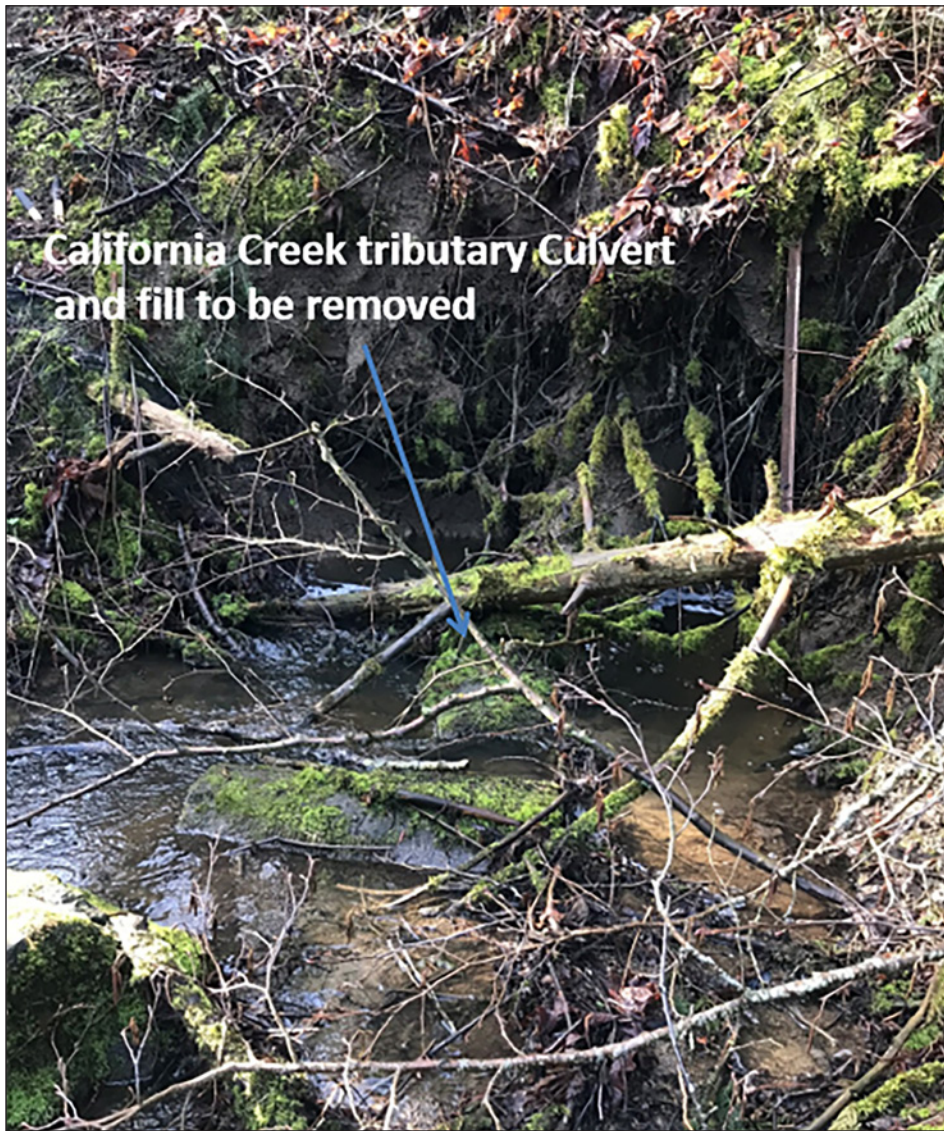
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Partnerships Key to Making Habitat Restoration Projects a Reality



California Creek tributary Culvert and fill to be removed

**By Darrell Gray,
Project Manager**

For the past eight years, the Whatcom Public Utility District has generously donated to NSEA to assist with its salmon habitat restoration projects throughout Whatcom County.

