

# PENINSULA STREAMS & SHORELINES

NEWSLETTER JULY 2023

Streams  
&  
Peninsula Shorelines  
Since 2002

## SPRING HIGHLIGHT

### CREATURES OF HABITAT

80 students, 11 volunteers, 3 hours removing invasive species in SNIDŶEŁ (Tod Inlet).



Scan here for more information on our projects



## LATEST UPDATES

- Letter from Ian Bruce
- Stream work
- Forage Fish and BEACH Updates
- Shoreline Restoration
- Rain Gardens in Bloom!
- Completed Work Parties
- Environmental Education

***Peninsula Streams would like to wish all of our members a happy summer season!***

**This issue will acknowledge Ian Bruce's change in role within the organization, provide highlights from the last 6 months from our ongoing projects, both in the streams and on the shorelines, community engagements, and upcoming events.**

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# LETTER FROM IAN BRUCE

*Dear Peninsula Streams Members and Community,*

As most of you undoubtedly know, I have stepped back from my position leading the Peninsula Streams & Shorelines team. I will remain in a part-time capacity for the next year or so providing mentoring, advice, and program support to our Executive Director Kyle Armstrong and his capable team. I have full faith in Kyle's leadership and vision and he will serve PSS very well. I expect that all of you will give Kyle and the staff the same help & support that I was so fortunate to have enjoyed since 2002 and before.

It has been a great pleasure and privilege to have served in my position leading this organization. I owe an extreme measure of gratitude to our volunteers, Board members, and all of the others that have helped achieve mutual goals in community stewardship, ecological restoration and environmental education.

I sincerely hope to see you out on the streams and beaches in the future!

*With Gratitude,*



**Ian Bruce, Senior Biologist and Advisor**



# WHAT'S HAPPENING IN OUR STREAMS?

## RECOVERY OF SALMON EGG INCUBATORS IN BOWKER CREEK AND CHALET!

Both Bowker (Oak Bay) and Chalet Creek (North Saanich) had salmon egg incubators installed this winter to help reestablish native salmon populations. Bowker Creek received chum eggs, while Chalet Creek received coho eggs. It is believed that this may give hatchery fish more time to imprint on the streams where they are being reintroduced and help reduce straying rates to other systems when they one day return to spawn.

Both creeks had excellent fry emergence in the spring despite some curious raccoons!

## COLQUITZ RIVER HABITAT ASSESSMENT AND RESTORATION PLANNING

A full habitat assessment of the Colquitz River was completed this past May in partnership with the District of Saanich. This involved walking the river from headwaters to tidewaters and mapping out current habitat features and identifying potential restoration opportunities.

As expected, we found that the Colquitz has been heavily impacted by anthropogenic activities, however, we found pockets of excellent salmon habitat and have also identified several high impact sections of the creek that will hopefully be restored in the next few years.

## MERMAID CREEK PAINT SPILL

In late March, a local steward noticed that Mermaid Creek, which flows into Roberts Bay, had turned milky white and notified PSS. Town of Sidney crews investigated and found that paint had entered the town's storm drain system through a residential painting project. A notice was sent out to residents in the catchment by the CRD; PSS is working with Sidney Engineering and Roberts Bay Residents to develop an educational rain garden in the area. No fines were issued.



Friends of Bowker Creek gently place eggs into protected trays in a reach they closely monitor!



Coho eggs getting loaded into the incubator trays at Goldstream Hatchery



# MILL STREAM WATERSHED

## FISH DETECTION ARRAY SYSTEM

In early March, PSS and Goldstream Hatchery volunteers injected PIT tags (Passive Integrated Transponders) into Coho fry, which were then released into Millstream Creek. 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.

Each PIT tag has a unique identification code associated with it that allows us to monitor fish at different life stages as they migrate out through the freshwater, into the marine environment and then again as they return as adults. We'll use this information to piece together survival estimates at these different points. Salmon that reach the ocean safely and survive their years at sea return to the rivers as adults to spawn and contribute to the recovery of threatened and endangered populations.

Over the next few years, we hope to continue tagging both wild and hatchery raised coho, as well as cutthroat trout, to gain a better understanding of salmon survivorship, bottlenecks, and habitat use in Millstream, Colquitz and Craigflower Creeks.



