

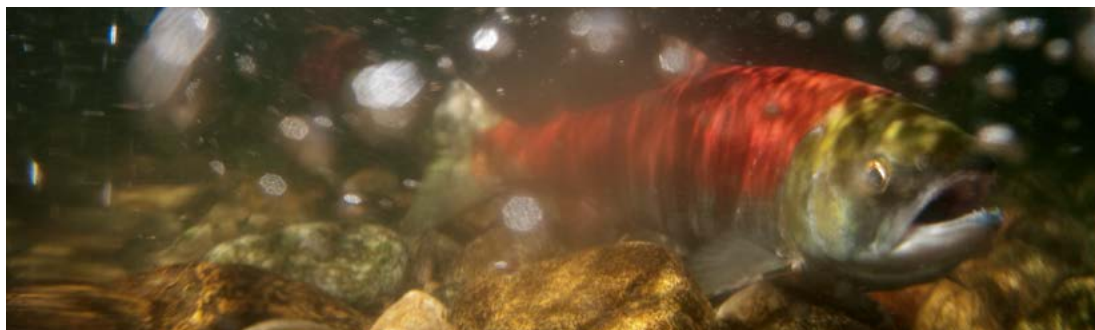
StreamTalk

The Newsletter for Stewards of Salmonids and their Habitat

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International Year of the Salmon— connection, knowledge, action



Salmon are a vital part of life in British Columbia. They are intrinsically linked to our history, our identity, culture and our future. They are fundamental to Indigenous communities and our economy and a significant indicator of overall environmental health, not just on the West Coast, but globally.

While every year is “the year of the salmon” for those involved in protecting salmonids and their habitat, 2019 is especially noteworthy as it is the focal year of the [International Year of the Salmon \(IYS\)](#). Launched in October 2018, with activities continuing into 2022, IYS is a joint scientific research and outreach initiative of the [North Pacific Anadromous Fisheries Commission \(NPAFC\)](#) based in Vancouver, and the [North Atlantic Salmon Conservation Organization \(NASCO\)](#). Under the umbrella of the theme “Salmon and People in a Changing World”, the aim of IYS is to bring stakeholders together to stimulate science and raise public awareness, to foster understanding of the issues facing salmon and inspire action to protect them.

Salmon are at risk from environmental change and human activities across the Northern Hemisphere. To address these issues, governments, academia, Indigenous Peoples, NGOs and industry from 14 countries in the Northern Hemisphere have partnered together to support the conservation, restoration and resiliency of wild salmon species.

Salmon science on the high seas

While the initiative is international in scope, [Canada](#) is playing a pivotal role in it. One of the

signature IYS projects is the B.C.-led expedition to the Gulf of Alaska on board a Russian research trawler. A team of 21 volunteer scientists from five salmon-producing Pacific Rim countries—Canada, South Korea, Japan, Russia, and the United States—conducted the first comprehensive study examining the condition, abundance, and composition of Pacific salmon in the North Pacific Ocean, as well as country of origin and location of stocks. The five-week expedition returned to Vancouver on March 18 after travelling 8,000 kilometres and surveying 60 different locations. The researchers collected thousands of samples and pioneered a new DNA testing method as part of more than a dozen research projects including projects on food supply and diet, prey, microplastics, and the impact of climate. While the voyage yielded some initial surprising discoveries, it will take months to analyze the data and samples collected. The findings will provide a better understanding of the health of all five species of Pacific salmon and their survival at sea, and help in forecasting salmon returns, and will inform solutions for supporting their recovery and long-term management.

“What we need to know most about Pacific salmon, we mostly don’t know,” said Richard Beamish, expedition organizer and a scientist emeritus with Fisheries and Oceans Canada’s Pacific Biological Station in Nanaimo, at the launch of the voyage. “The discoveries that will be made will lead to an understanding of how to be responsible stewards of Pacific salmon in a future of changing ocean ecosystems.”



