

PENINSULA STREAMS & SHORELINES

NEWSLETTER DECEMBER 2023

*Streams
&
Peninsula Shorelines*
Since 2002

SONGHEES WALKWAY POCKET BEACH COMPLETE

A new shoreline restoration project in the heart of Victoria's Urban Naturehood is a hub of activity for people and nature!



LATEST UPDATES

- Letter from the Executive Director
- Stream Restoration
- BEACH Program
- Songhees Walkway
- Rain Gardens in Bloom
- Stewardship
- Environmental Education
- PSS Legacy Fund... and more!



Scan here for
more information
on our projects

FROM THE EXECUTIVE DIRECTOR

It has been an exciting seven months since stepping into the role of Executive Director back in June. Ian Bruce remains with the organization as a Senior Biologist and has been a critical support during this transition. Our incredible staff, volunteer Board of Directors, and our entire PSS community have also risen to the occasion. These efforts ensured that we not only had a smooth transition but like the oaks, had a 'mast' season surpassing many benchmarks.

This newsletter highlights just some of the many accomplishments you have supported over this past fall, summer, and year. Looking forward to 2024, we will continue our efforts in Strategic Planning with a session early in the new year. We remain ambitious in our restoration project pipeline and, with some program building over the past few months, we look to hit the ground running with engaging environmental education and stewardship initiatives.

Thank you for your commitment to the Peninsula Streams Society, our streams and shorelines, and our communities.

From Headwaters to Deepwaters,
Kyle Armstrong, Executive Director

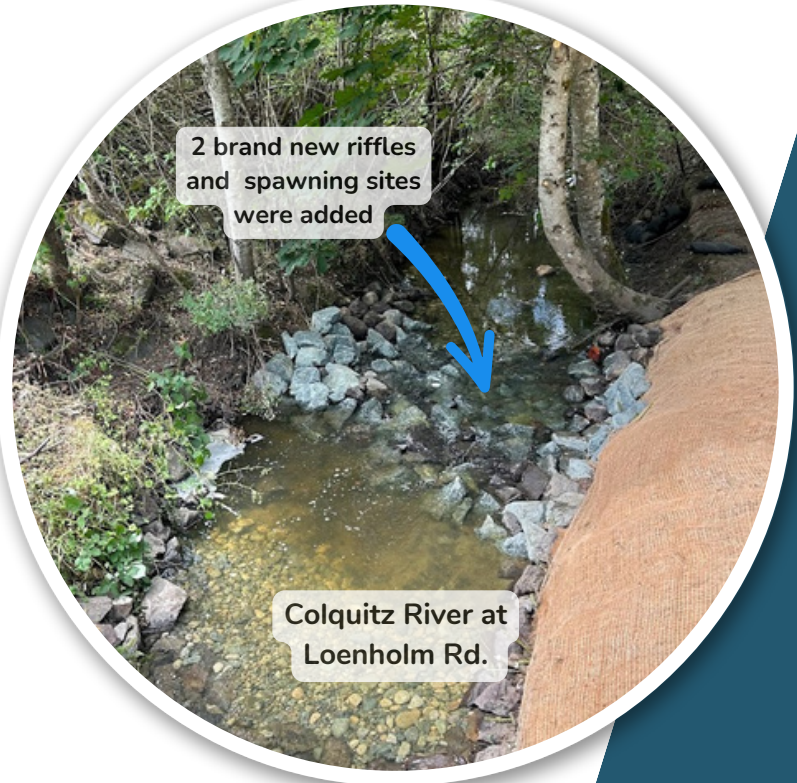


WHAT'S HAPPENING IN OUR STREAMS?

COLQUITZ RIVER RESTORATION

Summer 2023 restoration work involved restoring 4 sites within the Colquitz Watershed for a total of almost 400 m of improved salmon habitat. In partnership with the District of Saanich, we built multiple riffles that help oxygenate the water, added appropriately sized spawning gravel for coho and cutthroat trout as well as improved instream cover through boulder and wood additions. All of this work has not only resulted in habitat that is functioning as it should, but also look and sound beautiful.