This year, NSEA will focus PUD funds in the California Creek and Dakota Creek watersheds. Both creeks flow into Drayton Harbor in Blaine, WA, and support coho salmon and ESA-listed steelhead, as well as resident trout. Over the last 20 years, NSEA has completed numerous projects in the Dakota Creek watershed, but less so in

the California Creek watershed.

In the spring, the PUD generously hosted meetings among stakeholders in these watersheds. At the meetings, NSEA staff was fortunate to make some new contacts and re-establish some old ones.

NSEA is currently working with Drainage Improvement District #7 to restore fish passage to a tributary of California Creek and potentially move a section of California Creek out of a roadside ditch. NSEA also has plans to assist the Grandview Business Park in improving fish habitat within its properties.

In addition, NSEA recently returned

to a joint project from 2006 with the Delta Tech Business Park and Whatcom Conservation District on California Creek to remove or expand beaver protectors, as the trees are doing well.

This winter, NSEA worked with the Whatcom Land Trust on a new property the Trust acquired at the confluence of California Creek and Drayton Harbor to complete a 3-acre riparian restoration project, with plans to return this summer to place large woody debris to improve estuary habitat.

Currently, NSEA is surveying several culverts in the Dakota Creek watershed for potential fish passage barrier removal proj-

ects and plans to work with the Drayton Harbor Watershed Improvement District to identify other habitat restoration opportunities.

Partnerships are what make most of NSEA projects happen. NSEA is grateful to work with the above entities and gives a special thanks to Steve Jilk and his staff at the Whatcom PUD, Rick Metzger at Drainage Improvement District #7, Jennifer Mackey at the Whatcom Land Trust, Joel Ingram with Washington Department of Fish and Wildlife and the many landowners who have allowed NSEA to access their properties to scope out new restoration opportunities.



NSEA 2019 Instream Projects

CREEK	PROJECT	Project Length (ft)	# of LWD structures to be installed	Improved access of upstream habitat (miles)
Bertrand	LWD Placement	350	6	
California	LWD placement	400	5	
California	Remove barrier culvert	100		0.5
Dakota	LWD placement	500	5	
Dakota	Remove barrier culvert	100		0.3
Double Ditch	Replace barrier culvert with 35'x16' bridge	60		6.2
Fishtrap	LWD Placement	150	3	
Goodwin	LWD placement	300	6	
Goodwin	Channel realignment, LWD placement	200	3	0.6
Johnson	Replace barrier culvert with 45'x14' bridge	80		4
McClellan	Replace barrier culvert with 40'x14' bridge	80		3.2
Nooksack Trib	Replace barrier culvert with 25' x 14' bridge	60		0.6
Squalicum	LWD placement	900	8	
Tenmile	Channel relocation and LWD placement	1,800	12	
	Total	5,080	48	15.4

Hammerin' for Salmon: Winter Construction Projects at NSEA

**By Drew Falabella,
WCC Crewmember**

During midwinter, Washington Conservation Corps (WCC) and NSEA restoration crews can be faced with frozen ground and unsafe conditions at restoration sites.

When we can't put plants in the ground, crews turn their attention to ways we can improve the NSEA campus. Everything from landscaping to campus renovation is on the list, but some of the most exciting winter projects involve the construction of something new to further NSEA's mission.

Innovative Thinking

In the winter of 2017, the WCC crew constructed a mobile potting shed for the 2018 nursery restock season. Using an old tow trailer chassis, the crew created a tower to fill with soil and a tarped basin where soil can be collected for potting. The galvanized roof keeps the soil (and working volunteers) dry during inclement weather.

Overall, the shed helps make potting more efficient, while keeping space for conversation just like potting at a table.

Also this winter, the two crews collaborated to build new equipment for NSEA projects. Storage of leftover pots has been an ongoing challenge at NSEA for some time, so the crews aimed to solve it by constructing mobile pot-holder pallets to keep them organized.

These were built using reclaimed wood pallets as the base, with a custom plywood fence ringing the edge and a strategic low crossbar on one side to allow access to the contents. Easily able to contain 1,000 pots each, they are quickly movable with the NSEA tractor's forklift attachment when completely full, or team-lifted when partially full. Since pot stacks fit vertically in the pot-holders, they also act as a more visually pleasing and space-saving element on campus.