International Gulf of Alaska Expedition Resources



Photo: Pacific Salmon Foundation

[IYS International Gulf of Alaska Expedition webpage](#)

[Vancouver Sun series The Secret Lives of Salmon](#)

[Pacific Salmon Foundation mini docuseries](#)

[Post-expedition news conference video](#)

[Expedition photo gallery](#)



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International Year of the Salmon

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"Life in the Salmonsphere"—sharing ideas, solutions and stories

The International Year of the Salmon will also be a focus of this year's Salmon Enhancement Program Community Workshop May 31 - June 2 in Nanaimo (read more about the workshop on page 3). The workshop's theme, "Life in the Salmonsphere" is an acknowledgement that given the cultural, social and economic importance of salmon, their well-being in our hemisphere, or "salmonsphere" is a shared responsibility as we aspire to create resilience for both salmon and people in an increasingly uncertain environment.

The workshop will also be an opportunity to review Canada's [Wild Salmon Policy Implementation Plan](#), introduced by Minister Wilkinson at the IYS launch event in October,

and other initiatives such as the [British Columbia Salmon Restoration and Innovation Fund](#) to help restore the habitat of wild fish stocks in communities across B.C.

By understanding the present status of salmon and the natural and human factors that affect them, we can further explore the ways in which communities can contribute to their sustainability through connection, knowledge and action.

The International Year of the Salmon is an opportunity for everyone who cares about Pacific salmon to join others from across the world to make a difference, not only for the salmon but also the communities and cultures that depend on them. While organizers recognize this is a global issue, they also believe that by acting locally our combined efforts—as citizen scientists, researchers, policy makers and more—will make a big difference. Our own voyage of discovery awaits! ●

Restoration efforts in the Campbell River Second Island side channel rejuvenates critical salmon habitat

In 2018, the South Coast Area Resource Restoration Unit (RRU) undertook a project to restore and increase salmon habitat in the lower Campbell River in response to changes in river management priorities. The work took place in a naturally occurring side channel along a lower portion of the river commonly referred to as the Second Island side channel. Five hundred metres long, the top end of the channel begins approximately 600 metres downstream of the John Hart Generating Station tailrace and provides over 8,000 square metres of spawning and rearing habitat, primarily for chinook salmon. The project, which re-established surface

water flow to the side channel, was completed with funding from the Fish and Wildlife Conservation Program. The [A-Telegay Fisheries Society](#), which represents the interest of five Indigenous groups in the Campbell River area, provided environmental monitoring assistance and project administration.

Since the construction of the John Hart Dam in the 1940s, the lower Campbell River has had extremely limited gravel recruitment as high flow events have scoured away most of the gravel. In an attempt to restore lost habitat, the Second Island side channel was modified in the 1980s, and again in 1995. A series of large rock weirs were erected to create pools for rearing, and suitably sized gravel was placed within the weirs to create spawning beds. The weirs also served to limit flow into the channel and created a refuge area for salmonids during high flow conditions.

Circa 1995, increasing spawning capacity in the location became a priority, prompting ongoing habitat restoration efforts including the construction of new gravel spawning beds. High flow events in the river often mobilised this gravel, with the side channel becoming a deposition point due to the structures that had been in the channel.



Photo: Colin McGregor, DFO

Second Island Side Channel (left) and Campbell River main stem (right)

IYS Resources

We look forward to sharing stories about B.C. IYS initiatives in future editions of *StreamTalk*. Individuals and organizations are invited to put on their own International Year of the Salmon events and outreach—anything from dancing, storytelling, cooking, art, music, talks, stream cleanups and more! You can check out what IYS [events](#) and [projects](#) are happening around the world and in B.C. on the IYS website and [register](#) what you'll be doing to celebrate. The website also has several [resources](#) to support your celebrations.

Follow IYS and share your stories and photos on social media:



(@yearofthesalmon)



(@yearaofthesalmon)

Hashtags

#InternationalYearoftheSalmon

#YearoftheSalmon

#Salmonshpere

#SalmonandPeople



Matt Foy

Salmon on the Rough Edge of Canada and Beyond (short story series) by Matt Foy, retired DFO/SEP biologist

continued on page 3

2019 SEP Community Workshop just downstream!

Every two years, salmon lovers from across the province gather to celebrate salmon and learn more about the state of salmon and salmon stewardship in B.C. The 2019 SEP Community Workshop—“Life in the Salmonsphere” is being hosted by the Nanaimo River Stewardship Society and the Nanaimo River Hatchery at Vancouver Island University from May 31st to June 2nd.

