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The B.C. Wildlife Federation gratefully acknowledges that our head office is located on the traditional, ancestral, and unceded territories of the Semiahmoo, sqaciya? temaxw (Katzie), S'ólh Téméxw (Stó:lō), Á,LENENEØ ŁTE (WSÁNEĆ), Kwantlen, Stz'uminus, and Hul'qumi'num Treaty Group Nations.

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Our programs and projects take place across the province of British Columbia, within the traditional territories of many First Nations communities. We thank our Indigenous partners for their continued collaboration, hospitality, and shared commitment to protecting watersheds.

CONSERVATION STEWARDSHIP DIRECTOR'S MESSAGE

Neil Fletcher, BCWF Director of Conservation Stewardship

As we reflect on 2024, I'm proud to share the strides made by the B.C. Wildlife Federation's Conservation Stewardship Department in advancing watershed health and community resilience across the province. This year's achievements are a testament to the power of investing in people, fostering local partnerships, and scaling up nature-based solutions to meet the growing environmental challenges we face.

Watersheds are more than just geographic features—they are the lifeblood of ecosystems, communities, and economies. Strengthening this sector requires bold collaboration, innovative science, and a deep commitment to stewardship. Through our continued efforts, we are demonstrating that it's possible to restore ecological function, empower local leadership, and build climate resilience from the ground up. Thanks to the dedication of our teams and partners, 2024 saw the enhancement of over 744,000 m² of wetland and riparian habitat, the installation of 71 Beaver Dam Analogues (BDAs), and the removal of more than 22,000 kg of debris—critical milestones for both habitat and species recovery.

Projects like the Yaqan Nukiy Wetland Restoration, the Mosquito Creek revival, and the Ginty's Pond enhancement highlight how Indigenous leadership, science, and hands-on action can come together to drive lasting impact. Meanwhile, our work with the Wetland Ecosystem Services Protocol (WESP) continues to equip communities and decision-makers with the tools they need to recognize and protect the value of wetlands.

We also know that lasting change depends on investing in people. This year alone, we trained 77 individuals in WESP, engaged 146 Indigenous community members, and supported five staff in pursuing professional designations. These efforts are helping to build a skilled, diverse, and resilient workforce ready to lead the next generation of conservation work.

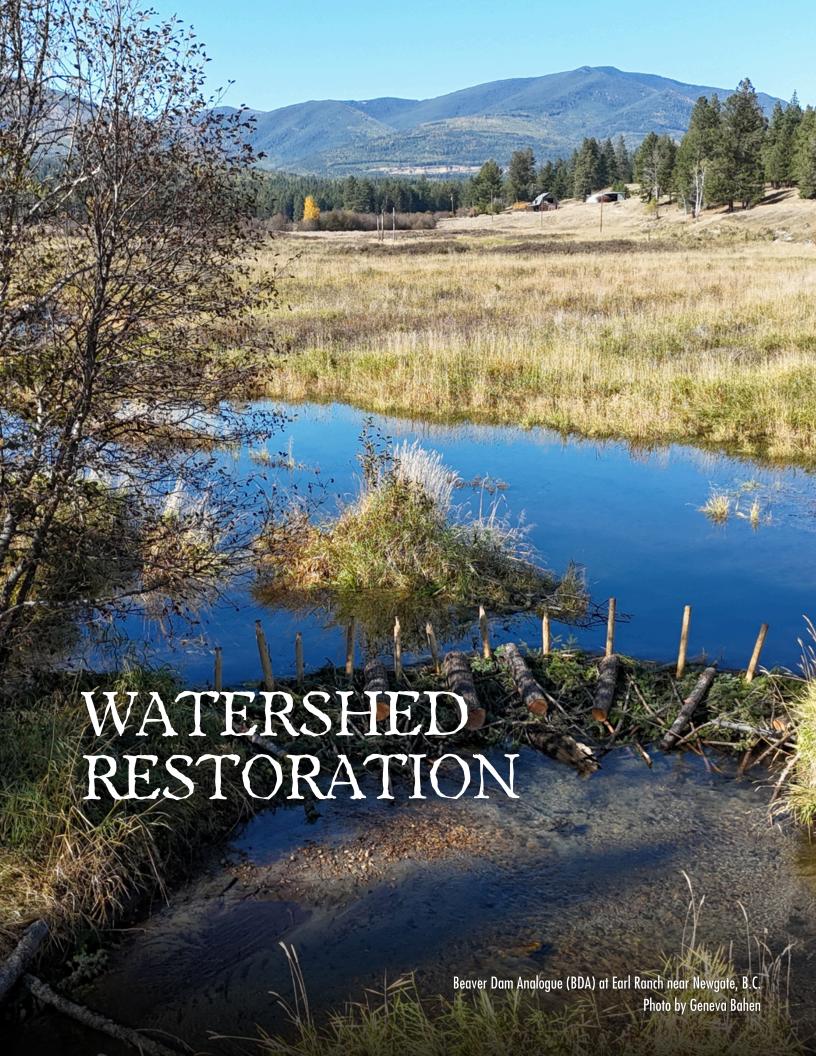
From beaver coexistence workshops in the Skeena to streamkeeping in Delta, the collective efforts of our partners, funders, and volunteers have allowed us to restore ecosystems and uplift communities across British Columbia.



To all who've contributed—your passion, knowledge, and collaboration continue to inspire us. Together, we are shaping a future where watersheds thrive and the people who depend on them flourish.

With gratitude,

Neil Fletcher



2024 WATERSHED **RESTORATION STATS**

Total Area of Wetland and Riparian Habitat Restored	744,811 m ²
Length of Stream Habitat Restored	4,117 m
Total Area of Invasive Species Treated	$2,272 \mathrm{m}^2$
Beaver Dam Analogues (BDAs) Installed	71
Total Debris Removed	22,780 kg



10,000 WETLANDS

USING BEAVER-BASED RESTORATION TO ENHANCE WATERSHED RESILIENCE

Since its launch in early 2023, the BCWF's *10,000 Wetlands* project has made significant strides in Low-Tech Process-Based Restoration (LTPBR), addressing key environmental challenges such as drought, fire recovery, and overall watershed health. Led by Jennifer Rogers, *10,000 Wetlands* aims to construct 100 Beaver Dam Analogues (BDAs) across B.C., training a variety of professionals along the way and catalyzing the restoration and enhancement of over 10,000 wetlands and floodplains province-wide.

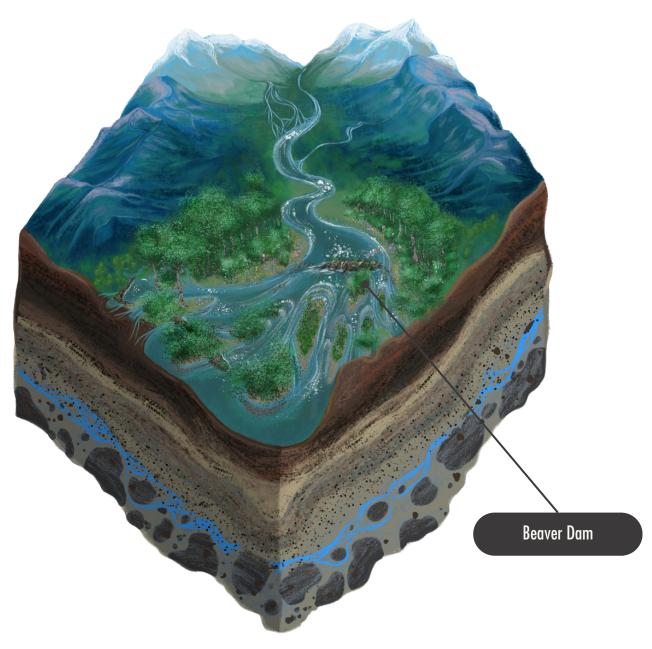
Through this initiative, the BCWF is advancing science, policy, and public awareness of process-based restoration, promoting nature-based solutions that support biodiversity and strengthen watershed resilience.

