

xʔəliwətaʔt Watershed Restoration

Log jam installation to help restore salmon habitat and river processes within a watershed with high fisheries and cultural values, as well as to protect downstream culturally and ecologically significant sites.

Collaborative project between Tsleil-Waututh Nation and Fisheries & Oceans Canada

Contact:

Graham Nicholas
Senior Environmental Specialist
Tsleil-Waututh Nation



xʔəliwətaʔt (Indian River, BC), within the unceded traditional lands of the Tsleil-Waututh Nation

Elk River Cottonwood Restoration Program

Connect and restore riparian habitats along the Elk River and tributaries using bioengineering (native plants):

- Reduce erosion and flood impacts.
- Improve fish habitat and populations
- Improve and connect terrestrial habitat
- Improve knowledge sharing, capacity development and volunteer opportunities

Elk River Alliance

Chad Hughes

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Elk River Watershed, East Kootenay, BC (currently 4 restoration sites)

Sturgeon Bank Sediment Enhancement

This pilot project is an opportunity to test, refine, and evaluate how strategic sediment deposition can help restore tidal marsh and support ecological resilience. The primary objectives are to demonstrate concept feasibility, evaluate the environmental response, and enhance the resilience of the Fraser River Estuary biophysical system through an innovative approach to restoring tidal marshes.

Eric Balke, Senior Restoration Biologist
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*Conserving
Canada's
Wetlands*

Ducks Unlimited Canada



Fraser River Estuary on the western foreshore of Lulu Island, near the city of Richmond, British Columbia, Canada, within the greater Vancouver metropolitan area.

South Coast European Green Crab Control

Aquatic invasive species removal program designed to test the efficacy of targeted trapping to deplete populations of European green crab in critical juvenile salmon habitat.

Project successes include declining catch per unit effort, increased native species presence in traps and increase in eelgrass cover and density.

Crysta Stubbs

Science Department Director

Coastal Restoration Society

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Clayoquot Sound – territories of the Ahousaht and Tla-o-qui-aht First Nations

Sooke Basin – territory of the T'Sou-Ke First Nation

BC Transit Victoria handyDART

Realignment and reconstruction of a
channelized tributary to Craigflower Creek
(2022-2024)

Installation of 21 new weirs

Installation of large wood and rock;
groundwater reconnection

Planting over 4000 m² of new riparian plants
with local school kids

Trout and coho returned in the 1st winter!

1st Salmon Safe project on Vancouver Island

Cori Barraclough, RPBio, PAg

Aqua-Tex Scientific Consulting Ltd.

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Craigflower Creek Watershed, View Royal BC, Capital Regional District (Victoria)

China Creek Culvert Replacement

Replaced undersized, rusted out, perched culvert with bottomless fish passage culvert. Sized for 500-year event to allow for debris flows and changing runoff patterns. Opened 1.5 miles of anadromous salmonid spawning.



Stefanie Hays

Idaho Soil and Water Conservation District

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China Creek off South Fork Clearwater River

Harpster, Idaho USA

Cultus Lake Park Green Shores Demo Site

Canada's first Green Shores for Shoreline Development project on a lake using a nature-based approaches to enhance endangered sockeye salmon habitat, mitigate erosion, and increase public awareness. Funded by the BC Salmon Restoration and Innovation Fund.

Andrea McDonald

Project Manager, Green Shores Lower Mainland

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Cultus Lake Park, Fraser Valley, British Columbia

Newaukum Headwaters Wood Placement Assessment

The proposed design project will assess 19 priority miles of the Newaukum Headwaters (8.3mi of the Upper North Fork Newaukum, 3.5mi of the Lower North Fork Newaukum, and 7.2mi of Lucas Creek) for wood placement and prioritize 9.4mi for future restoration projects. This work represents the next phase in the Newaukum River Headwaters Prioritized Restoration Plan (2023) which outlines a goal of restoring 20% of a watershed for measurable fish response.