Experts will share the latest on salmon, salmon habitat, restoration and stewardship. As part of our contribution to International Year of the Salmon, SEP will host an interactive plenary session titled “Building Resilience in the Salmonsphere” to examine what communities can do to ensure the conservation and restoration of salmon and their habitats. This is a rare opportunity for a shared discussion on the state of the salmonsphere and to explore ideas for building resilience.

Register soon to reserve your spot in the sessions of your choice. The Early Bird Registration is \$35, available until May 1st—a great price for the whole weekend (lunches, refreshments and a locally hand-made pottery mug included). Extra activities include dinner on Saturday night for just \$5 and an exploration Sunday afternoon of Snuneymuxw First Nation culture at [Saysutshun](#) (Newcastle Island) for more learning and fun.

Accommodations can be reserved on-campus and there’s a Junior Stewards Program for children aged 5-12 who want to join you for the event. Come for one day; come for two, join us for the meet and greet on Friday night if you can...just COME!

The community workshop is a great opportunity to celebrate the accomplishments of the program and everyone who has played a role in the



Photo: Cliff Kelsey,
Hyde Creek Watershed Society

Jean Peachman in the fish costume
(We have fun at these events...)
2013 workshop on Bowen Island

success of SEP over the past 42 years in this International Year of the Salmon. Spread the word—we hope to see you there! ●

Visit the [online event page](#) for more information and watch for updates on the [Pacific Streamkeepers website](#).

—Joanne Day,
*Community Involvement and
Resource Restoration
Fisheries and Oceans Canada*

Second Island Side Channel

continued from page 2



Photo: Colin McGregor, DFO

Gravel accumulation in the Second Island side channel prior to 2018 works

In the winter of 2014, a significant gravel accumulation at the mouth of the side channel limited, and at times prevented, water from entering. To temporarily re-establish surface water flow, the RRU removed approximately 3,500 cubic metres of gravel from the channel mouth during the summer of 2015, placing it outside of the side channel in the river main stem for spawning habitat.

RRU constructed a series of spawning beds upstream of Second Island in 2016, however flow events that winter and in 2017 mobilised much of this gravel and

deposited it once again at the mouth of the side channel. So, in the summer of 2018, RRU removed approximately 3,500 cubic metres of gravel, placing it outside of the side channel in the river main stem. The weirs were also removed with only minor remnants remaining, and the channel was regraded to create a more natural looking and functioning channel.

These latest modifications were made with the expectation that ongoing efforts to increase the spawning capacity in the

lower Campbell River will continue. They will not stop gravel from entering the side channel but should allow it to transport through when high flow events occur and now limit the potential for gravel to accumulate at the mouth to help maintain continuous flow throughout the side channel. ●

—Kirby Rietze,
*Engineer,
DFO Ecosystems Management Branch*



Photo: Colin McGregor, DFO

Second Island side channel following 2018 works

Citizen Scientists on the front lines of monitoring invasive species

Citizen science is at the forefront of hands-on environmental action. There is a vibrant citizen science community in B.C., particularly on the coast. Whether it is a biodiversity project, kids involved in pollinator studies, or [naturalist activities while aboard BC Ferries](#), there are many projects engaging citizens in taking an active role in observing and collecting data. The Pacific Streamkeepers Federation is one such group leading the way with methodology and data collection in rivers and streams. We can take comfort in knowing that our Community Involvement volunteers are active and engaged in local research and emerging issues.



Hayden and DFO Biologist Renny Talbot identifying, measuring and recording all species of crabs caught during the sampling effort.

One recent citizen science initiative in the [headlines](#) is monitoring of invasive European Green Crabs in our coastal waters. European Green Crabs have been found and studied in B.C., on the west coast of Vancouver Island, central coast areas and within the Sooke Basin. Aquatic Invasive Species will be a session topic at the SEP Community Workshop in Nanaimo, May 28 - June 1. In the meantime, Patty Menning, a fisheries protection biologist working out of the Pacific Biological Station in Nanaimo, provides a snapshot of this “alien invader” and shares a story of a young citizen scientist as an example of how the community can assist the DFO.

The [European Green Crab](#) is one of the ten most unwanted species in the world. First making an appearance on the East Coast with devastating impact, the invasive crustacean has been established on the west coast of North America since at least 1989 and were first found on the west coast of Vancouver Island and some central coast areas of mainland B.C. in 2006.