- 7 BDA project sites
- 71 BDAs constructed
- · 34 potential BDA sites assessed
- 32 individuals trained in LTPBR techniques

BASICS OF BEAVER-BASED RESTORATION

Beaver-based restoration is a type of LTPBR—an approach to stream restoration that uses simple, temporary instream structures to mimic natural systems and initiate or enhance specific processes that regulate healthy ecosystems. Beaver-based restoration intends to bring back the ecological benefits of beaver dams to degraded streams.

The below schematic illustrates the effects of natural beaver dams and BDAs on waterways and land.



Artwork for Chenoa Gao



GORDON CREEK ENHANCEMENT PROJECT

In July, the BCWF—in partnership with the Nooaitch Indian Band and with support from the <u>Okanagan Nation Alliance (ONA)</u> — built our first set of BDAs as part of the *10,000 Wetlands* project at Gordon Creek, near Merritt, B.C.



SPIUS CREEK ENHANCEMENT PROJECT

In July, the BCWF, in collaboration with the <u>Nooaitch Indian</u> <u>Band</u> and the <u>Lower Nicola Indian Band</u>, installed a series of BDAs on a Spius Creek tributary near Merritt, B.C. We were also joined by staff from the <u>Fisheries and Oceans Canada (DFO)</u>, <u>Interior Wildlife Rehabilitation Society</u>, and <u>Ducks Unlimited</u>.



SEKW'EL'WAS TRADITIONAL TERRITORY STREAM ENHANCEMENT PROJECT

In August, the BCWF, in collaboration with <u>Splitrock</u> <u>Environmental</u> and the <u>Cayoose Creek Indian Band</u>, installed seven BDAs across 400 metres in the Sekw'el'was Traditional Territory.



VOGHT CREEK **ENHANCEMENT PROJECT**

In July, the BCWF, in collaboration with the Nooaitch Indian Band and the Lower Nicola Indian Band, installed 17 BDAs along Voght Creek near Merritt, B.C.



MCINTYRE WETLAND **ENHANCEMENT PROJECT**

In September, the BCWF, alongside the McLeod Lake Indian Band, constructed 17 BDAs at McIntyre Wetland, focusing on stabilizing seven critical headcuts—steep drops in the streambed that contributed to erosion.



EARL RANCH WETLAND ENHANCEMENT PROJECT

In October, the BCWF, in collaboration with Yadit 7a knugli'it (Tobacco Plains Indian Band), constructed ten BDAs at Earl Ranch in Newgate, B.C.

Beaver Co-Existence Training and Beaver Dam Analogue Build:

BEAVER COEXISTENCE WORKSHOP IN THE SKEENA/KISPIOX REGION

Learn more on page 31

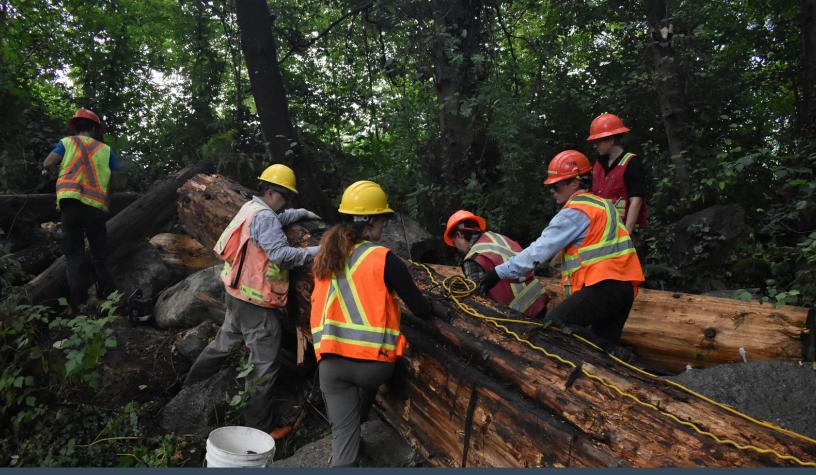




BCWF staff and project partners from the Nooaitch Indian Band and the Lower Nicola Indian Band stand atop a completed BDA at Voght Creek near Merritt, B.C.



In 2024, the 10,000 Wetlands project continued with support from the Province of BC's Watershed Security Fund, Fisheries and Oceans Canada's British Columbia Salmon Habitat Restoration and Innovation Fund, and the Habitat Conservation Trust Foundation.



Mosquito Creek Phase Two partners preparing to install large woody debris into the stream system

MOSQUITO CREEK RESTORATION (PHASE TWO)

As part of Phase Two of the Mosquito Creek restoration, the B.C. Wildlife Federation, North Shore Streamkeepers and Skwxwú7mesh Úxwumixw (Squamish First Nation) added large woody debris structures to increase stream complexity and create better—more natural and resilient—habitat for salmon. This work builds on our success in 2021, when salmon returned to the creek after years of absence. Since then, dozens have come back each year. The large woody debris structures are expected to last 20–30 years, as the logs were chosen for their size and slower decay rate.

After the completion of the 2024 restoration, adult chum salmon returned in significant numbers for the first time in over 40 years.

Funding for this project was provided by the <u>Province of BC's Watershed Security Fund</u>.

- 130 metres of creek restored
- 45 cedar logs placed
- 150+ boulders added





Photos by Keegan Cassidy



Installing flexi baffles - Flexi Baffles are designed to assist with upstream fish passage by altering the flow of water through culverts and providing areas for fish to rest

BLAKE AND COUGAR CREEK RESTORATION

In 2024, the BCWF collaborated with the Cougar Creek Streamkeepers to restore sections of Blake Creek and Cougar Creek in Delta, B.C., during a workshop focused on enhancing aquatic habitats and supporting biodiversity.

The BCWF and the Streamkeepers co-hosted a free, two-day Fish Habitat Stewardship Workshop, offering hands-on experience in riparian planting, building flexi-baffles, and constructing rock weirs to benefit salmon and trout populations.

Thank you to our funders, Habitat Conservation Trust Foundation, Pacific Salmon Foundation, Gulf & Fraser, and the Government of Canada (Ministry of Environment and Climate Change) for making this workshop possible.

- 245 linear m of stream restored
- 310 plants planted







Photos by Shane Scott and Emma Kingsland



Heavy equipment at work at the Yagan Nukiy wetland restoration site

YAQAN NUKIY WETLAND RESTORATION

The Yaqan Nukiy Wetland Restoration Project in Creston, B.C., stands as the largest Indigenous-led wetland restoration initiative in Canada, covering a 517-hectare area. Under the leadership of Norm Allard, Community Planner for the <u>Lower Kootenay Band</u>, the project focuses on creating wetland pools that support a diverse range of species and decommissioning dikes to allow natural flooding by the Kootenay River—thereby reconnecting the floodplain and restoring natural hydrological processes on traditional Yaqan Nukiy territory. These ongoing restoration activities continue to enhance habitats for various wildlife species, including those at risk, and contribute to the overall health and resilience of the ecosystem.

Funding for this project was provided by the <u>Province of BC's Watershed Security Fund</u>.