Alex Gustafson

Trout Unlimited

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Newaukum Headwaters, Chehalis, Washington

South Fork Nooksack Homesteader Restoration Project

Over 1 mile of priority salmon habitat restored involving construction of 23 ELJ's, removal of approximately 125-feet of riprap rock from the HMZ, and floodplain channel grading to promote floodplain connectivity. The project will build climate resilience by restoring holding pools for adult Chinook salmon that will provide refuge from high temperatures, as well as stabilize the channel and promote floodplain connectivity. Project addresses bank erosion that had led to significant loss of land in active agricultural production and opened up opportunity to build relationship with large ag landowner.

First Nooksack/WRIA 1 restoration project to go through the FEMA CLOMR process. 7 years from initial outreach to construction

Lindsie Fratus-Thomas

Nooksack Indian Tribe

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Nooksack Watershed/WRIA 1, Acme, WA

Completed July-September 2024

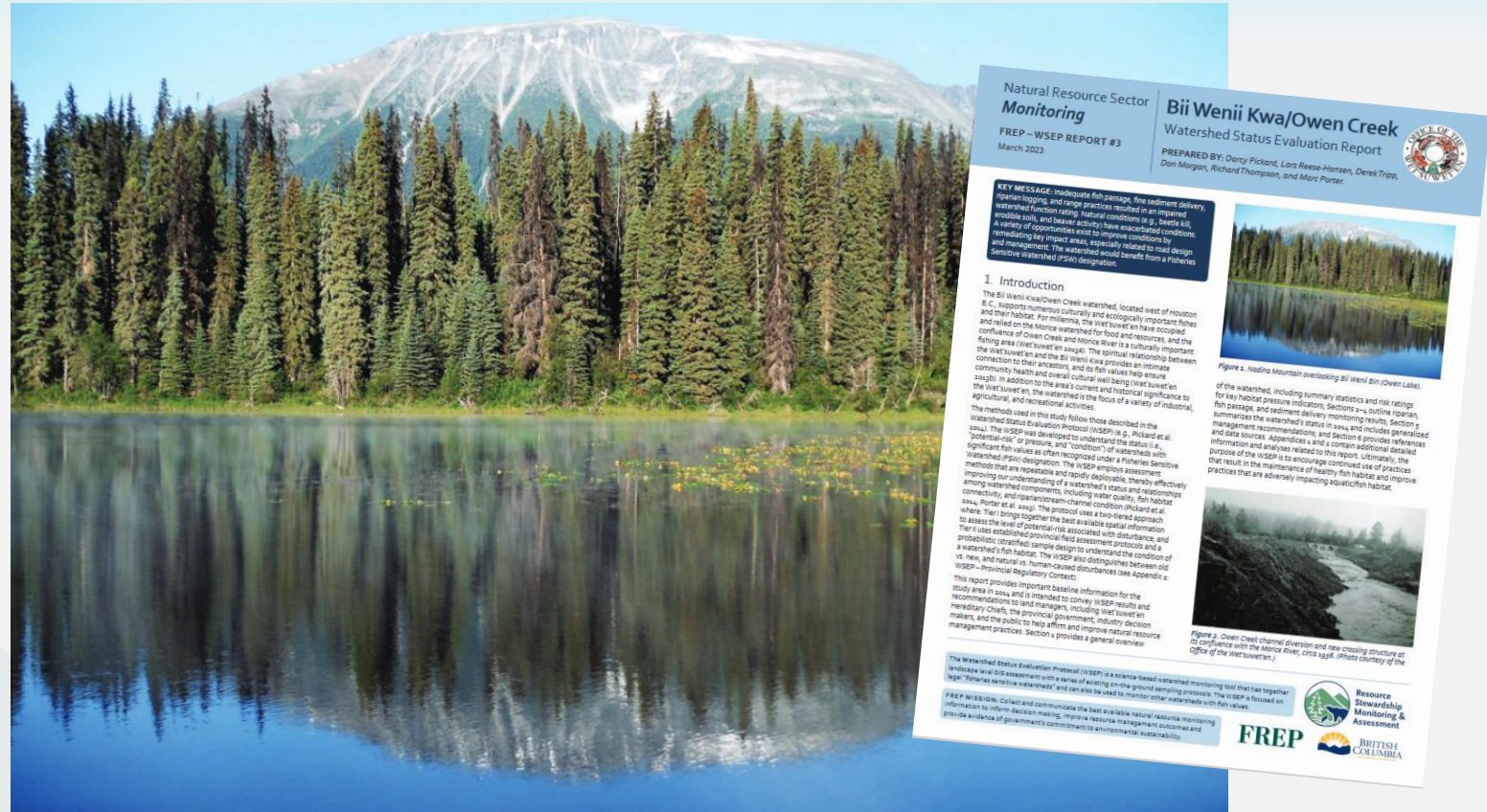
Bii Wenii Kwa (Owen Creek) Watershed Restoration / Recovery Planning & Implementation