This small coastal crab has the potential to upset the overall balance of the marine

ecosystem and harm shoreline habitats, putting native species at risk. Highly resilient and aggressive (its Latin name, *Carcinus maenas*, has been translated as “raving mad crab”), it is a voracious predator that feeds on a variety of intertidal animals, out-competing native species for food. Green crabs can also damage eelgrass beds which provide important nursery habitat for juvenile salmonids in search of prey items.

As part of the [Aquatic Invasive Species \(AIS\) Action Plan](#), the Department of Fisheries and Oceans (DFO) is developing an Early Detection Monitoring Program for European Green Crab with a focus on locations within the Salish Sea. DFO is looking to partner with coastal communities to monitor long-term detection sites during the spring/summer months. In addition to developing a long-term early detection monitoring program, DFO is enlisting community support by asking the public to serve as its “boots on the beach” to keep an eye out for these crabs. If your community group is interested in participating or would like more information on the Early Detection Monitoring Program for European Green Crab, please contact the AIS program AISPACIFIC@dfo-mpo.gc.ca.

If you suspect you have found a green crab, take photos but leave the crab where you found it. Email photos and detailed location information to AISPACIFIC@dfo-mpo.gc.ca. ●

Important Note:

Despite its name, the term “green crab” is not entirely accurate, as both adult and juvenile crabs can have many colour and pattern variations. As many of our native crab species are green, it is easy to misidentify the European Green Crabs; only the European Green Crabs have five spines.

For more information on the regulations, research and action plans for reducing the spread of aquatic invasive species, visit the [DFO website](#).

Citizen Science Resources

[Government of Canada Citizen Science Portal](#)
[NatureWatch environmental monitoring program](#)

—Joanne Day,
Community Involvement and
Resource Restoration
Fisheries and Oceans Canada

How to identify European Green Crabs



Photo: Patty Menning, DFO

- Five spines (or marginal teeth) to the outside of each eye
- Up to 10cm across the carapace (back shell)
- Wider at front than back of the carapace
- Although the crab is often referred to as “green crab”, colour is not its distinguishing feature. The actual colour can vary from dark mottled green to orange or red

Grade 9 student jumps in



Photo: Patty Menning, DFO

Hayden showing a Fukui Trap used to capture European Green Crab.

In August of 2018, Fisheries and Oceans received a notice that an invasive species of crab might have been found. Grade 9 student, Hayden Nelson, was fishing with his friend close to his home in Metchosin near Victoria. He says, “I looked down and saw a crab I had never seen before. So, I jumped into the shallow water and picked it up.” Hayden and his father forwarded photos of the crab to DFO. The Aquatic Invasive Species Unit then visited the site in September 2018 to resample. With Hayden’s assistance, two European green crabs were captured in the same area. In October 2018 DFO conducted a comprehensive sampling effort by deploying 95 traps; one additional green crab was located. Follow-up assessments will occur this spring/summer.

Exhibit in the Cariboo Chilcotin promotes salmonid and habitat health through art



Salmonid and Habitat Health Through Art exhibit in the viewing area of the Sam Ketcham Pool

In the fall edition of StreamTalk, we invited readers to submit examples of salmon art in their community. Guy Scharf, SEP community advisor for the B.C. Interior North, alerted us to a wonderful art exhibit celebrating the importance of salmon installed last year at the Cariboo Memorial Recreation Complex in Williams Lake. We reached out to Brianna van de Wijngaard, Water and Waste Wise communications coordinator with the Cariboo Chilcotin Conservation Society (CCCS), to share the story behind the exhibit titled “Salmonid and Habitat Health Through Art.”

When the Sam Ketcham Pool in the West Fraser Aquatic Centre at the Cariboo Memorial Recreation Complex was renovated, Marg Evans (former [Cariboo Chilcotin Conservation Society](#) executive director) envisioned a mural using images similar to the DFO “Vital Link” poster (note: contact me if you’d like a copy) of salmonid species and their habitat. The logistics of a mural turned out to be a little too much to take on, so CCCS Coordinator Vanessa Moberg and the Water Wise team wisely went to “Plan B”—an art installation, which turned out to be a terrific idea, fully supported by City staff and Council.

The goal of the exhibit is to highlight both the beauty and the importance of salmonid species and their habitats to demonstrate how they are integral to the long-term health and sustainability of surrounding ecosystems and the economy of communities across the Cariboo Chilcotin.