2024 Project Highlights:

• In 2024, with the assistance of wetland restoration specialist Tom Biebighauser, the Yaqan Nukiy project restored a total of 720,600 m² (72.06 hectares) of wetland habitat



Photo by Norm Allard



Birch Matkowski (BCWF Project Lead) in the restored Phase 2 restored Crooked Horn wetland site

CROOKED HORN WETLAND RESTORATION — PHASE TWO

In October 2024, the BCWF, in partnership with the <u>Slocan River Streamkeepers</u> and local organic farmers Gord and Ange, launched Phase Two of the wetland restoration at <u>Crooked Horn Farm</u> in Winlaw, B.C. This phase expanded the existing wetland by adding pools and enhancing the surrounding riparian area. Native vegetation—including various trees, shrubs, herbaceous perennials, and 200 common camas bulbs—were planted to enrich wildlife habitat.

The project also reclaimed an area of farmland using soil excavated from the wetlands, allowing the farmers to extend their growing season by mitigating seasonal flooding impacts.

Funding for this project was provided by the <u>Regional District of Central Kootenay Conservation</u> <u>Fund</u>, the <u>Slocan Valley Legacy Fund</u>, and the <u>Province of BC's Watershed Security Fund</u>.

- 4,311 m² restored
- Planted and livestaked 399 plants
- Enhanced 2743 m² of farmland









Rebecca Dodge (BCWF) and contractors Keith and Dave discussing project details during wetland construction on South Pender Island

WETLAND RESTORATION ON PRIVATE LAND — PENDER ISLAND

In 2024, the BCWF launched a wetland restoration project on private land on Pender Island, led by staff member Rebecca Dodge. The team excavated organic material from an old farm field to create a deep, permanent wetland pool and is designing shallow, seasonal pools to further enhance habitat diversity. The removed material is being repurposed to support native wetland and riparian plant growth around the site.

Funding for this project was provided by the <u>Environment and Climate Change Canada's Habitat Stewardship Partnership</u>, and the <u>Province of BC's Watershed Security Fund</u>.

- 2,900 m² restored
- 315 m² of invasive species treated





BCWF staff members Emma, Kyra, Geneva, Erika, and Alyssa conducting some post-restoration invasive plant removal at Ginty's Pond in Cawston, B.C.

N?ASXWT (GINTY'S POND) WETLAND RESTORATION — PHASE TWO

In 2024, the BCWF, in collaboration with partners, advanced Phase Two of the n?aςxwt (Ginty's Pond) wetland restoration in Cawston, within the territory of the <u>Syilx Nation</u>. Community input emphasized the need for water storage, wildlife conservation, and recreational uses such as winter skating and summer kayaking. Historically an oxbow of the Similkameen River, Ginty's Pond had become overgrown with cattails, reducing habitat diversity.

Phase Two focused on creating an additional two hectares of open-water habitat and 0.5 hectares of upland riparian habitat by planting native species such as cottonwood, woods rose, red osier dogwood, and milkweed. These efforts aimed to transform the area into a diverse wetland supporting a wide range of species, including the western painted turtle.

Project partners included the BCWF, Southern Interior Land Trust (SILT), Ministry of Water, Land and Resource Stewardship, Lower Similkameen Indian Band, Rewilding Water and Earth Inc.

Funding support for this phase was provided by the Community Foundation South Okanagan and the Province of BC's Watershed Security Fund

2024 Project Highlights:

- 17000 m² restored
- 115+ turtle basking logs installed
- 1900+ m² of invasive species treated



Photo by the Southern Interior Land Trust



The first full bin of the 2024 season

FRASER RIVER TIDAL MARSH CLEAN-UP PROJECT

In 2024, the BCWF, <u>Tsawwassen First Nation</u>, and South Coast Conservation Land Management Program, advanced Phase Two of the Fraser River Tidal Marsh Clean-up Project.

Building upon the initial phase in 2021, the second phase of the project (2023-2025) aimed to eliminate an additional 15,000 kilograms of waste from a 450-hectare area of the Fraser River Tidal Marsh. By July 2024, the team had already surpassed expectations; collecting and removing over 20,000 kilograms of waste.

The project also included collaborations with organizations such as <u>Friends of Semiahmoo Bay</u> and <u>Fisheries and Oceans Canada (DFO)</u> to survey invasive species and monitor salmon populations, further enhancing conservation efforts in the region for the benefit of migratory birds, fi2qsh species, and overall ecosystem resilience.

Funding support for this phase was provided by <u>Wildlife Habitat Canada</u>, <u>Environment and Climate Change Canada</u> and the <u>Province of BC's Watershed Security Fund</u>.

- 22,780 kg of debris removed
- 1,535,000 m² covered









One of the many loads of debris carried from island to mainland



TRAINING, OUTREACH, & **ENGAGEMENT STATS**

First Nations Trainings & Engagements **Reaching over 100** individuals Outreach Reaching 1,684 individuals 14 Wetland & Fish Habitat Workshops **Reaching 238** individuals Conferences **Reaching over 200** Attended individuals Webinars **Reaching over 600** Hosted individuals Low-Tech Process-Based **Training 32 professionals** Restoration Training Sessions on LTPBR techniques



BCWF field staff Nadia and Katerina, alongside Kaia Bjorklund of Lheidli T'enneh First Nation, before heading to conduct WESP assessments in the Sub-Boreal Interior

WETLAND ECOSYSTEM SERVICES PROTOCOL (WESP) TRAININGS

Launched in 2021, the BCWF's Wetlands Workforce has continued to lead the Wetland Ecosystem Services Protocol (WESP) project. Over the years, field crews and First Nations partners have been trained in wetland ecology and drone use to support field assessments. The project's goal is to calibrate the WESP model by collecting data from over 100 diverse wetlands within each ecoprovince—regions defined by similar climate, geological history, and physiography.

In 2024, alongside project partners, we focused our efforts in the Sub-Boreal Interior and Southern Interior ecoprovinces. In the Sub-Boreal Interior, BCWF staff Katerina Sofos and Nadia Pagliaro collaborated with Lheidli T'enneh First Nation, Saik'uz First Nation, Binche Whut'en, and Ti'azt'en Nation. In the Southern Interior, Kyla Rushton worked with the Okanagan Indian Band, Okanagan Indian Band, Nooaitch First Nation, Nation Band to assess wetland sites and gather data.

We are grateful to our 2024 WESP partners for sharing their cultural perspectives and invaluable guidance in working within their territories.

- 77 people trained to use the WESP tool
- 10 First Nations partnered with



BCWF team & Field Technicians from Saik'uz First Nation including Jerry George & Caleb Nome



Delaney from the Okanagan Nation Alliance (ONA) digging a soil auger in a wetland converted to hayfield near Osoyoos B.C.



Joseph and Ross from Binche Whut'en & Ti'azt'en First Nations doing vegetation identification for a WESP assessments

Training Event Feature:

REVITALIZING INDIGENOUS LAW FOR LAND, AIR, AND **WATER (RELAW) PROGRAM TOUR**





Taylor Sounding-Stone, Lincoln Taylor, and Neil Fletcher

The BCWF joined members of B.C.'s Watershed Security Coalition, Cheam First Nation, Shxw'ōwhámél First Nation, and the Lower Fraser Fisheries Alliance (LFFA) on the Fraser River as part of a RELAW Program tour. RELAW supports the application of Indigenous laws to environmental governance and stewardship, with a focus on developing an Indigenous-led Fish Habitat Restoration Plan and Climate Adaptation Strategy for the Lower Fraser. During the tour, Elder Sonny Mchalsie of Shxw'ōwhámél First Nation shared a detailed history of the area, offering invaluable knowledge and perspective.