The most recently completed project is an equipment rack for the RTV dubbed the Red Baron, so named for its resemblance to the top wing of an old biplane. Designed to reduce the number of trips required to carry plants to a site, it has proven even more useful than first imagined. When fully stacked, the RTV with the

Red Baron can carry nearly 300 1-gallon potted plants, greatly streamlining work.

It has since carried rolls of deer exclu-

sion fence and seven foot bamboo stakes.

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The new mobile pot-holder pallets make storage a breeze.

Teachers Learn How to Show Students ‘Every Day Is Earth Day’

By Abby Sussman,
School Day Programs Coordinator
at North Cascades Institute

Officially, we celebrated our planet on April 22, and many of us took part in a variety of celebrations, work parties and other gatherings intended to reignite our commitment to protecting the natural systems upon which we all depend.

For many, these events are a fun and meaningful way to introduce children to environmental advocacy. But as that trite phrase suggests, the real work needs to happen every day, not just one day in April.

Before Jay Inslee became the “Climate Change Presidential Candidate,” he guided our state legislature to earmark \$4 million to provide climate science education to our children at every grade level. The proviso funds are intended to support teachers by providing professional development in climate science and Next Generation Science Standards.

To that end, with funding from the Office of Superintendent of Public Instruction, six local independent community-based organizations (Common Threads, Gardens of the Salish Sea Curriculum, Nooksack Salmon Enhancement Association, North Cascades Institute, ReSources Sustainable Schools Program and Wild Whatcom) came together to provide a four-part teacher training series.

Beyond the Classroom

Through this collaboration, almost 50 K-12 teachers in Whatcom and Skagit counties have been empowered to take their students outside, introduced to

grade-appropriate lessons focused on climate science and supported as they dive into the new Next Generation Science Standards.

The goal of this training series is to give teachers knowledge and tools so they are confident in extending their teaching beyond the walls of the classroom, without having to outsource naturalist “experts.” Hands-on outdoor lessons incorporating environmental stewardship don’t have to be left to a special class field trip – it can be done nearly anywhere, in any season, with any group of students.

Sabrina Hauck, a kindergarten teacher from Skyline Elementary in Ferndale, has already implemented some of her newfound skills by taking her students on a nature walk to discover the difference between living and non-living things.

Third-grade teacher Shannon Wanlin balked at the idea that elementary is too young to teach about climate science. “Climate science is important to teach young kids,” she said. “These changes will impact their lives directly. A third-grader can change the habits of people in their family even by just reminding them to turn off the faucet.”

Local Examples

During two classroom sessions and two field day sessions, teachers rediscovered their inner-student through active lessons focusing on specific, local examples on the ways climate change is impacting our planet and how we are able to help reduce the consequences.

Whether playing a game of tag that



Teachers rediscovered their inner-student through active lessons focusing on specific, local examples of the ways climate change is impacting the planet.

models the obstacles that shellfish might experience due to ocean acidification, forming a human snowflake, designing a model to illustrate how greenhouse gases trap heat, or engineering and building a watershed to explore conservation and mitigation techniques, teachers come away from the training series with specific lessons to use, as well as the tools to create their own.

All of these organizations bring experience in presenting diverse and proven programming to students in our region: garden education with Common Threads, neighborhood adventures with Wild Whatcom, salmon education and restoration with Nooksack Salmon Enhancement Association, water stewards program with ReSources Sustainable Schools, intertidal biomes with Gardens of the Salish Sea

Curriculum and mountain, snow and forest ecology with North Cascades Institute.

Many Whatcom and Skagit county schools have relied on the strengths of these organizations to introduce kids to ecological concepts and natural systems. This collaborative effort will further bolster teachers as they expand their skill set into place-based education, multiplying the opportunities for students to intuitively understand and sense their responsibility for the natural world around them.