A process-based approach to whole watershed restoration and recovery in a basin with traditionally high fish values.

An initiative between the local Wet'suwet'en, Federal, & Provincial governments, along with local stewardship groups.

Julia Onderwater (Office of the Wet'suwet'en), Lana Miller¹ (DFO), Emily Mason & Lars Reese-Hansen² (WLRs), Don Morgan (Morice Trust), Shaelyn Bertrand (NWRM), and others

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Owen Lake, in the upper reaches of the Bii Wenii Kwa with the dormant volcano Mount Nadia in the background.

2023 Watershed Status Evaluation Report of the Bii Wenii Kwa drainage: <https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/frep/frep-docs/reports/frep-owencreekwsep-mar2023.pdf>

Tributary watershed in the Morice River basin near the towns of Houston (east) and Smithers (north) in NW BC. The Morice Rr watershed is within the unceded traditional lands of the Wet'suwet'en peoples.

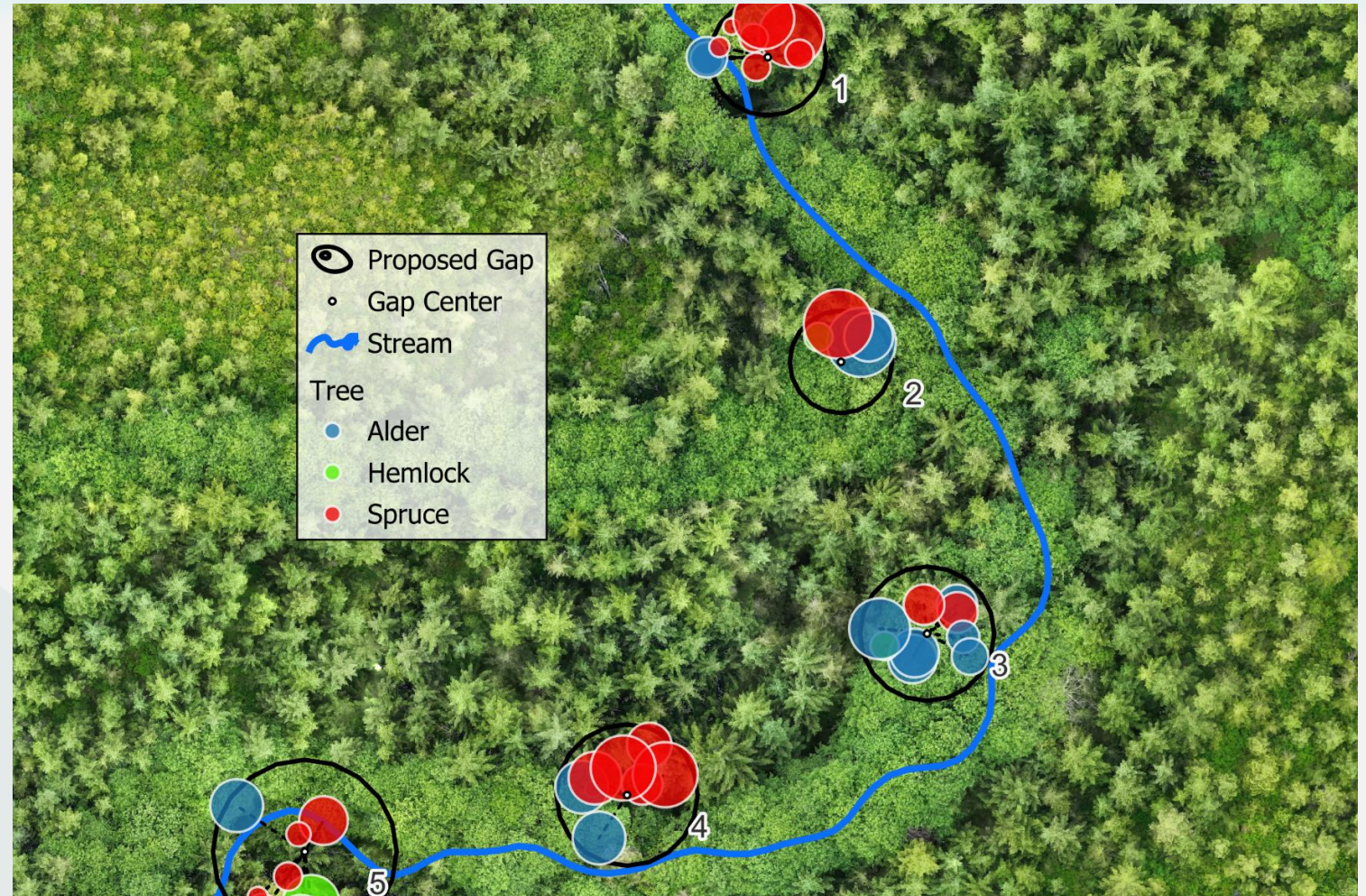
Riparian Restoration - Alaska

Using LiDAR from old growth stands to inform stream canopy gap emulation in stem-excluded young growth stands to accelerate recovery of natural riparian functions as part of a landscape level process-based restoration strategy

Bernard Romey, Romey Fisheries & Aquatic Science, bern@rom3y.com



Douglas Martin, Martin Environmental, doug@martinenv.com



Camp Creek, Hoonah, Alaska

West Don River Restoration for Urban Infrastructure Protection

Application of 'natural channel design' principles to stabilized reconstruction of a section of river where a recreational trail, stormwater outfall, and two buried sanitary sewer crossings were at risk from an **urbanized hydrologic regime**

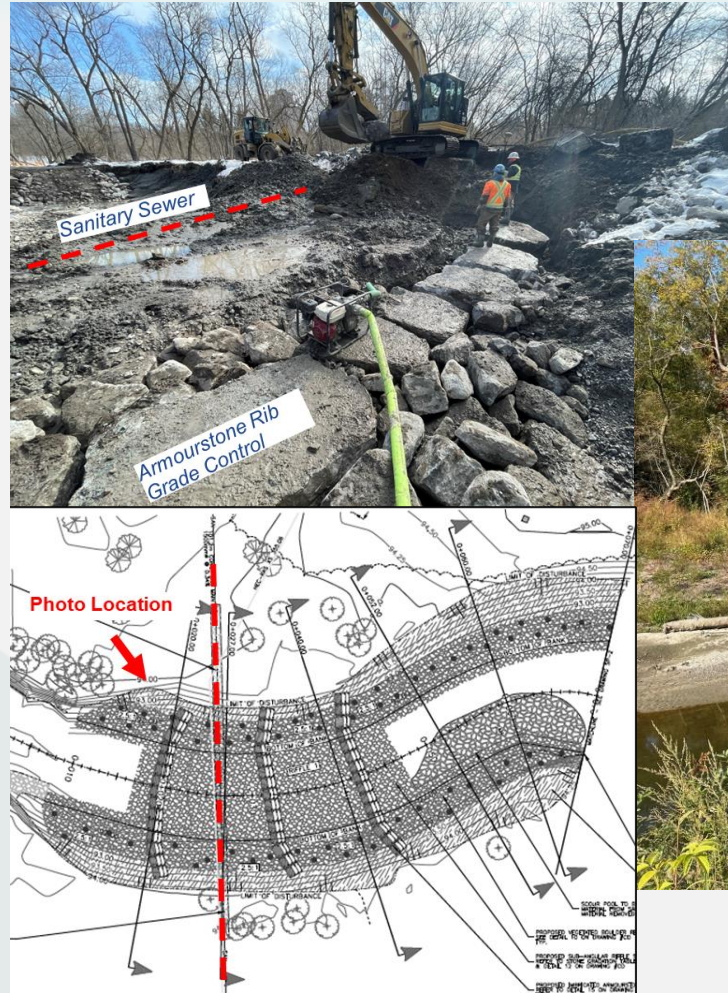
Client: Toronto and Region Conservation Authority