BCWF field staff Katerina, Nadia, Jen, Geneva, and Spencer alongside DFO staff atop a BDA in Voght Creek

LOW-TECH PROCESS-BASED RESTORATION TRAININGS

As part of the BCWF's 10,000 Wetlands project, we are building a province-wide network of trained practitioners to carry out Low-Tech Process-Based Restoration (LTPBR) techniques such as Beaver Dam Analogues (BDAs) and Post-Assisted Log Structures (PALS)—to enhance watershed resilience.

Through hands-on training and workshops, we're equipping practitioners from First Nations, environmental NGOs, government, and community organizations with the skills to assess, design, construct, and monitor restoration sites.

This work supports the core pillars of the 10,000 Wetlands initiative: navigating regulatory pathways, applying sound science, fostering collaboration, and providing implementation support. By strengthening local capacity across B.C., we aim to accelerate the adoption of nature-based solutions that restore wetlands, promote biodiversity, and improve watershed health in a changing climate.

Photo by B.C. Wildlife Federation

2024 Project Highlights:

 32 individuals were trained in Low-Tech Process-Based Restoration techniques, including building Beaver Dam Analogues (BDAs) and Post-Assisted Log Structures (PALS)



In 2024, participants represented six First Nations and Indigenous groups, <u>Fisheries and Oceans</u> (<u>DFO</u>), the <u>Province of BC</u>, and various nonprofit organizations.

Training Event Feature:

BEAVER COEXISTENCE WORKSHOP IN THE SKEENA/KISPIOX REGION





As part of the 10,000 Wetlands initiative (focused on Low-Tech Process-Based Restoration), the BCWF Watershed Team partnered with the Gitksan Watershed Authority, Silver Creek Wildlife, and Fisheries and Oceans Canada for a beaver coexistence workshop in the Skeena/Kispiox region. The team shared techniques for building like beavers to support habitat restoration.

At the site, an active beaver dam with a five-foot hydraulic drop posed challenges for fish migration. To balance fish passage and beaver habitat, the team led the construction of a Beaver Dam Analogue (BDA), successfully raising water levels to create a pool that helps fish navigate upstream. With guidance from Silver Creek Wildlife, the group then installed a pond leveler to regulate water flow and a modular fish ladder—unlocking kilometres of salmon spawning habitat while preserving crucial rearing areas.



Training Event Feature:

NIGHT QUEST AT PACIFIC SPIRIT REGIONAL PARK

In March 2024, the BCWF attended Metro Vancouver's Night Quest at Pacific Spirit Regional Park, spending two evenings educating attendees about wetlands and wildlife.



Volunteer Event Feature:

FRASER RIVER TIDAL MARSH CLEAN-UP **VOLUNTEER EVENT 1**

In May 2024, the BCWF's FRTMC crew and Wetlands Education Program hosted a community clean-up at the Oak Street Bridge in Richmond, removing debris to support the health of the Fraser River Estuary.



Training Event Feature:

GINTY'S POND TOUR DURING THE **MEADOWLARK NATURE FESTIVAL**

In May 2024, BCWF staff led a tour of N?a[°]x^wt (Ginty's Pond) in Cawston for the Meadowlark Festival, where participants explored wetland restoration and species identification through hands-on activities.



Volunteer Event Feature:

FRASER RIVER TIDAL MARSH **CLEAN-UP VOLUNTEER EVENT 2**

In June 2024, BCWF staff and the <u>Tsawwassen First Nation</u> hosted a volunteer clean-up event to remove debris and educate participants on invasive species and the ecological threats that debris poses to the Fraser River Estuary.



Photos by B.C. Wildlife Federation



Invasive yellow-flag iris removal at the Creston Valley Wildlife Management Area

WETLANDS EDUCATION PROGRAM

The Wetlands Education Program (WEP) is where the BCWF's Watershed Team began. Since 1996, the BCWF's Wetlands Education Program has provided hands-on training and resources to support wetland stewardship across British Columbia, equipping participants with the skills to assess, protect, and restore vital wetland ecosystems.

Each year, the program offers Wetlands Institute, Wetlandkeepers, and Map Our Marshes, along with other outreach events. In 2024, the program was led by Alana Higginson and Erika Kolli.

Training Event Feature:

COLUMBIA MOUNTAINS INSTITUTE INTRODUCTION TO WETLAND CLASSIFICATION COURSE





classify and delineate wetlands

In July, the BCWF co-led instruction for a Wetland Classification Introduction course hosted by the Columbia Mountains Institute of Applied Ecology in Revelstoke. BCWF's Alana Higginson and Kyla Rushton facilitated sessions alongside experts Deepa Filatow and Cora Skaien from the Province of BC, and Erin Roberts from Environment and Climate Change Canada. The course combined classroom learning with hands-on field training, giving all 28 participants practical experience in wetland classification.

Training Event Feature:

WETLANDS INSTITUTE, 2024





Wetland Institute participants engaging in hands on wetland restoration

The BCWF's 22nd Annual Wetlands Institute took place in September 2024 in Creston and Salmo, B.C., on Ktunaxa and Sinixt territories, bringing together 14 individuals for a week of hands-on wetland restoration training.

Participants conducted fieldwork at the <u>Creston Valley Wildlife Management Area</u>, explored wetland policy under the Water Sustainability Act, and studied habitat connectivity with the Kootenay Conservation Program. A key highlight was the Yagan Nukiy wetland restoration project, where dikes were decommissioned to restore natural flooding and habitat.

The 2024 Wetlands Institute equipped participants with practical skills, ecological knowledge, and conservation tools to support wetland stewardship across British Columbia.







The 2024 Wetlands Institute was funded by the Province of BC's Watershed Security Fund, Wildlife Habitat Canada, and the Habitat Conservation Trust Foundation.

Photos by Alana Higginson

Training Event Feature:

WETLANDKEEPERS, 2024



Wetlandkeepers participants studying macroinvertebrates, Quadra Island 2024



Participants of the 2024 Wetlandkeepers workshop in Nanaimo practicing wetland and soil classification

BCWF's Wetlandkeepers courses are two-and-a-half-day workshops that educate participants about wetland conservation, stewardship, and restoration. These workshops provide communities with hands-on experiences, tools, and resources needed to steward their wetlands. The Wetlandkeepers program covers topics such as wetland classification, species identification, and soil sampling.

Additionally, a Map Our Marshes Tea & Walk event was hosted in collaboration with the Lil'wat First Nation, with 13 First Nations participants attending.

The 2024 Wetlandkeepers events were funded by the Province of BC's Watershed Security Fund, Wildlife Habitat Canada, Mosaic Forest Management, and FortisBC.