As a community, we can go further than “Every day is Earth Day” and make every teacher an outdoor educator, every school a place for environmental education and every student a steward of our planet.

This article was previously featured in Cascadia Weekly.



Thank You, Kendra Krantz – Good Luck in Graduate School!



By Annitra Peck,
Program Director

NSEA is small – but mighty. While our community of supporters is in the thousands, we only have ten full-time staff positions.

One key individual has been courageously leading NSEA’s community programming for the past three years, often the first person in and last to clock out. This special individual continuously brings the most exuberant, energetic and positively dynamic perspective to her work each and every day.

It is with great respect that we highlight and honor Kendra Krantz, and at the same time with heavy hearts, say goodbye to one of the best staff members NSEA will ever likely see.

She has worked over the years to refine our internal systems to meet professional standards, set record-breaking commu-



Kendra during a Students for Salmon program Field Trip teaching young scientists about macroinvertebrates.

nity engagement metrics for the Nooksack River Stewards Program, piloted NSEA’s first phenology citizen science project, connected NSEA with new and exciting strategic partners, created (and tested) NSEA’s first climate science lesson plans and wrote grants to increase our capacity.

Kendra started her journey with NSEA as an intern. After fulfilling a term of service with Washington Conservation Corps at North Olympic Salmon Coalition, another Regional Fisheries Enhancement Group in Washington, she returned

to NSEA bringing her passion as a full-time staff member in 2016.

This extraordinary member of our team has tirelessly strived to connect with our community by creating a powerful salmon stewardship staff-force as her legacy.

Kendra is leaving NSEA to pursue graduate school in Oregon, following her love of education. We are thrilled to support the “spawn” of a new era for her, as Kendra will continue to serve students by becoming a formal teacher. While this



Kendra Krantz cheering on a volunteer at the Terrell Creek Work Party.

article is just a small nod to her good work here at NSEA, we want the world to know that she has truly changed our lives forever.

Kendra Krantz, thank you for bringing your talent and contagiously sweet and fishy-self to NSEA. You deserve every opportunity you desire, and so much more.

You are the best – because you brought out the best in us.



Thank You Very Mulch!



Sammy the Salmon encourages volunteers during the bucket brigade at the Earth Day work party.

By Sarah Brown and Raena Anderson, Environmental Stewardship Coordinators

As a critical component of the Pacific Northwest, salmon support over 137 different species in marine, freshwater and terrestrial ecosystems. However, due to human-caused climate change, pollution and habitat degradation, salmon need our help. Community work parties are a way for individuals to work together toward a common goal – salmon recovery. With the support of American Forests, ALCOA, Andeavor, BP, ERM and the National Fish and Wildlife Foundation, NSEA has hosted 18 community work parties since last fall. Nearly 1,500 volunteers dedicated over 4,400 hours to planting 5,097 native trees and shrubs and removing about 8,500 pounds of invasive vegetation. This work improved 1.5 miles of critical streamside salmon habitat, empowering and educating neighbors to be stewards to their environment and creating a resilient community. As more people learn about the needs of the ecosystems around them, the more they will understand the urgency for action, whether in the small choices made every day or the choice to attend events like NSEA work parties. NSEA

strives to demonstrate these needs, especially during a time of global awareness, like Earth Day.

On April 20, 176 members of our community celebrated Earth Day through the action of restoring streamside habitat along Tenmile Creek with NSEA, Whatcom Land Trust, Tenmile Clean Water Project, and Sammy the Salmon! From digging holes to bucket brigades, volunteers worked together to plant and mulch more than 500 native trees and shrubs, improving water quality for salmon. Local businesses also came together to support the restoration efforts: Gato Verde Sailing donated a raffle prize, The Bagelry, Community Food Co-op and Tony's Coffee provided food and refreshments, and Yeager's Sporting Goods, Haggen, ERM, Gear Aid and Natural Systems Design ensured everyone was dressed for the occasion with Earth Day t-shirts. The dedication, enthusiasm and support everyone brought to Earth Day is a reminder for all of us to act now in creating a better environment for people and fish. Keep in mind, Earth Day does not have to end in the spring! Salmon and their habitats are essential to the region and will continue to rely on this community to protect them.