The assessment that was completed in late May resulted in essentially a “shopping list” of potential sections of the Colquitz that need restoration. We will be working off of this list well into the future!



SWAN CREEK RESTORATION

One of the larger projects we worked on this past summer within the Colquitz Watershed was a 300 m long reach within Swan Creek, which is one of the main tributaries flowing into the Colquitz. Swan Creek usually gets a good number of coho salmon spawning each Fall, despite it being highly impacted from human activities.

The work was done in partnership with Saanich Parks staff as well as volunteers from the Friends of Swan Creek. 6 riffles were either newly built or enhanced, over 10 yards of spawning gravel was added, as well as habitat boulders and brush bundles were added to increase overall complexity. Despite an overall poor spawning season, we saw coho using the newly built spawning beds in Swan Creek!



CENTRAL SAANICH STREAM RESTORATION

MÁWUEĆ RESTORATION

This is a partnership restoration project by Tsartlip First Nations and PSS. The plan is to restore the floodplain, riparian, and in-stream habitats in the historically dredged, logged, and diverted channel of Hagan Creek within Máwueć (a large farm property near the outlet of Hagan that is owned by Tsartlip). Hagan Creek is home to what is believed to be a genetically isolated strain of Coastal Cutthroat Trout. Typical of streams in most urban and agricultural regions, Hagan Creek within Máwueć lacks structural habitat features that support the spawning and rearing of salmonids.

Work completed in 2023 included restoring 50 m of a tributary flowing into Hagan Creek by adding much-needed spawning gravel, instream cover through boulder additions, and removing invasive species. Next summer will be a larger project and will include restoring the floodplain, and mainstem and will look at recreating a natural wetland habitat.

TETAYUT CREEK RESTORATION

Back in September, PSS staff and volunteers were hard at work performing some instream restoration work on Tetayut Creek within the Saanich Historical Artifacts Society property. This work included rebuilding two riffle structures and removing a problem stump from the creek that was resulting in excessive erosion. Rock was added to reseal and restructure the riffles, rock was also added after stump removal to provide habitat complexity and reduce the excessive erosion. Lots of appropriately sized alluvial gravel was added to increase the available salmonid spawning habitat within this productive creek. A huge thank you to the volunteers who came and helped us with this important work!