IN 2024, OUR WEP TEAM HOSTED THREE **WETLANDKEEPERS WORKSHOPS:**

- Galiano Island 22 participants
- Quadra Island 21 participants
- Nanaimo 23 participants





Soil sampling at Brookwood Park during the Nanaimo Wetlandkeepers



Collecting data for pre-restoration monitoring during the Galiano Island Wetlandkeepers

IN 2024, THE BCWF'S WATERSHED TEAM ALSO HOSTED SEVERAL VIRTUAL EDUCATION EVENTS:

- Lunch in the Wetlands:
 - Wetland Fungi
 - Utilizing Drones in the Field
 - Hope in the Face of Climate Change
 - Amphibians and Egg Mass Identification
 - <u>Low-Tech Process-Based Restoration: Design & Construction</u>
 <u>Considerations</u>
- <u>Understanding Potential Risks, Uncertainties, and Benefits of Low-Tech Process-Based Restoration</u>



Drone shot of urban wetland in Kelowna

Photo by Kyla Rushton



Fish identification during a FHREP workshop

FISH HABITAT RESTORATION AND **EDUCATION PROGRAM**

The BCWF's Fish Habitat Restoration & Education Program (FHREP) focuses on restoring critical fish habitat while fostering community engagement and knowledge-sharing. Through hands-on restoration projects, training workshops, and outreach initiatives, the program works to enhance aquatic ecosystems, improve fish populations, and equip communities with the skills needed to protect and restore B.C.'s waterways. By collaborating with Indigenous partners, conservation groups, and local stakeholders, the program promotes sustainable stewardship and long-term habitat resilience.

Photo by Jamie Long

Workshop Feature:

BLAKE AND COUGAR CREEK WORKSHOP





Katie (BCWF) leading participants through the fish identification section of the workshop

In September 2024, the BCWF, in collaboration with the Cougar Creek Streamkeepers, hosted 33 participants for a free two-day streamkeeping workshop focused on Blake and Cougar Creeks in Delta. The workshop provided participants with hands-on experience in urban stream restoration techniques, including the installation of flexi-baffles to enhance fish habitat and benthic invertebrate sampling to assess stream health.

Guest speakers discussed strategies for increasing fish habitat, fish identification, and local restoration efforts to support urban streams. Representatives from the Kwantlen First Nation shared insights into traditional land use and the cultural significance of these waterways.

The workshop emphasized community involvement and collaboration, highlighting the importance of local stewardship in restoring and maintaining urban salmon-bearing streams.

Workshop Feature:

MOSQUITO CREEK RESTORATION WORKSHOP





Workshop participants preparing to place large woody debris and cabled boulders into the stream

In the summer of 2024, the BCWF hosted 12 participants for a hands-on restoration workshop at Mosquito Creek in North Vancouver, providing practical experience in riparian planting and in-stream habitat enhancement.

Participants learned from Dave Harper, head of BCIT's Ecological Restoration Program, and gained hands-on experience securing Large Woody Debris (LWD) installations in streams.

This workshop was part of a larger restoration effort with the North Shore Streamkeepers and Skwxwú7mesh Úxwumixw (Squamish First Nation).

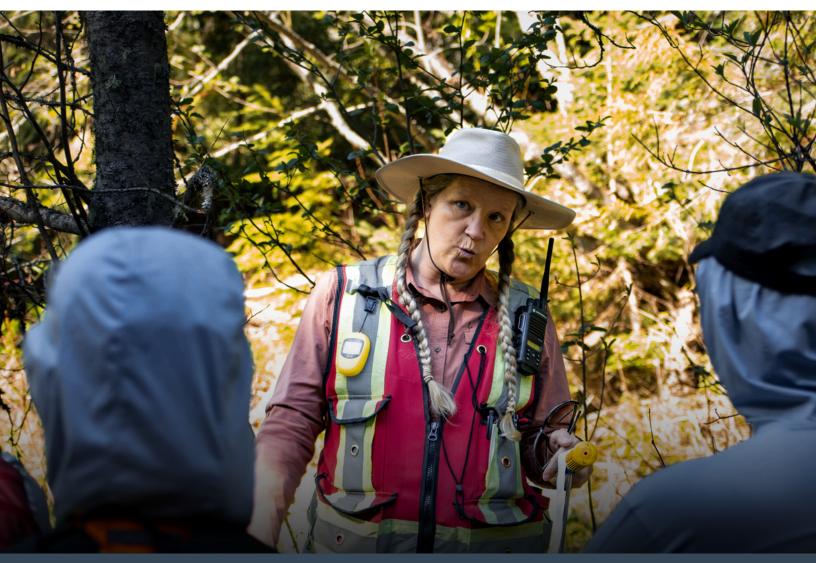
In 2024, both FHREP workshops were funded by Environment and Climate Change Canada, the Habitat Conservation Trust Foundation, and the Province of BC's Watershed **Security Fund**



ENHANCING EXPERTISE IN WATERSHED STEWARDSHIP

In 2024, BCWF's Watershed Team continued to prioritize building a network of watershed restoration professionals. Team members gained certifications and professional designations while collaborating with partners to foster shared knowledge and skill development. In total, 15 team members attended 26 training events.

Notably, over 85% of the BCWF's Watershed Team in 2024 were women.



Robin Annschild Wetland & Stream Restoration Specialist (Rewilding Water and Earth Inc.), leading BCWF staff through a multi-day Erosion and Road Impact Training at the Cambridge-Violin Restoration Site in the West Kootenays

Photo by Jamie Long

2024 BCWF STAFF TRAINING EVENTS

Event Highlights



Low-Tech Process-Based Restoration Training provided by Swift Water Designs

BCWF staff travelled to Bly, Oregon, for hands-on training in Low-Tech Process-Based Restoration. This training greatly informed how the team approached building Beaver Dam Analogues (BDAs) throughout 2024.



Pond-leveler (Beaver Co-existence) Training Training provided by Silver Creek Wildlife

In Kimberley, B.C., our team received hands-on training in building and installing pond levelers. Two devices were installed in active beaver ponds to regulate water levels, prevent flooding, and ensure year-round roadway accessibility.



Baseline Monitoring Training Training provided by Jennifer Rogers, BCWF

In May 2024, field crews joined BCWF's Beaver Restoration Lead to install baseline monitoring stations and collect channel profiles, drone imagery, and water quality data. This hands-on training enhanced the team's ability to track changes in stream morphology, streambed elevation, flow, and water quality during the 2024 BDA installations.

2024 BCWF STAFF TRAINING EVENTS

Event Highlights



European Green Crab Monitoring

Training provided by the Friends of Semiahmoo Bay Society and Fisheries and Oceans Canada

The BCWF's Fraser River Tidal Marsh Clean-up Crew joined the Friends of Semiahmoo Bay Society and Fisheries and Oceans Canada to assist with debris removal and to learn about and support the monitoring of the invasive European Green Crab (Carcinus maenas).



Beaver Co-existence Training

Gitxsan First Nation, Silver Creek Wildlife, and and Fisheries and Oceans Canada

In the Skeena/Kispiox area of B.C., members of our team shared beaver-like building techniques and, with assistance from Silver Creek Wildlife, installed a pond leveler to control water flow and a modular fish ladder to aid salmon migration. These ladders enhance spawning habitats while protecting juvenile salmon during rearing.