Less Precipitation Prompts Watering New Plants

By Darrell Gray, Project Manager

In the past, NSEA rarely had to water new riparian plantings. However, in 2017 and 2018, Whatcom County experienced exceptionally dry spring and summer seasons, and we chose to water several sites in the summer months.

This year, with a relatively dry winter and spring combined with a projected dry summer, NSEA has already started to water sites until there is some appreciable rainfall.

NSEA is also altering its plant selection for some sites to species that are more drought resistant and discussing the use of other native plants that are more tolerable to drought conditions.



Devin Soliday watering plants early in the season.



Volunteers plant a native shrub along Squalicum Creek at the Bay to Baker work party.

People from all over Whatcom County can attend NSEA events and join our family to initiate widespread positive change.

Work parties are driven by this community in many ways: the difference one person makes; neighbors collaborating; the dedication and enthusiasm for restoring salmon habitat; and creating a sense of belonging for all types of people. Everyone has a role in building a more resilient environment and community, whether you are an AmeriCorps member coordinating the events, a Stream Steward intern leading volunteers, or a community member willing to get dirty to plant a tree, work parties are a success because of volunteers like you.

Positive change cannot happen without all of us, individuals and local organizations, acting now to give selflessly and work together to make our little corner of the world a better place.

To everyone in our community, thank you very mulch.



A volunteer removes invasive Himalayan blackberry along Connelly Creek at a community work party.

Nooksack Salmon Enhancement Association
Nooksack River Stewards

2019 Community Events

For more information, visit the Nooksack River Stewards Information Booth every weekend July - September located at the Glacier Public Service Center in Glacier, WA, visit www.n-sea.org, or call (360) 715-0283.

Fun, free, family-friendly events!

Nooksack River Walk at Horseshoe Bend Trailhead, HWY 542, Glacier, WA
 3 pm - 4 pm every Saturday from June 22 - September 21
 11 am - 12 pm on June 30, July 7, August 4, September 1
 Join NSEA naturalists during a 60-minute guided trail walk along the Nooksack River to learn about local salmon species and their habitat!



Salmon Campfire Stories at Chair 9, HWY 542, Glacier, WA
 6 pm - 8 pm on June 29 & August 10 (National S'mores Day!)
 Join us for a night of salmon stories and s'mores around the campfire.

Community Work Party removing invasives along Bell Creek
 10 am - 1 pm on July 13, with Whatcom Land Trust
 Parking is limited, call (360) 715-0283 to RSVP and join a carpool.

Nooksack History & S'more at Chair 9, HWY 542, Glacier, WA
 7 pm - 8 pm on July 27
 Learn the history of the Nooksack River while enjoying a s'more around the campfire.

Fishtival at Nugents Corner, HWY 542, Deming, WA
 10 am - 2 pm on August 24
 Come celebrate the wonderful world of fish and Nooksack River recreation. Whether you're a seasoned water recreator, or just starting out, there is something for everyone! Cast a fly rod, learn about boating opportunities, tie a fly, or take a guided river walk.

Salmon Sighting at Thompson Creek Bridge, Glacier, WA
 10 am - 12 pm on August 31 & September 7, 14 & 21
 Celebrate the biennial return of Pacific pink salmon by joining NSEA naturalists along Thompson Creek. Light refreshments, activities and prizes provided. Please leave dogs at home.


Program supported thanks to:
 Whatcom Community Foundation

“What lies behind us and what lies before us are tiny matters compared to what lies within us.”

—RALPH WALDO EMERSON—

Partner Spotlight: Whatcom Land Trust

By Lorraine Wilde, Wilde World Communications



The Skookum Creek Conservation Corridor acquisition will permanently protect 1,400 acres of riparian forest and uplands.

Tell our readers about the Whatcom Land Trust.