Volunteers rebuilding trout habitat by adding gravel and boulders



Newly restored tributary flowing nicely at Máwueć



Freshwater Fisheries
Society of BC



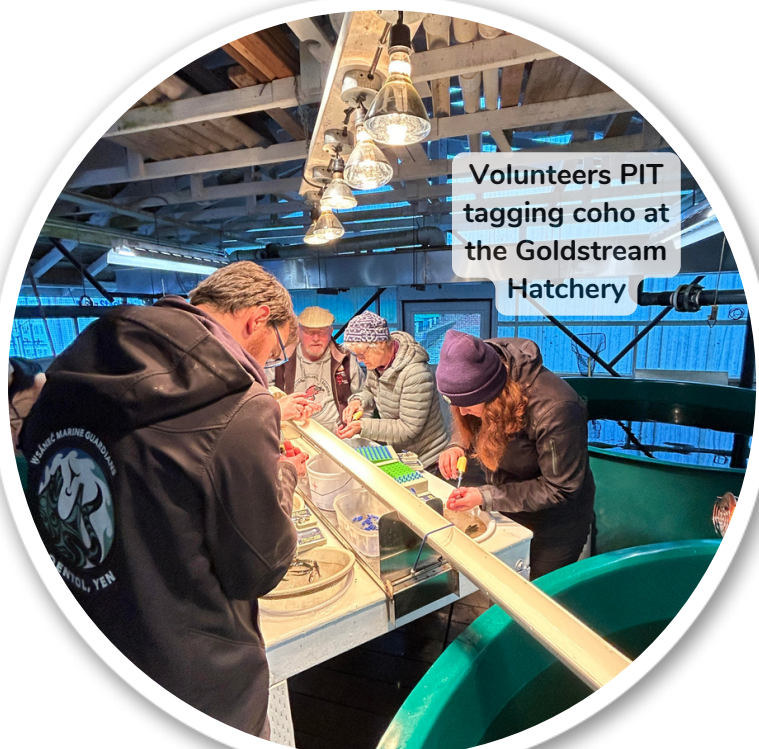
PACIFIC SALMON
FOUNDATION

MILLSTREAM WATERSHED

FISH TRACKING SYSTEM - PIT TAGGING

Over the last 2 years, PSS and Goldstream Hatchery volunteers have released over 4000 coho fry that have had PIT tags (Passive Integrated Transponders) into Millstream. An electronic array, installed in late May, detects the tagged fish as they swim by and records the unique tag ID and date. The information collected from the array will help us to understand the migration patterns, timings, and survivability of both coho and cutthroat.

We hope to expand this program into other watersheds, including the Colquitz and Craigflower. We then hope to get a better understanding of how salmonids are moving between systems.



CEDAR VALE PARK RESTORATION

Cedar Vale Park, located in Langford, just below the Highway 1 is a beautiful spot for a walk next to Millstream, but it also has the potential to provide high-quality fish habitat. It has, however, undergone significant alteration due to development and intense flooding. There is a noticeable lack of rock, both spawning gravel and instream cover, as well as large woody debris.

Working with volunteers from the dedicated Friends of Millstream Watershed, we moved (by hand!) massive piles of gravel and river rock into the stream, building a large riffle that will help oxygenate the water, as well as providing a home for invertebrates (ie. fish food!).

We hope to continue this work next year and hopefully will see spawning salmon in this reach sometime in the future!



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BEACH PROGRAM UPDATES

COMMUNITY SCIENTIST FORAGE FISH SURVEYS

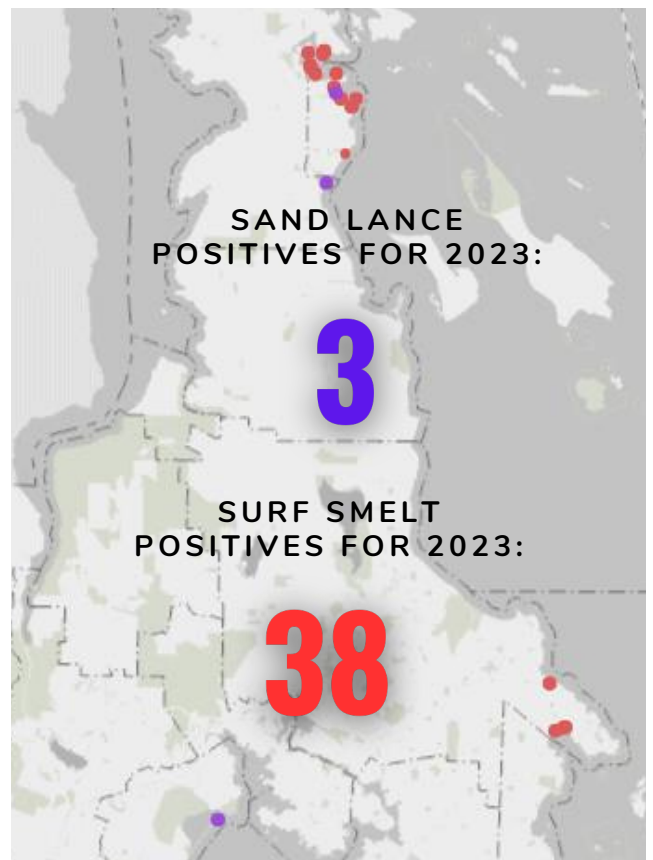
Our dedicated BEACH volunteers are stewards of our local forage fish beach spawning habitat, accumulating 1750 hours this year. Since September, when we reinvigorate our survey efforts, we have collected 60 samples with 10 positives for surf smelt. There were 6 citizen scientist training sessions in November. Additionally, Songhees Nation staff were trained to sample within their territory. From June 2018 until the present, ~1000 samples and counting have been collected from 162 sample sites with 205 positives. A huge thank you to our volunteers and generous funders!