Robin McKillop, M.Sc., P.Geo.

Principal Geomorphologist

SLR Consulting

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Don River Watershed, City of Toronto, Ontario

The s̓c̓e:łx̓w̓əy̓əm Foodlands Corridor

Across seven properties, restored 13,675 m², planted 15,525 native plants over 10,425 m², and created 3,450 m² of new aquatic habitat, including erosion control along 65 meters of riverbank.

Rivershed is working in collaboration with s̓əy̓em̓ Qwantlen, Kwantlen Land Guardians, Langley Environmental Partners Society, Kerr Wood Leidal, Lower Fraser Fisheries Alliance, and multiple landholders along the river.

Rivershed Society of BC

Justine Nelson, ED – justine@rivershed.com

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www.rivershed.com



s̓c̓e:łx̓w̓əy̓əm (Salmon River) in Langley the shared territory of the Kwantlen, Katzie, Semiahmoo and Matsqui Nations.

Coastal Stream Mouth Restoration Along Railroad

Regionally-focused project to restore stream mouths along Washington portion of Salish Sea that are impacted by railroad tracks along 73 miles of shoreline.

Forty high priority sites identified to restore resilience and fish passage by addressing undersized culverts to re-establish more natural estuary.

Paul Schlenger

Environmental Science Associates

(located in Seattle area)

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Example shown is Meadowdale Beach Park in Snohomish County, WA near Edmonds

Upper Bulkley Process Based Riparian Restoration

- Stabilizing banks and re-establishing riparian vegetation with natural materials and native vegetation
- Partnership between local landowners, local First Nations, local government, stewardship groups and consultants

Marjorie Lieuwen

A Rocha Canada (Buck Creek Hatchery and Nature Centre, Houston BC)

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Upper Bulkley River Watershed, Houston and Topley, British Columbia