Since 1984, Whatcom Land Trust has preserved more than 24,000 acres of land through more than 150 transactions in every corner of Whatcom County – from simple donations of conservation easements to complex public-private partnerships to acquire land for wildlife habitat, parks and farmland.

We're proud to be involved with more than 14 Whatcom County Parks, as well as recent efforts that have protected Galbraith Mountain, Governors Point and Skookum Creek Corridor.

The Trust is committed to the preservation, protection and stewardship of the natural and cultural heritage and assets that have inspired people to make Whatcom County home. Preserving the natural features that provide the quality of life we cherish – exceptional food, water, recreation and livelihood – requires active choices and enduring resolve.

With the help of volunteers, landowners, donors and partners, the Trust has ensured that Whatcom County's unique legacy remains for future generations.

In what ways does Whatcom Land Trust work cooperatively with NSEA?

The Trust has been honored to partner with NSEA on multiple community work parties. Together, we help coordinate

volunteers, materials and equipment that get the hard work of streamside habitat restoration accomplished on Whatcom Land Trust properties and the public parks that the Trust has helped establish and steward.

We look forward to working with NSEA on many more work parties, as well as the continued habitat improvement in Whatcom County watersheds.

Why does the Whatcom Land Trust value a connection with NSEA?

Quoting Helen Keller, “Alone we can do so little. Together we can do so much.” Our shared mission to engage our community in education, conservation and stewardship of this land and water we love makes our partnership with NSEA an excellent fit.

As we work together, both organizations can move closer to our goals of improving habitat for salmon and wildlife, educating the community and building an ethic of stewardship to ensure a healthy natural environment in Whatcom County for generations to come.

Learn more about the Trust at www.whatcomlandtrust.org.



Business Spotlight: Western Solar

By Trish Merriman, Marketing Coordinator



Western Solar Installers

Tell us about your business and your connection to the community here in Whatcom County?

Western Solar was founded in 2002 by retired Western Washington University ecology professor Jack Hardy. To date, we have installed more than 28,000 solar panels in western Washington. While the management baton has since been passed to two of the company's longest-standing employees, we continue to operate and live out of beautiful Bellingham.

We feel it is extremely important to give back to the communities we serve and, through the Western Solar Initiative, annually partner with a local nonprofit to raise awareness about its mission and donate the installation of a solar array to help offset its operating costs.

What does your business do to support NSEA?

In partnership with NSEA, Western Solar is currently running the Empowering NSEA campaign, which will culminate with the donation and installation of a solar electric system on NSEA's headquarters.

Through a series of free educational

talks, we're providing attendees with an overview of how solar works in the Pacific Northwest, how it can directly benefit them as a homeowner or business owner and the impact that solar can have on the operating budget of nonprofits, such as NSEA.

Generating 100 percent of NSEA's electricity needs with solar would provide it with an additional \$4,000 annually, which it could channel back into the work it does for salmon recovery.

Why do you feel it is important to support NSEA and salmon habitat restoration in Whatcom County?

When we are not working hard throughout Whatcom County installing solar, we are playing hard in the outdoors. Growing up in the Pacific Northwest goes hand-in-hand with having a close understanding of natural systems.

The work that NSEA does is critical in protecting the lush, diverse and wild ecosystems that we know and love. We appreciate NSEA's pragmatic approach to ecological restoration and are proud to be one of its many local supporters.



Thank You Washington Service Corps Team 2018-2019!

NSEA cannot begin to thank these extraordinary individuals enough. Each member served a minimum of 1,700 hours over the course of the past 10.5 months. Without their hard work and dedication, our work at NSEA would not be possible. NSEA's community programs are more robust, more energetic, more professional and infinitely stronger because of this powerful team. We are certain that these young professionals will create lasting impacts for watershed and fisheries conservation in their future. Swim BIG little fishes!

Megan Madamba, Zack Patteck, Sarah Brown, and Raena Anderson at Semiahmoo Bay for a program team retreat.

Hammerin' for Salmon: Winter Construction Projects at NSEA

Continued from page 4



The Red Baron.

with sizeable load of plants. As the site maintenance season hits full swing, it will be exciting to see new, creative uses for the Red Baron.