Additional 2024 Training Events

- · Chainsaw & post-pounder trainings
- Soil and wetland classification courses
- · Moss identification courses
- B.C.Marsh Bird monitoring training

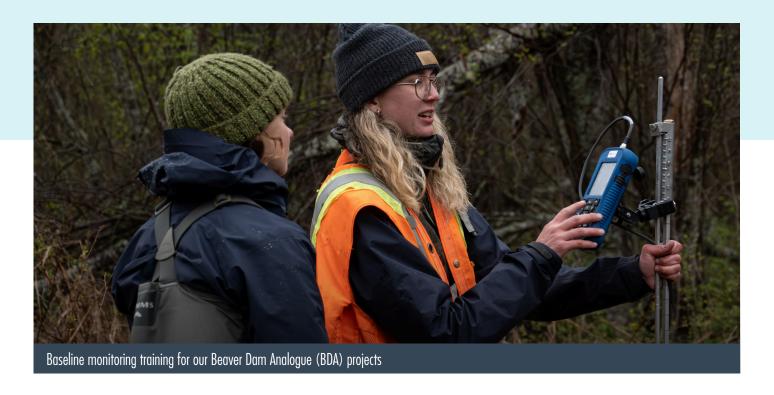
- Bryophyte workshop
- Stream restoration workshops
- Borrow pit workshops

PROFESSIONAL DESIGNATIONS

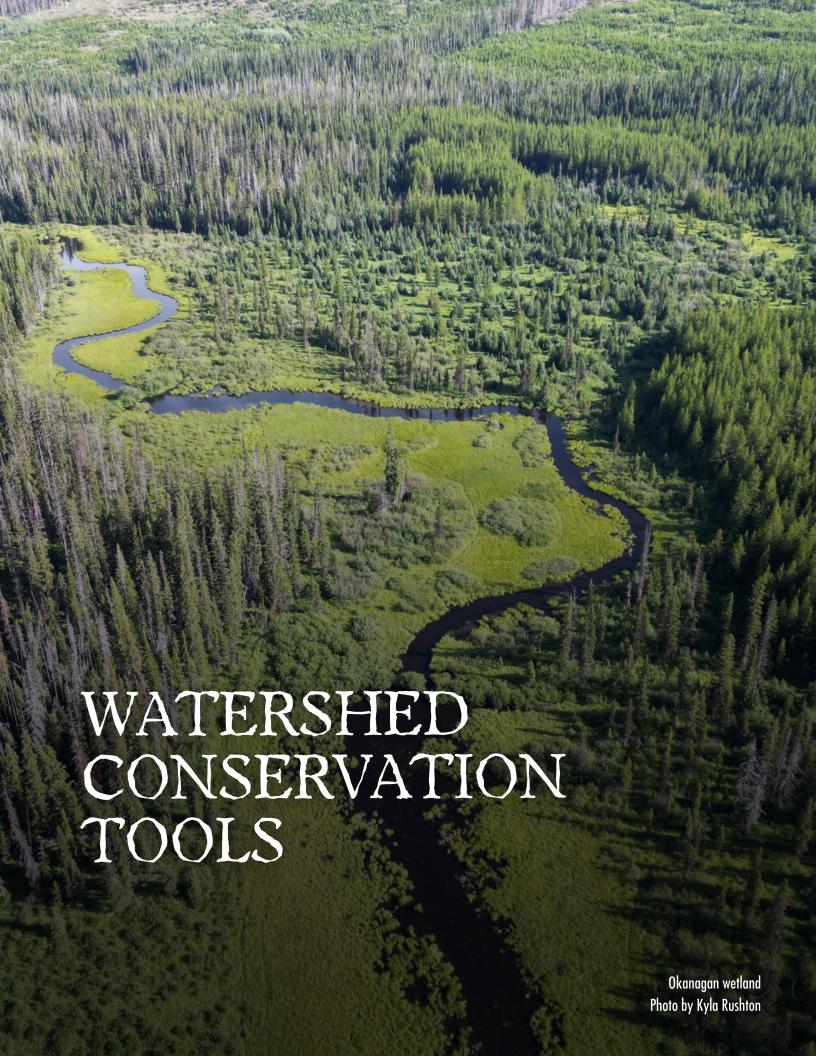
Emerging Leaders in Watershed Restoration

The BCWF Watershed Team is supporting the development of emerging leaders in watershed restoration. Through hands-on experience in wetland restoration and low-tech process-based techniques, team members are honing their expertise while working toward Registered Professional Biologist (R.P.Bio.) designations.

With the support of continued watershed security funding, staff are being equipped with the leadership skills and technical knowledge needed to advance their careers and contribute to the restoration and resilience of B.C.'s landscapes and waterways.



IN 2024, THE BCWF WATERSHED TEAM SUPPORTED FIVE STAFF MEMBERS IN THEIR PURSUIT OF THE REGISTERED PROFESSIONAL BIOLOGIST (R.P.BIO.) DESIGNATION, WITH TWO SUCCESSFULLY ACHIEVING THIS CREDENTIAL.



WATERSHED CONSERVATION TOOLS

WESP ASSESSMENTS, 2024

Over the past three years, the BCWF's Wetland Ecosystem Services Protocol (WESP) initiative has been laying the groundwork for a standardized approach to conserving wetlands in British Columbia.

To be functional, the WESP tool must be calibrated across all eight of B.C.'s ecoprovinces, each defined by unique climate, geological history, and ecological features. This pan-provincial approach ensures the tool captures the diversity and complexity of B.C.'s wetlands, creating a robust framework for their long-term conservation.

In 2024, the BCWF and First Nations partners focused on completing assessments in the Sub-Boreal Interior and Southern Interior ecoprovinces. Field crews visited both backcountry and urban wetland sites in these regions, collecting data to assess the ecological services provided by wetlands.

Sub-Boreal Interior: BCWF's Katerina Sofos and Nadia Pagliaro collaborated with the <u>Lheidli T'enneh First Nation</u>, <u>Saik'uz First Nation</u>, <u>Binche Whut'en</u>, and <u>Tl'azt'en Nation</u>.

Southern Interior: Kyla Rushton and Spencer Haakman partnered with the <u>Okanagan Indian</u> <u>Band</u>, <u>Okanagan Nation Alliance</u>, <u>Simpcw Resources Group</u>, <u>Tsal'alh First Nation</u>, <u>Nooaitch First Nation</u>, and <u>Lower Nicola Indian Band</u>.

In 2024, the Wetland Ecosystem Services Protocol was funded by the <u>Province of BC's Watershed Security Fund</u>.

2024 Project Highlights:

- 62 sites assessed in the Sub-Boreal Interior region
- 80 sites assessed in the Southern Interior region



Sedge illustration by Eryne Donohue



Field technicians from Binche Whut'en First Nation and Tl'azt'en First Nation taking in the comfortable bog during WESP and CNWI assessments

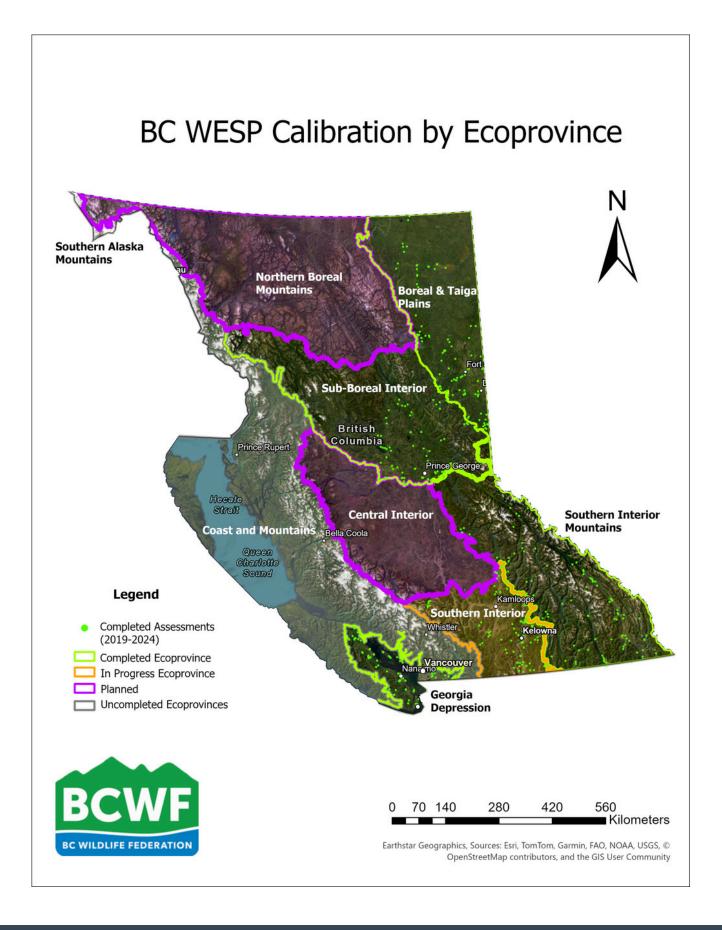
WESP PROGRESS TO DATE

Since 2021, 340 sites have been assessed across multiple ecoprovinces:

- Completed: Sub-Boreal Interior, Boreal Taiga Plains, Southern Interior Mountain, Georgia Depression (2021-2024)
- In Progress: Southern Interior (near completion, 2024-2025)
- Upcoming: Central Interior, Northern Boreal Mountains (scheduled for 2025)
- · Remaining: Coast & Mountain

Annual Site Assessments: 2022: 63 sites | 2023: 131 sites | 2024: 146 sites

WATERSHED CONSERVATION TOOLS



CANADIAN NATIONAL WETLAND **INVENTORY ASSESSMENTS, 2024**

BCWF's Involvement with the Canadian National Wetland Inventory (CNWI)

The BCWF is actively contributing to the Canadian National Wetland Inventory (CNWI) to improve wetland mapping and conservation efforts across Canada.

Through collaboration with federal, provincial, and Indigenous partners, the BCWF is working to advance wetland mapping, inform conservation strategies, and support decision-making for watershed management.

2024 Project Highlights:

• A total of 297 CNWI assessments were conducted — 136 in the Southern Interior and 161 in the Sub-Boreal Interior



Drone photo of fen and bog complex

Photo by Nadia Pagliaro

FOREST RANGE EVALUATION PROGRAM (FREP), 2024

Since 2018, the BCWF has worked with the Province of BC's Forest and Range Evaluation Program (FREP) to develop and deliver a standardized protocol for assessing wetlands impacted by forestry operations. Neil Fletcher, BCWF's Director of Conservation Stewardship, has led training workshops for FREP practitioners, forest companies, First Nations, and government staff across the province.

In 2024, Neil and the BCWF team delivered FREP training sessions in Nelson, Vernon, Smithers, and MacKenzie, along with one virtual session—training a total of 30 forestry professionals.



BCWF and Province of B.C. staff during a FREP training session near Nelson, B.C.

Photo by Neil Fletcher





First Nations and Indigenous Groups

- <u>?aġam (Agam)</u>
- <u>?akisqnuk First Nation</u>
- · B.C. Métis Federation
- · Binche Whut'en First Nation
- Cayoose Creek Band (Sekw'el'was)
- Cook's Ferry Indian Band
- Gitksan Watershed Authority
- Katzie First Nation
- Kootenai Tribe of Idaho
- Ktunaxa Nation Council
- Kwantlen First Nation
- Kwadacha Nation
- · Lheidli T'enneh First Nation
- Lil'wat Nation
- · Lower Nicola Indian Band
- Lower Similkameen Indian Band
- McLeod Lake Indian Band
- Nak'azdli Whut'en First Nation
- Nechako Environmental Water Stewardship Society

- Nooaitch Indian Band
- Ntityix Development Corporation
- Ntityix Resources LP
- Okanagan Indian Band
- Okanagan Nation Alliance
- · Penticton Indian Band
- Saik'uz First Nation
- Scw'exmx Tribal Council
- Shuswap Indian Band
- Simpcw First Nation
- Sinixt Confederacy
- Squamish Nation
- Stgeeye' Learning Society
- Tk'emlúps te Secwépemc
- Tobacco Plains Indian Band (Yaqit <u>Pa·knuqiiit)</u>
- Tsawwassen First Nation
- Upper Nicola Band
- Westbank First Nation
- · Yaqan Nukiy Band (Lower Kootenay Band)

PARTNERS & FUNDERS

Consultants

- Associated Environmental Consultants
- · Cirque Ecological
- Geomorphic Environmental Services
- Northwest Hydraulic Consultants
- Rewilding Water & Earth Inc.
- SSE Environment
- Wetland Restoration & Training LLC

Schools

- Nicola Valley Institute of Technology
- Quadra Elementary School
- Simon Fraser University
- University of British Columbia
- Utah State University

Land Owners

- Crooked Horn Farm
- Notch Hill Farm
- · Engelstoft Family Property

Businesses

- Mad Props Marine
- Peace Country Technical Services Ltd.
- Silver Creek Wildlife
- TreeCycle

Government

- BC Parks
- British Columbia Ministry of Forests
- · British Columbia Ministry of Water, Land and Resource Stewardship
- <u>City of Delta Environment & Conservation</u>
- City of Richmond
- Department of Fisheries and Oceans Canada (DFO)
- Environment and Climate Change Canada
- Metro Vancouver



Diving Pacific chorus frog illustration by Chenoa Gao

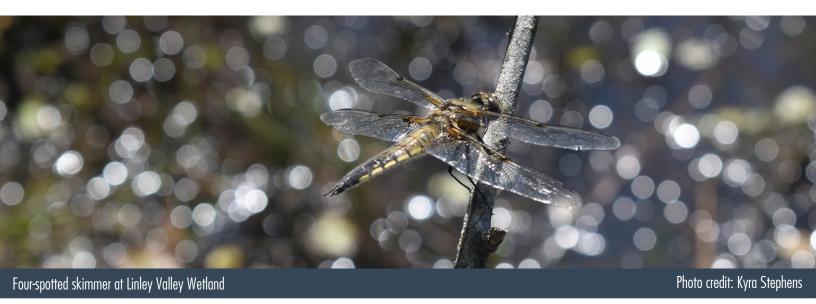
PARTNERS & FUNDERS

Environmental Non-Government Organizations

- Alouette River Management Society
- Armstrong Wetlands Association
- B.C. Small Wetlands Association
- Canadian Wetland Round Table
- · Canadian Wildlife Service
- Central Kootenay Invasive Species Society
- Columbia Mountains Institute of Applied <u>Ecology</u>
- Columbia Wetland Stewardship Partners
- Cougar Creek Streamkeepers
- Creston Valley Wildlife Management Area
- Delta Farmland & Wildlife Trust
- · Ducks Unlimited Canada
- Galiano Conservancy Association
- Interior Wildlife Rehabilitation Society
- Kootenay Conservation Program
- · Little Campbell Watershed Society

- Nanaimo & Area Land Trust
- Nature Conservancy of Canada
- Nature Trust of B.C. (Kootenay Branch)
- Nature Trust of B.C. (Okanagan Branch)
- North Okanagan Naturalist Club
- North Shore Streamkeepers
- Pemberton Wildlife Association
- Quadra Island Climate Action Network
- Redd Fish Restoration Society
- Salmo Watershed Streamkeepers Society
- <u>Secwepemcúl'ecw Restoration and Stewardship Society</u>
- Slocan River Streamkeepers Society
- Southern Interior Land Trust
- Swift Water Designs

IN RECENT YEARS, THE BCWF WATERSHED TEAM HAS SIGNIFICANTLY ADVANCED CONSERVATION EFFORTS THROUGHOUT B.C. THE WORK WE DO WOULD NOT BE POSSIBLE WITHOUT OUR PROJECT PARTNERS.