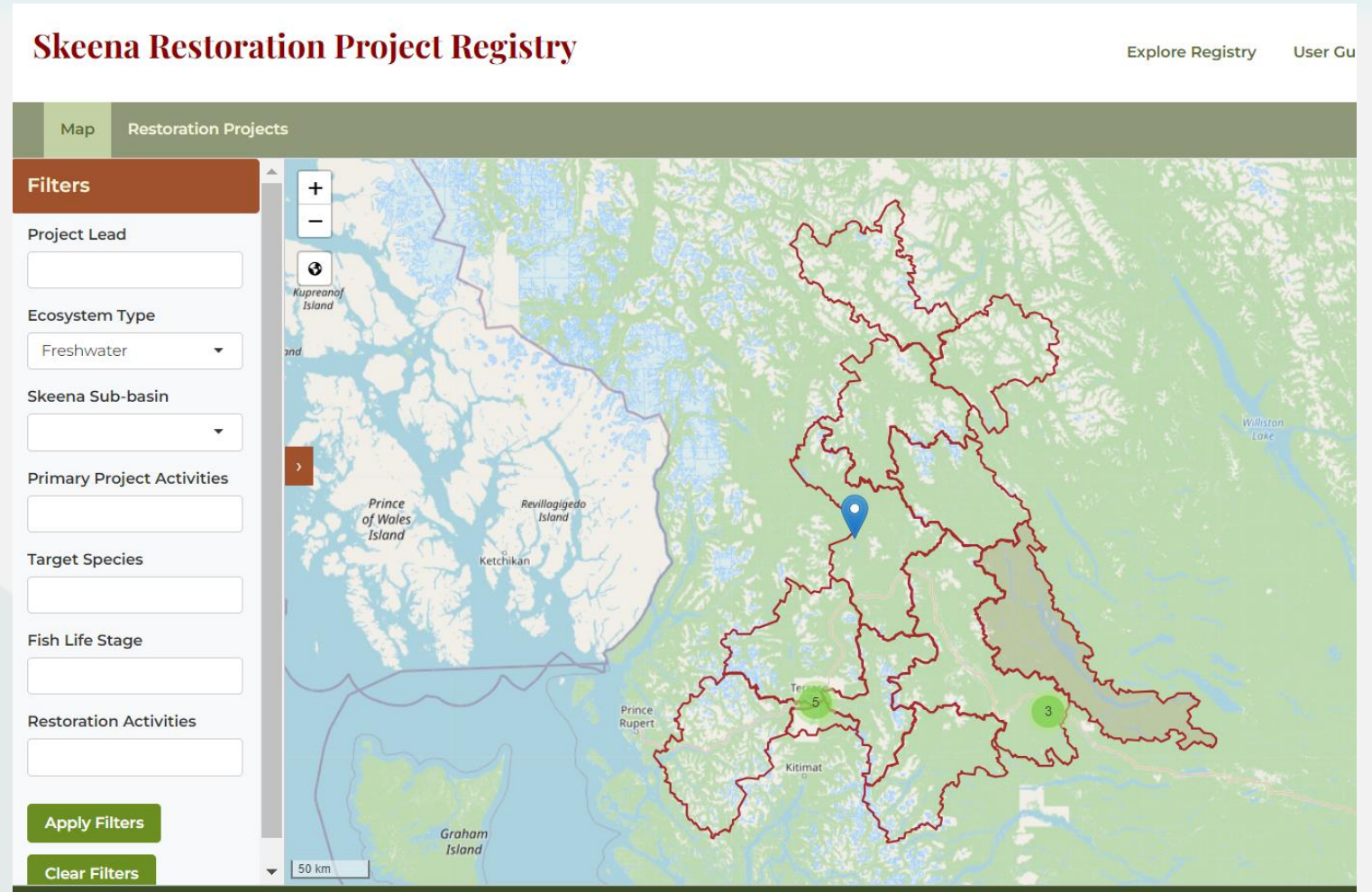
Skeena Restoration Project Registry

Central platform with mapping features, collecting and displaying information around aquatic and salmon habitat restoration projects in the Skeena watershed. Functionalities include filters, search bar, information view, and download options into csv files.

Manuela Zindler

Skeena Knowledge Trust

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Skeena watershed, estuary, and ocean approaches.

Vinegar to Vincent Fish Habitat Improvement Project

Restoring floodplain connectivity to increase habitat for juvenile salmonids, while also reducing water temperatures during summer months through channel reconstruction.

Lauren Osborne, Fisheries Biologist

Confederated Tribes of the Warm Springs Reservation of Oregon

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Middle Fork of the John Day River, near Bates, Oregon

Kitselas First Nation Singlehurst Creek Overwintering Pools

Overall goal of Kitselas Salmon Enhancement Program is to return a sustained abundance of wild salmon to the region

Construction of three new overwintering pools along an existing groundwater fed tributary to Singlehurst Creek

Pools sizes range from 20 to 50 meters in width, and up to 2 meters deep

Consistent access to overwintering habitat for salmonids

Cynthia (Cindy) Barwell, Senior Resource Stewardship Officer, Kitselas Lands and Resources Department, Kitselas First Nation



Singlehurst Creek, Skeena River Watershed, approximately 20km east of Terrace, BC

Snow Creek Uncas Preserve Restoration Project

Stage 8 channel, sidechannel, and floodplain restoration project to address an extremely incised stream. Prior to the project, the treatment reach was identified as the highest contributor of fine sediment to the primary area where ESA listed Hood Canal Summer Chum spawn.