PSS Staff and volunteers installing the array into Millstream

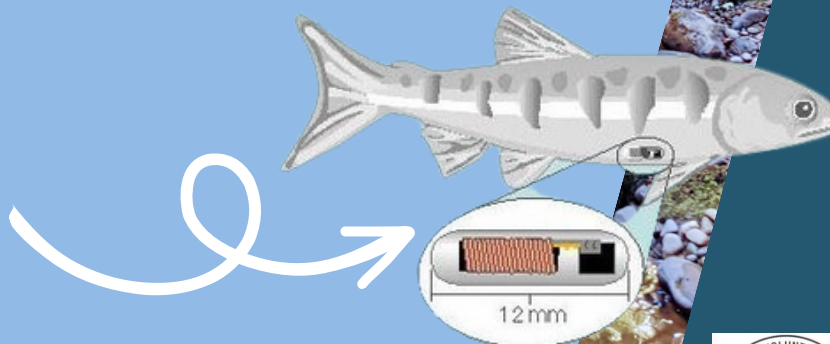


Releasing PIT-tagged coho fry into Millstream in early March

# OF TAGGED COHO DETECTED IN 3 WEEKS:

110

Tiny PIT tags get inserted into the body cavity of an anesthetised coho fry



A huge thank you to the residents of Creekside Glen for their generosity and support!



# BEACH PROGRAM UPDATES

## FORAGE FISH SAMPLES COLLECTED FROM EACH MUNICIPALITY TO DATE

Sidney: 189	Victoria: 12
North Saanich: 287	Colwood: 141
Central Saanich: 22	View Royal: 10
Saanich: 99	Metchosin: 14
Oak Bay: 80	Sooke 10
Esquimalt: 7	

Our dedicated volunteers are stewards of our local forage fish beach spawning habitat. During the past spawning season, they have collected 189 samples from local beaches, with 54 samples having eggs present. Of these 54 samples, 45 have been surf smelt, 6 have been sand lance, and 3 surveys have resulted in both species. From June 2018 until present, 900 samples and counting have been collected with 188 positives! A huge thank you to our volunteers and generous funders!

### EUROPEAN GREEN CRAB MONITORING

Peninsula Streams is expanding the BEACH program and is starting early detection monitoring for the invasive European green crab. The European green crab (EGC) impacts native ecosystems by outcompeting native crab species for food, excavating eel grass beds while looking for invertebrates, and feeding on native animals.



SURF SMELT POSITIVES  
FOR 2022/2023:

48

SAND-LANCE POSITIVES  
FOR 2022/2023:

9

Learn more about the BEACH program in the The Schooler newsletter! Found here:



# SHORELINE RESTORATION

## MERMAID CREEK SALT MARSH, ROBERTS BAY

The upper marsh sedge plantings that were planted in the spring have experienced high mortality rates. This is likely due to several factors including the paint spill, poor water and sediment quality, low elevations of the substrate, and interrupted freshwater flows. We will take an adaptive management approach towards the restoration of this ecosystem, experimenting with different treatments into the future. The area where invasives were removed has fared well and we will expand this treatment further this summer. The lower marsh restoration has been delayed indefinitely as we wait for provincial permitting, It may be pushed to next year, unfortunately, ensuring that more of the existing marsh will erode this winter.



PhD Student Acacia Markov (middle) is collaborating on vegetation modelling and monitoring with PSS on the Mermaid Creek NBS Project.



PSS tours the Coastal Zone Conference around the Songhees Walkway Pocket Beach with Cecelia Dick from Explore Songhees

## SONGHEES WALKWAY POCKET BEACH

The Songhees Walkway Pocket Beach Project, funded by the Resilient Coasts for Salmon Program, is nearing completion. The backshore was stabilized and more nourishment material was added to the beach. Planting will take place in July by project partners. Signage and ceremonies are being planned with the Songhees Nation, the City, and others. Special thank you to Salish Sea Industrials, Ralmax, and Destination Greater Victoria for their Corporate Sponsorship of this important project that will demonstrate hybrid shoreline protection designs that improve ecological and cultural values of our beaches! We will monitor the site for forage fish use over the winter.



Songhees Walkway Pocket Beach in Lime Bay Park, Victoria Harbour nears completion!