A gala held in December brought together 40 people to celebrate the installation and to provide background information to the public about the message. The artwork—in a variety of mediums, from illustration, photography and painting, to fibre art and pottery—is a form of “soft” environmental education, and the City is very happy that it has livened up the space. As the installation will be in place for the next five years, it will reach future visitors to the pool complex and hopefully inspire them to visit the nearby Horsefly River with a greater understanding and appreciation for salmon.

Many thanks to Brianna, Vanessa and Marg for their efforts in bringing this project to life! ●

—Joanne Day,
Community Involvement and
Resource Restoration
Fisheries and Oceans Canada



(l-r) Local artists Linda Bachman, Suzie Ambrose, Kevin Easthope, Joan Beck and Maureen LeBourdais contributed artwork to the exhibit.

Photos: Brianna van de Wijngaard

Salmon Spottings

When out and about in your community, have you spotted salmon-inspired artwork? We want to hear about it to share in future editions of *StreamTalk*. Send photos of your artistic fishy finds, including details about the artist (if possible) and location, to: joanne.day@dfo-mpo.gc.ca

Nanaimo Public Art



Salmon Carving by Peter Ryan



Salmon graffiti by Justin Kaczmarek

These are some salmon works of art in Nanaimo that you can check out (and others—search “salmon” in the [inventory](#)) when attending the SEP Community Workshop.

SEP Workshop hatching soon!

Life in the Salmonsphere

May 31 - June 2, 2019, Nanaimo, B.C.

Don't miss out—register now! Registration package now available on the workshop [website](#).

Hosts: Nanaimo River Stewardship Society & Nanaimo River Hatchery

Partners: DFO ● Pacific Streamkeepers Federation ● Pacific Salmon Foundation

● Snuneymuxw First Nation

Growing rain gardens for salmon

A rain garden is a landscaped area that receives, filters and absorbs rainwater runoff (also called stormwater runoff) from a roof or pavement.

Rain gardens have been growing in popularity with both city governments and homeowners given their many benefits (see sidebar), including for salmon.

The City of Delta has been at the forefront of installing rain gardens, thanks in part to the efforts of Cougar Creek Streamkeepers' rain garden coordinator Deborah Jones, who has been championing rainwater infiltration projects since 2002.



In 2005, Delta engineer Hugh Fraser suggested a pilot rain garden project at Cougar Canyon Elementary School. Thus, was born a template of collaboration: design and earthwork by Delta Engineering; additional funding from Pacific Salmon Foundation; watershed education by Stream of Dreams and planting by students under streamkeeper supervision.

Other projects followed, leading to the development of rain garden curriculum materials for Grades 4-5 and a maintenance manual for volunteers with Delta's Adopt a Rain Garden program.

There are now nearly 100 rainwater infiltration features throughout Delta, including 28 school and community rain gardens which collectively receive every year nearly 22 million litres of rainwater runoff annually that formerly flowed through the storm sewer system and into sensitive salmon habitat.

Cougar Creek Streamkeepers have had the good fortune of collaborating with a willing engineering department and a supportive Mayor and Council. That said, input "from the bottom up" is equally important. Streamkeepers and other volunteers worked hard on maintaining early projects to high standards, so the City would see their many benefits.

'Shoring up community engagement

On Vancouver's North Shore, with its elevation and terrain, many streams, heavy rainfall

and incidence of flooding in residential areas, rain gardens have been part of the three local municipalities' integrated stormwater management plans (ISMPs) and green infrastructure development for several years.

Inspired by a campaign to install [12,000 rain gardens](#) in the Seattle/Puget Sound region of Washington State, Simon Fraser University researcher Dr. Joanna Ashworth established in 2017 the North Shore Rain Garden Project initiative to engage the community in protecting salmon habitat through rainwater infiltration. Working with a graduate student in Ecological Restoration, the project collaborated with the North Shore municipalities, streamkeepers and other NGOs, to increase awareness of the benefits of rain gardens; educate citizens about the resources available to help in creating rain gardens; and encourage participation in the planning, installation and maintenance of rain gardens on their properties and in public areas.

The project also supported the graduate researcher's own study to analyze North Shore streams based on the impacts of urban runoff and identify locations where rain gardens could have the strongest positive impact on the watershed.