Kevin Long, Project Manager
North Olympic Salmon Coalition
Projectmanager@nosc.org



Snow Creek, Discovery Bay, Port Townsend Washington
Reach owned by Jefferson Land Trust

Mill Pond Restoration Project

A partnership between Wei Wai Kum First Nation and Greenways Land Trust, we have been working on a 2-hectare restoration project within the Campbell River Estuary, restoring salt marsh, eelgrass meadow, and riparian habitat.

Funded through BCSRIF, PSF, Nature Trust BC, and more.

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Danny Hurry
Guardian Manager
Wei Wai Kum First Nation
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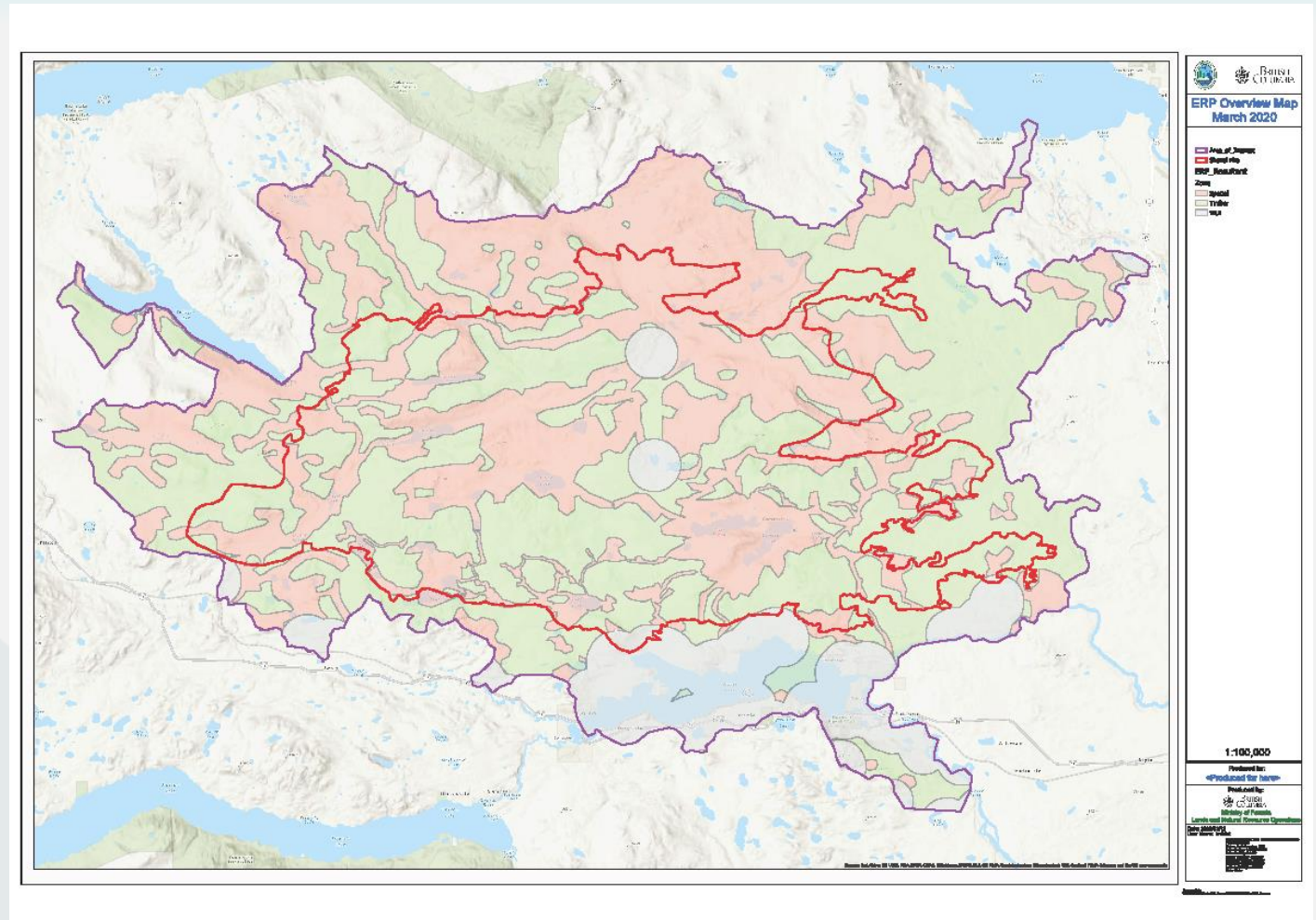