Increasing Capacity

While we have since returned to field work throughout Whatcom County, we continue to see the benefits of our construction projects time and time again.

Volunteer capacity at annual potting parties has increased thanks to the mobile shed, pot storage improvements have opened space for a walking trail on campus and we are finishing work at larger sites in

record time with the added hauling potential provided by the Red Baron.

Each year, a new improvement (or three) is ready for deployment with the field season. Winter may be a challenging time for field staff, but NSEA can rest assured that these restoration crews will find a way to support the mission of restoration, education and stewardship all year-round.

Drew Falabella is a 2018-19 Washington Conservation Corps crewmember with NSEA. He hasn't spent much time writing for NSEA yet, but he's always willing to give salmon puns the old college fry.



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NSEA's First Film Festival Was a Success

By Amy Johnson,
Advancement Manager

NSEA embarked on a new outreach and fundraising event this spring. We hosted the first Earth Day Wild & Scenic Film Festival at the Mount Baker Theatre. 325 people, 13 non-profits and 28 local businesses supported this inaugural event. The event was inspired by NSEA's belief statement, "We believe salmon are an essential part of our environment, culture and economy."

The Wild & Scenic Film Festival is a collection of films which speak to the environmental concerns and celebrations of our planet and is considered to be one of the premiere environmental film festivals in the country. NSEA chose 14 films to premiere that related to our belief statement.

The evening started in the Walton Theatre with outreach booths from some of our community partners to represent the culture of Whatcom County. Guests got to meet and learn about the non-profits we partner with to make salmon recovery possible. A big shout out to American Rivers, Bellingham Parks Volunteer Program, Bellingham Technical College, Common Threads, North Cascade Institute, ReSources, the Sierra Club: Mt. Baker Chapter, Washington Native Plant Society,

Whatcom Conservation District, Whatcom Land Trust, Washington Conservation Corps, and Wild Whatcom for being there. A special thanks to all the volunteers at Mount Baker Theatre. You were amazing and we could not have done it without you.

The economy of salmon was showcased by the local businesses and national sponsors of the film festival. Haggen and Natural Systems Designs were the two largest local sponsors that made this event a reality.

NSEA procured gift certificates and small retail items that were worked into five incredible raffle prizes valued at over \$450 a piece. Special Thanks to AB Crepes, Aslan Brewery, Bay to Baker Trading Company, Bellewood Farms, Carne Meats, Casa Que Pasa, Clif Bars,

Drayton Harbor Oysters, Gear Aid, Haggen, Hundred North, Klean Kanteen, LFS Inc., Northwest Yarns, ModSock, Old Town Café, Peak Design, Pepper Sisters, Pizzazza, San Juan Cruises, Still Life Massage & Float, Tony's Coffee Roasters, Vital Climbing Gym, Wander Brewing, Western Solar, Wild & Scenic River Tours, and Yeager's Sporting Goods.

"Ultimately, this event was a representation of how salmon connects us all," Amy, an NSEA staff member said. "It's exactly what we were going for and will be even better next year."



EMPOWERING
NSEA

UPCOMING FREE WORKSHOPS

Thursday, July 18th • 6:00-7:00pm
Wednesday, August 21st • 6:00-7:00pm
Thursday, October 3rd • 6:00-7:00pm

LEARN MORE & REGISTER AT
WWW.NSEA.SOLAR

NSEA Mission Statement

Nooksack Salmon Enhancement Association strives to recover salmon by engaging our community in restoration, education and stewardship.

NSEA is an independent nonprofit organization (501c3) and is one of fourteen Regional Fisheries Enhancement Groups (RFEs) in Washington State. Base funding for the RFE program comes from a grant from the U.S. Fish & Wildlife Service's *Partners for Fish and Wildlife Program*, a portion of state commercial and recreational fishing license fees, and excess egg and carcass sales administered by the Washington Department of Fish & Wildlife.