COASTAL FORAGE FISH NETWORK

The Coastal Forage Fish Network (CFFN) co-chaired by PSS, celebrated Sand Lance day on December 8th, 2023. On this day members of the network went out and collected samples from known/expected Pacific sand lance spawning beaches. Peninsula Streams (in partnership with DFO) also hosted a forage fish egg ID training session for the CFFN. Members and community scientists were given a presentation and had the chance to examine surf smelt and sand lance eggs under the microscope.

EUROPEAN GREEN CRAB EARLY-DETECTION MONITORING

This summer, PSS started a new early-detection monitoring program for the highly invasive European Green Crab (EGC). EGC impacts native ecosystems by outcompeting native crab species for food, excavating eel grass beds while looking for invertebrates, and feeding on native animals. We monitored Esquimalt Lagoon, Millstream Estuary, and Roberts Bay. Thankfully, we did not catch any EGC (although they are known to be present in Esquimalt Lagoon), and we will continue to monitor these areas and/or others next spring.



SONGHEES WALKWAY POCKET BEACH COMPLETE!



The Songhees Walkway Pocket Beach Project, part of the Resilient Coasts for Salmon Program, was opened to the public late last July in Lime Bay Park. The final phase of the project saw backshore excavations, beach nourishment for smelt spawning, improved public access, and stabilization and planting of the backshore marine riparian.



A Green Shores For Shoreline Development demonstration site, the beach is an exemplary example of a collaborative approach to Nature-based Solutions (NbS) with ancillary benefits to people and nature. The site has been a hub of cultural and ecological activity including serving as a destination on NbS educational tours for government officials, students, and professionals. Smelt eggs and molting harbour seals have been observed and cultural canoes landed to drumming and singing during recent celebrations of the Welcome Pole installation by WSA NEC carver Tom Lafortune and Victoria International Marina. Special thank you to our partners the Songhees Nation and the City of Victoria.

RAIN GARDENS

URBAN STORMWATER & 6PPD

Together with the BC Conservation Foundation and others, PSS is monitoring multiple creeks for an identified toxin called 6PPD-Quinone. This compound is found in car tires, and is being flushed into our urban creeks from roadways during rain events. As 6PPD is particularly harmful to Coho salmon, there is an urgent need to not only continue monitoring, but also treat stormwater for this and the many other toxic materials it carries.

RAIN GARDENS TO THE RESCUE!

Thankfully, rain gardens and biofiltration have been identified as effective treatment options for 6PPD as they capture this toxic runoff and filter it before it enters salmon-bearing streams. We have been hard at work building and maintaining rain gardens with communities as part of our 'Rain Gardens for Headwaters' Program. Our three gardens at Campus View Elementary and one at Monterey Middle School have been functioning well thanks to the diligent effort from PSS staff, students, community members, district staff, and stewardship groups.

UPCOMING PROJECTS

And there are more on the way! In 2024, we plan to build rain gardens at Parkdale Church and Childhood Centre in the Cecelia Creek Watershed as well as St. Michaels University School in the Bowker Creek Watershed. Does your business or community want to get involved? Please get in contact with us!



Want to get involved? Email:
justin.budyk@peninsula-streams.ca

Rain Garden Sites

6

Stormwater Captured

> 1 Million
Litres

Rain Garden Events

39

Volunteers

91

Hours

206



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EDUCATION

Our Education Programs have a long history in Greater Victoria, and an important legacy that we are excited to continue building, under the leadership of our new Environmental Education and Outreach Specialist, Deb Deacon.