An advisory team was recruited from the community and is working with the City of North Vancouver on the installation of demonstration gardens, with the first planned for the Capilano Mall parking lot (which drains into [MacKay Creek](#)) in partnership with QuadReal Property Group. Another site in West Vancouver will also be part of their work this year.

"We are thrilled that our steady engagement with the community and local governments has sparked so much interest in the power of rain gardens," says Joanna Ashworth. "Getting the community to learn about rain gardens means they are learning about natural assets and that is really exciting."

Footnote: You can learn more about rain gardens at the SEP Community Workshop and Deborah Jones' session: "Just do it! Easy rain gardens to hone your skills & gain street cred." ●

—Joanne Day,
Community Involvement and Resource Restoration,
Fisheries and Oceans Canada

Rain Garden - East 15th St & Lonsdale,
North Vancouver

Rain Garden Benefits

- Filter out rainwater run-off pollutants before they reach storm drains and creeks: tire dust, brake dust, heavy metals, motor oil and grease, oily residues from fresh asphalt, road salt, cigarette butts and other litter, pesticides & fertilizers
- Protect rivers and streams, wetlands, lakes, and marine waters and wildlife
- Protect biodiversity and provide habitat for beneficial insects and birds
- Reduce standing water, flooding, overflows in sewers, and erosion in streams by absorbing runoff from hard surfaces
- Increase the amount of water that soaks into the ground to recharge local groundwater and protect against drought
- Enhance the landscaping and appearance of the homes and yards and urban streetscapes, and reduce garden maintenance

Resources

[Rain garden handbook for Western Washington](#)

[Seattle Rainwise Program](#)

[How to be a salmon friendly gardener / Snohomish County Public Works](#)

Cougar Creek Streamkeepers [website](#) includes photo tours of school and community rain gardens, a checklist for successful rain gardens and links to a number of helpful resources to assist with rain garden planning, building, planting and maintenance.

The North Shore Rain Garden Project [webpage](#) includes background on the engagement process and community events, walking tour and resources.

Partnership for Water Sustainability in BC [article](#) *Creating the Future in The Corporation of Delta: Rain Gardens Help Restore Nature.*





Salmon and streams bring people together

The last two days have shown me again the power of community and the endless interest and passion we have here in the Pacific Region for our streams and the life within them. Through snow storms, rain and sunshine, people come out in droves to learn more about our streams and how to protect and preserve them. How to monitor them, photograph them and watch over them. Our community cares, and in doing so shines a light on the needs of our rivers and streams.

Friday morning finds an overflowing parking lot at Chilliwack Secondary School as teachers come out in our winter weather to learn about all kinds of things to help instill knowledge within our next generation. We gather at first inside the classroom and teachers listen intently to a session titled “Introduction to Streamkeepers.” They learn of the Modules best suited for each age range and some tips and tricks to engage students with their local streams and creatures in a positive way (both for the students and the streams’ health). That afternoon we are welcomed to the [Skowkale Hatchery](#) by hatchery manager Harold Archie. Here we get a quick tour of the facilities, then learn how to gather a bug and water sample in the creek. This needs to be done ever so gently and from the bank, as it’s February and there are salmon below the gravels awaiting spring.



[\(View Facebook Photo Album\)](#)

As we pull out of the parking lot, the snow is heavy and the visibility poor. Next stop is Squamish—thankfully the highway is clear, and the sun pops out for a lovely drive past trees filled with eagles.

At the [Squamish River Watershed Society](#)’s gathering entitled “Love in the Land of Salmon” we hear first from Bob Turner (past Mayor of Bowen Island) as

he shares his passion for our streams and salmon via his [videos](#). He has captured our salmon in all shapes and sizes, bedraggled and shiny, seeming to sing as they are in the throes of spawning and in the moments just prior to their life’s end. You can’t help but be touched and want to help, to do something for the betterment of our salmon. Next up is our presentation on “The Streamkeepers Program”—what we can do, and how we can monitor our streams and share our findings. Local community members, stewardship groups and a member of Squamish council come to learn and see how they have a role in protecting our precious salmon. Photographer Breanna Wilson loads her presentation and has us all quickly entranced by many birds. Her photography draws us in as she provides snapshots into the habitat of the birds and the circumstances which enabled her to capture their images to share with us all.