Campbell River Estuary

Shovel Lake Wildfire Ecosystem Restoration Plan

A values-based zonation over a wildfire impacted area developed in collaboration between Nadleh Whut'en, Stelat'en First Nation, Ministry of Forests, and SERNbc

John DeGagne MoF and SERNbc
John.degagne@gov.bc.ca



Fraser Lake, BC-Upper Fraser River watershed

About 135,000 ha in size.

Miami River Riparian Restoration

For almost 15 years, the Miami River Streamkeepers Society (MRSS) has been working to restore riparian habitat along the Miami River Greenway for the benefit of fish, wildlife, and Greenway users. A small dedicated group of volunteers meet on Mondays to maintain the work already done and plan future activities and priorities for the area.

Jillian Stewart, ABT, BTech, MRSS Member
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Miami River, Harrison Hot Springs Village, Fraser Valley, British Columbia

Tahuya River Preserve Floodplain Restoration

Habitat restoration of former agricultural land in key salmon spawning reach.

Project actions include:

- Removal of extensive bank armoring
- Side channel reconnection
- Reactivation of natural floodplain
- Current phase: Planning/Design

Jill Grbavac jill@pnwsalmoncenter.org

Project Manager

Hood Canal Salmon Enhancement Group

Belfair, Washington, USA



Tahuya River, Mason County, Kitsap Peninsula, NW Washington

Project partner: Great Peninsula Conservancy land trust



Beaver Dam Analog Construction & Monitoring

This collaborative before-after control-impact study will evaluate the effectiveness of beaver dam analog (BDA) restoration techniques intended to restore natural processes and improve watershed resiliency. Intensive monitoring will document changes in fish, amphibians, benthic inverts., water temps., instream habitat, channel geometry, and surface and groundwater elevations.

Jamie Glasgow, Wild Fish Conservancy,
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Reed Ojala- Barbour, WA Dept. of Fish and Wildlife, Reed.Ojala-Barbour@dfw.wa.gov

Daniel Trovillion, WA Dept. of Fish and Wildlife, Daniel.Trovillion@dfw.wa.gov



Construction and monitoring is occurring at six sites, each with 5 to 9 BDAs, in wadable tributaries to the Chehalis watershed in southwest Washington.

Green Shores for Shoreline Development at Esquimalt Gorge Park

Restoration of a shoreline in the popular Esquimalt Gorge Park is part of ongoing efforts to restore environmental function in the Gorge Waterway, including the estuary of Gorge Creek. Collaboration with the Township of Esquimalt, SCBC, Pacific Salmon Foundation, World Fisheries Trust and others have created and implemented this project for which the construction phase has been recently completed.

Kelly Loch MSc RPF Green Shores Projects Manager

Stewardship Centre for BC (SCBC)
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Gorge Creek Watershed, Gorge Waterway, Township of Esquimalt, Capital Regional District

Restoring Riparian Cottonwood Forests for Species at Risk in the Kettle River Watershed

We are facilitating riparian stewardship and restoration across the Boundary with landowners and land managers. At this site, we used a combination of rip rap at the toe of the slop and layers of brush mattresses to mitigate bank erosion and protect agricultural lands that are mixed with wetlands and highly valued cottonwoods stands important for species such as the Lewis's Woodpecker.

Jenny Coleshill and Barb Stewart (Kettle Ecological)

Granby Wilderness Society

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Granby River near Grand Forks, BC in the Kettle River Watershed

Restoring Musselshell Meadow (headgate and diversion removal)

Restoring floodplain connection and wet meadow habitat for 1st foods resilience of the Nez Perce Tribe within their U & A on the Nez Perce – Clearwater National Forests.

Justin Peterson & Aaron Penvose

Nez Perce Tribe DFRM Watershed Division

&

Trout Unlimited



Lolo Creek Watershed, Weippe, Idaho