PACIFIC SALMON  
FOUNDATION

RALMAX  
GROUP OF COMPANIES

DESTINATION GREATER  
VICTORIA

# RAIN GARDENS IN BLOOM!

## MONTEREY MIDDLE SCHOOL

The Friends of Bowker Creek, PSS staff, as well as educators and students from Monterey Middle School have been working hard to weed and mulch this newly installed rain garden as it experienced its first spring of growth! Thank you volunteers and students for all your hard work!



## CAMPUS VIEW ELEMENTARY

The principal of Campus View Elementary reported that the rain garden installed last fall was very successful at mitigating flooding in their parking lot during this winter's rains. This spring, the Yellow Monkey flower and Yarrow is looking fantastic in bloom. Students from Mount Doug Secondary School are also learning about watersheds, stormwater and how to design a rain garden through visits to this demonstration garden.



## LOOKING AHEAD

We are well underway to start building more rain gardens as a part of our 'Rain Gardens for Headwaters' Program this fall. Stay tuned for more!

If you are interested getting involved with in rain gardens in your community email [justin.budyk@peninsulastreams.ca](mailto:justin.budyk@peninsulastreams.ca)



# OUTREACH & VOLUNTEER EVENTS

## STEWARDSHIP HIGHLIGHTS

The newly formed KENNES Stewardship group (Hagan-Graham Creeks) has been hard at work on a number of different initiatives in the watershed. There have been multiple invasive species pull events, planting parties, water quality monitoring and even a walk-and-talk with a pre-school class. The group is really coming together and are working towards updating signage in Centennial Park, creating educational content about stream ecosystems and much more!



## STREAMKEEPERS WORKSHOPS

There have been multiple workshops offered this spring where stream surveys, habitat assessment and invertebrate sampling has been conducted. The eventual goal is to have volunteers within PSS, and the stewardship groups we support, start assessing the health of tributaries in the Victoria area. This will inform efforts to restore ecologically important habitat and support the recovery of fish populations in the area.

## KEATING INDUSTRIAL INITIATIVE

Due to water quality concerns downstream of the Industrial Park, we recently conducted an educational campaign where businesses were invited to complete a confidential survey and have a PSS staff member come discuss proper stormwater management. Many businesses took part and are now working to reduce contaminants from entering our local streams.

Looking for invertebrates from samples taken from the Colquitz



If you are interested in volunteering, please get in contact by emailing [peninsulastreams@gmail.com](mailto:peninsulastreams@gmail.com)

# EDUCATION

## GRADE 3 PROGRAM

We had an excellent spring teaching curious and engaged students our watershed model and Pacific Salmon lifecycle lessons.

Number of schools visited: 6

Number of classes reached: 22

Number of students taught: 470

Teaching hours: 22

Total student engagement hours: 470

Check out our education blog post!

<https://peninsulastreams.ca/gr-3-education-program-update/>

## CREATURES OF HABITAT

80 students, from Bayside Middle School joined our staff and 11 volunteers to remove invasive species in SNIDCEŁ (Todd Inlet). This was our first Creatures of Habitat program post COVID.

We are hiring:

## ENVIRONMENTAL EDUCATION & OUTREACH SPECIALIST

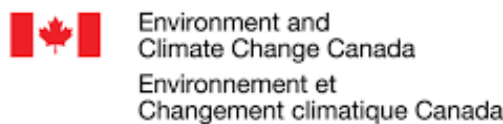
View full job description at  
[peninsulastreams.ca/join-us](https://peninsulastreams.ca/join-us)



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



# THANK YOU TO OUR SPONSORS AND PARTNERS

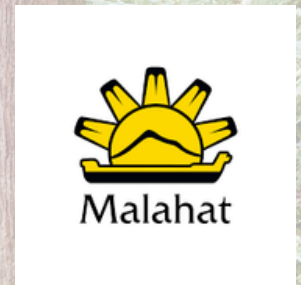


Please reach out to become a corporate sponsor!

SUSTAINABLE DEVELOPMENT GOALS



Peninsula Streams Society operates within Coast and Straits Salish territory, the territories of the Lekwungen-speaking peoples, known today as Songhees and Esquimalt Nations, and the WSÁNEĆ peoples, known today as WJÓŁEŁP (Tsartlip), BOKÉĆEN (Pauquachin), STÁUTW (Tsayout), WSIKEM (Tseycum) and MÁLEXEŁ (Malahat) Nations. Respectfully, we strive to build healthy relations and share our capacity to achieve goals.



**Songhees**



**PAUQUACHIN**  
FIRST NATION