[\(View Facebook Photo Album\)](#)

No time to dally as the [North Shore Streamkeepers](#) are hosting a workshop Saturday afternoon on the [Wild Salmon Policy Implementation Plan—Moving from Policy to Action](#). The planning team does a great job, first offering a guided tour up Mosquito Creek with local streamkeepers,



Minister Wilkinson and Jane Thornthwaite, MLA for North Vancouver-Seymour

then welcoming 100 participants to hear from Minister Wilkinson, Sarah Murdoch, the DFO’s WSP lead, and myself. After the presentations there is time for coffee and mingling, then Sarah and I are joined by Steve MacDonald and Dave Patterson from the Pacific Science Enterprise Centre to field questions, comments and concerns from participants. The event is well attended by community, streamkeepers, and politicians from local, provincial and federal governments.

[\(view workshop resources/presentations and Facebook Photo Album\)](#)

Facebook lights up with postings from the event. Streamkeepers are great communicators!

Local MLA Jane Thornthwaite writes: “Great event! Heartening to see so many partnerships together for salmon conservation and enhancement.” The note says what I wanted to express here, that salmon and streams bring us together.

The Pacific Streamkeepers Federation posts our events on Facebook to share some of the amazing community opportunities we get to be a part of. Check us out at <https://www.facebook.com/streamkeepersfederation/>

Footnote: Sarah Murdoch and Zo Ann Morten will present “Wild Salmon Policy Implementation Plan, Stock Assessment & Streamkeeper Spawner Surveys (Module 12): how do these all come together?” at the SEP Community Workshop. ●

—Zo Ann Morten,
Executive Director,
Pacific Streamkeepers Federation

@ Salmon Site-ings



Climate Kids

Environment and Climate Change Canada interactive [website](#) to teach children and teens aged 8-15 about climate change and their role in the protection and conservation of the environment. The site features games, activities and tips about the actions they can take in their daily lives, at home, at school, and in their communities, including [reducing plastic in the ocean](#).



Fisheries Magazine article

A September 2018 [article](#) in *Fisheries*, the monthly magazine of the [American Fisheries Society](#), explores whether restoration of salmonid habitat increases fish abundance and survival or concentrates fish, and looks at the influence of project scale, location and fish life history.



BC Hydro Power Smart for Schools Salmon Lifecycle Game

[Power Smart for Schools](#) is an online hub of energy-focused activities, lessons and resources for teachers looking for new ways to inspire their students, including the [Salmon Lifecycle Game](#) for Grade 2 students that follows the salmon's journey from the river to the ocean and back upstream. Students learn how other living things are connected to salmon and the role humans play in caring for our resources.



PSKF Module 5 Storm Drain Marking

The Pacific Streamkeepers Federation's "yellow fish" storm drain marking [module](#) includes a series of four [colouring sheets and placemats](#)—how to identify salmon species fry; aquatic creatures; characteristics of a healthy stream, and a guide to streamside plants—to help educate school children on the importance of stream health and protecting salmon habitat.



Canadian Network for Ocean Education (CaNOE)

Promotional [video](#) for the [Canadian Network for Ocean Education](#) which provides a platform for learning, dialogue and communication about ocean literacy in Canada, to increase understanding of the importance of the ocean and our relationship with it, by bringing together scientists and educators and other stakeholders.



Chum egg transfer from Puntledge to Gwa'ni

The 'Namgis First Nation in Alert Bay [document](#) the transfer of two million eyed chum eggs from the [Puntledge River Hatchery](#) in Courtenay to their [Gwa'ni Hatchery](#), a SEP Community Economic Development Plan project, to assist in the rebuilding of a chum run back into the Nimpkish River.



Ocean School

Promotional [video](#) for [Ocean School](#), a DFO-sponsored initiative to bring ocean literacy to schools in Canada and around the world through storytelling, immersive technologies and interactive media. Its inquiry-based approach advances critical thinking, innovation and environmental awareness to help students understand how we shape the ocean and the ocean shapes us.

To receive [StreamTalk](#) by e-mail, please contact Joanne Day at Joanne.Day@dfo-mpo.gc.ca with the subject line "StreamTalk by e-mail."

StreamTalk

is published collaboratively by Fisheries and Oceans Canada and stewardship, enhancement, education and streamkeeper groups in B.C. and Yukon that care for salmon and their habitat.

You will find past issues of *StreamTalk* [here](#).

The current issue can be viewed [here](#).

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