Thank you to the funders who make what we do possible:





Environment and Climate Change Canada

Environnement et Changement climatique Canada























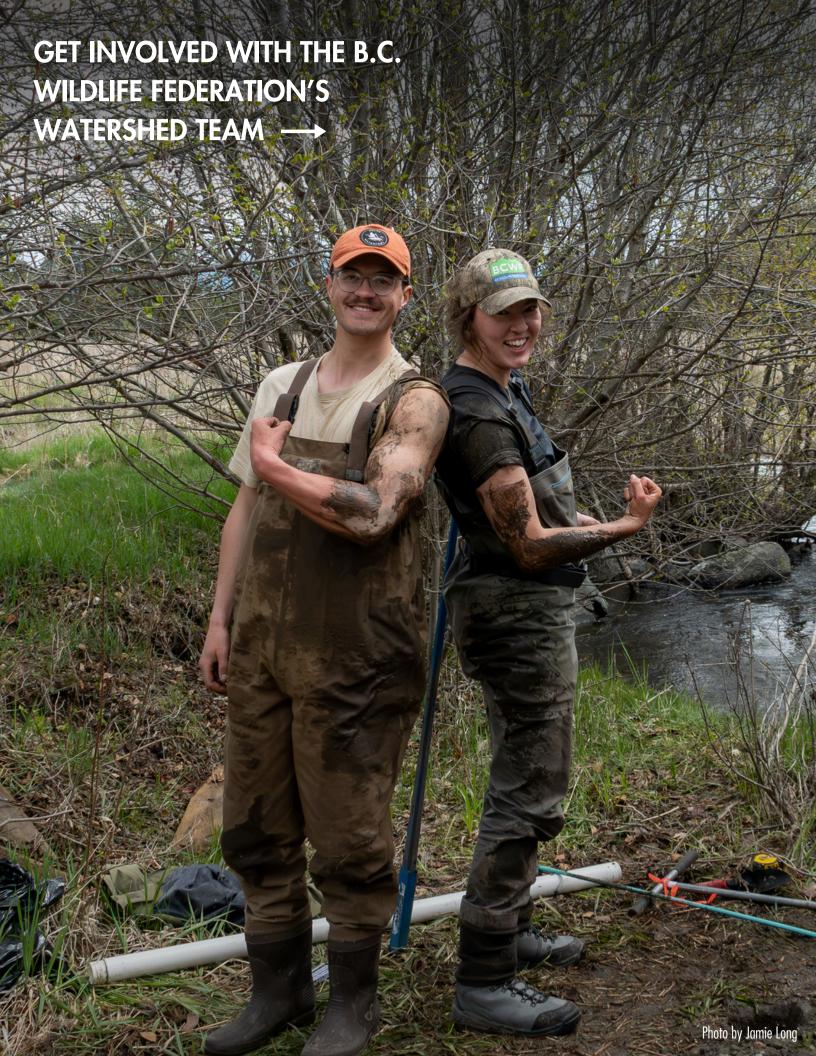








BC Salmon Restoration Innovation Fund | CN Rail | Community Foundation of the South Okanagan Similkameen | ECO Canada | Environment and Climate Change Canada | Fish and Wildlife Compensation Program | FortisBC | Habitat Conservation Trust Foundation | Kaleidoscope Fund (Wildlife Acoustics) | Mosaic Forest Management | Okanagan Basin Water Board | Pan American Silver | Province of British Columbia Community Gaming Grant | Province of British Columbia Watershed Security Fund | Regional District of Central Kootenay Local Conservation Fund | Slocan Valley Legacy Fund | Wildlife Habitat Canada







Make a One-Time Donation

By donating to the BCWF, you support conservation programs and initiatives across the province, including the initiatives of our Watershed Team. Your contribution aids in conserving and protecting B.C.'s fish, wildlife, and habitat for present and future generations.



Become a Monthly Donor

A monthly gift is one of the most significant ways you can make an impact. Your monthly contribution provides a ready and reliable source of funding to support the BCWF's important programs and initiatives, while reducing fundraising and administrative costs. Easily increase, decrease, pause or stop your monthly gift at any time.

Any donation above \$10 is eligible for a tax deduction. Scan the above QR code to learn more or visit www.bcwf.bc.ca/donate.

BCWF Volunteer Program

By becoming a BCWF volunteer, you can contribute to conservation efforts in your community and make an impact that will benefit everyone, now and in the future.



BCWF volunteers work in a variety of different capacities. They work to assist our various programs and services, with youth, and accomplishing hands-on-conservation work. They also assist in our Surrey office, helping with fundraising, advocacy, education, administrative support, special events, and so much more.

To become a BCWF volunteer, sign up through our volunteer portal!

Scan the above QR code to learn more or visit www.bcwf.bc.ca/volunteer.

Contact BCWF's Volunteer Program

e: volunteer@bcwf.bc.ca

ph: <u>1-888-881-2293</u> ext. 308

EVERY CONTRIBUTION HELPS PROTECT WILDLIFE AND RESTORE BC'S NATURAL SPACES.

BCWF Membership

Join the community dedicated to protecting and conserving B.C.'s fish, wildlife, and habitats. By becoming a member of the BCWF or an affiliated club, you contribute to advocacy, hands-on stewardship, independent research, and much more.

What Your Membership Supports

Membership fees help fund the vital administrative components of key on-the-ground restoration and enhancement initiatives that many of our grant funders do not cover, including:

- The 10,000 Wetlands initiative focused on beaver-based restoration.
- A wide variety of wetland restoration projects.
- The development of the Wetland Ecosystem Services Protocol (WESP).
- Stream and fish habitat enhancement projects.

- The SIMdeer and cougar projects.
- Support for controlled burns to promote healthy ecosystems.
- Advocacy for fish, wildlife, and habitat—more members ensure we are able to raise our voices in Victoria and Ottawa.
- And much more!

What Members Receive

As a BCWF member, you enjoy access to a range of exclusive benefits, including:

- Discounts on BCWF programs, including youth summer camps and outdoor women's programs, as well as free access to the Learn to Hunt and Learn to Fish series.
- Six issues of B.C. Outdoors Magazine annually, each featuring 16 pages of exclusive content.
- Tailored third-party liability insurance outdoor activities, including hunting, angling, and ATV use.

- Members-only training courses in hunting and angling.
- Discounts at the following:
 - Accent Inns, Capri Insurance, Coast Hotels, Enterprise Rent-A-Car, National Rental, Mark's Work Warehouse, Silvercore Advanced Training Services, SKRE Canada









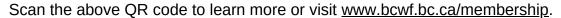








BCWF Membership Cont'd





Types of BCWF Memberships

Individual Membership \$56/year Family Membership \$85/year Life Membership \$1,150

This document was printed in January, 2025. Membership fees are subject to change.

Contact BCWF's Membership Department

Email: membership@bcwf.bc.ca

Phone: <u>1-888-881-2293</u> ext. 301

JOIN BRITISH COLUMBIA'S LEADING CONSERVATION ORGANIZATION AND HELP PROTECT FISH AND WILDLIFE, RESTORE HABITATS, AND BUILD A RESILIENT FUTURE FOR BC'S WILD SPACES.









DESIGN AND CONTENT:

Jamie Long, BCWF Conservation Stewardship Communications Coordinator

EDITING:

Erika Kolli, BCWF Wetlands Education Program Assistant

Ershiya Bagheri, BCWF Conservation Stewardship Office Coordinator

Presented by the B.C. Wildlife Federation's Conservation Stewardship Department

Corporate Office 101-9706 188 Street Surrey, BC, V4N 3m²

1-888-881-BCWF (2239) 604-882-9988 www.bcwf.bc.ca



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