As we evaluate and formalize existing programming, and plan for new programs and partnerships, we continue to offer hands-on, place-based learning opportunities for youth, with integration into our restoration and stewardship initiatives. Want to learn more? Get in touch with us! We can't wait to bring our programs to your students.

"Their staff are experienced, highly trained, and make outdoor learning fun and engaging! Getting students involved as citizen scientists is a valuable part of their education and keeps them engaged as life-long learners and community leaders."
- Erin Stinson, Teacher
Parkland Secondary School

In 2023, we engaged over 1,000 students across Greater Victoria, with the following programs:

- The BEACH Program
- Rain Garden Education
- Watershed Model & Salmon Lifecycle (Grade 3)
- Creatures of Habitat (Grade 6)
- Water Quality & Invertebrates

Generously funded by:



Canadian
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VICTORIA
FOUNDATION



Meet Deb!

To book an education event at your school, or to sign up as a volunteer, send her an email at deborah.deacon@peninsulastreams.ca



Scan here to donate to Peninsula Streams Society and help us continue our education programs!

COMMUNITY STEWARDSHIP

STREAMKEEPERS

Our Streamkeepers Program continued to expand in 2023, offering training to the multiple Stewardship groups as well as Tseycum First Nation, where water quality and invertebrate surveys, and stream habitat assessments were completed. Thanks to additional training offered by the Pacific Streamkeepers Federation, PSS plans on offering further opportunities to become a Streamkeeper in 2024. If this of interest to you, please get in touch!



STEWARDSHIP HIGHLIGHT

The KENNES Stewardship Group has been hard at work on Hagan Creek this past year. Through numerous invasive species pulls and riparian area planting events, they have helped restore and preserve the natural ecology of the stream that is home to a vulnerable population of Coastal Cutthroat Trout. In 2024 they plan to expand their efforts to include other sections of Hagan and Graham Creeks as well construct in-stream habitat to aid fish populations. If you would like to see what they getting up to, consider following us on social media!

TESTIMONIAL

“Since joining this Stewardship Group, I feel like I'm doing something important for the planet by helping to restore habitat, and am constantly learning and creating community in the process.”

-Dora Stroud,
The Friends of Millstream Watershed



If you are interested in becoming a Watershed Steward or Streamkeeper, please contact justin.budyk@peninsulastreams.ca

OUR LEGACY IS YOUR LEGACY

Did you know that by including us in your estate plans, you can provide long-term financial support for our restoration, conservation, stewardship, and education programs?

The Peninsula Streams and Shorelines Fund is a planned giving program established in partnership with the Victoria Foundation, which hosts and independently manages the fund on our behalf.

Your donation will be pooled with others in our permanent endowment fund. Income from the fund will be distributed annually to us by the Victoria Foundation to support our programs.

By giving even a small portion of your estate to our fund, you can leave a lasting legacy to your community and still support those you love.

You can make cash donations to the fund, bequests in your Will, or gifts of assets such as stocks and insurance. You may also be able to save on taxes.



Please contact us to learn more. Alternatively, consult your estate planning advisor, or visit the [Victoria Foundation](#).



**VICTORIA
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WORKING TOGETHER

Peninsula Streams and Shorelines is honoured to work within Coast and Straits Salish Territory, the Territories of the Lekwungen-speaking Peoples, known today as Songhees and Esquimalt Nations, and the W̱SÁNEĆ Peoples, known today as W̱JOḺEŁP (Tsartlip), BOKÉĆEN (Pauquachin), STÁUTW (Tsawout), W̱SIKEM (Tseycum) and MÁLEXEŁ (Malahat) Nations. We are deeply grateful for our partners within these Nations, and look forward to our continued work, achieving our shared goals, and strengthening our bonds as stewards of the environment.



PSS Staff, Board, and Friends attended a Working Effectively with Indigenous Peoples Training Workshop with Chief Bob Joseph in November to explore ways we can better work and build stronger relationships with our partners in their Territories.



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