



## PEACE REGION FISH AND WILDLIFE PROJECT LIST 2021–2022

### Fish and wildlife projects approved in our Peace Region

In our Peace Region, our board approved approximately \$1.3 million for 26 fish and wildlife projects to be implemented between April 1, 2021–March 31, 2022. First Nations, stewardship groups, consultants, and agencies are leading the 9 fish and 17 wildlife projects, which will help conserve and enhance fish and wildlife impacted by BC Hydro dams. These projects will prioritize a wide range of habitats and species, including Arctic grayling, caribou, and more. Visit our [interactive project map](#) and learn more about our Peace Region and 2021–2022 projects.

This project list includes conditionally approved grant-based fish and wildlife projects and directed projects as of April 1, 2021. Grant-based projects are submitted and approved through our annual open application process, and directed projects are identified by our regional boards as priority actions for implementation.

### We're conserving and enhancing fish and wildlife in watersheds impacted by BC Hydro dams

The FWCP compensates for dam impacts and takes a forward-looking approach to achieve the FWCP's vision of thriving fish and wildlife populations in watersheds that are functioning and sustainable. All approved projects align with one or more priority actions in our regional action plans.

### Learn more about the FWCP

Visit [fwcp.ca](http://fwcp.ca) to learn more about the projects we are funding across our three regions.

[Subscribe](#) and stay informed about the projects we fund and how you can apply for a grant. Follow us on [LinkedIn](#) and [Instagram](#). [Contact us](#) anytime.

## FWCP Peace Region 2021–2022 Project List

#	Project ID	2021–2022 Grant-based Fish Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-region
1	PEA-F22-F-3388	<p><b>Studying Arctic grayling and bull trout interactions in the Williston Reservoir</b>  <i>Spatial Ecology of Arctic Grayling in the Parsnip Core Area: Year 4</i>            This multi-year project investigates the spatial ecology of subadult and adult Arctic grayling and their interactions with bull trout in the Parsnip River and its tributaries.</p> <p>Acoustic telemetry, capture-recapture, temperature data logging, stable isotope analysis, and spatial modelling approaches will be used to address the objectives.</p>	University of Northern British Columbia	\$ 138,100	Research & Information Acquisition	Rivers, Lakes, & Reservoirs	Parsnip Sub-region
2	PEA-F22-F-3404	<p><b>Improving understanding of fish ecology using eDNA</b>  <i>Williston Reservoir Fish Ecology Assessed Using eDNA</i>            This project will use environmental DNA (eDNA) techniques to understand the ecology of fish species in the Williston Reservoir.</p> <p>Recent studies have demonstrated that the thermal stratification of the water column in lakes and the habitat selected by a particular species can influence the distribution of eDNA. The assemblage of species in the reservoir will be investigated using eDNA as means to improve understanding of potential interactions for three key species: kokanee, bull trout, and lake trout.</p>	University of Northern British Columbia	\$ 25,952	Research & Information Acquisition	Rivers, Lakes, & Reservoirs	Finlay Sub-region

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#	Project ID	2021–2022 Grant-based Fish Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-region
3	PEA-F22-F-3407	<p><b>Studying Arctic grayling in our Peace Region</b>  <i>2021 Parsnip Arctic Grayling Abundance and Critical Habitats: Year 4</i> This multi-year project, delivered in partnership with the B.C. Ministry of Forests, Lands, Natural Resource Operations and Rural Development; McLeod Lake Indian Band; and the University of Northern British Columbia, will address important information gaps identified in the FWCP’s <a href="#">Arctic Grayling Synthesis and Monitoring Framework</a>.</p> <p>This project includes the fourth consecutive year of Arctic grayling abundance monitoring in index sections of the Anzac and Table rivers using replicated snorkeling surveys validated by mark-recapture. Snorkeling will be used to estimate Arctic grayling abundance and critical habitats in reaches of the Parsnip River Watershed that have not been surveyed.</p>	John Hagen and Associates	\$ 89,123	Research & Information Acquisition	Rivers, Lakes, & Reservoirs	Parsnip Sub-region

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#	Project ID	2021–2022 Grant-based Fish Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-region
4	PEA-F22-F-3408	<p><b>Using eDNA to locate Arctic grayling</b>  <i>Fish Sampling at eDNA Sites for Finlay Reach Arctic Grayling</i>            Environmental DNA (eDNA) sampling has detected Arctic grayling in five streams draining the eastern slope of Finlay Reach, where previous sampling efforts failed to find them. In particular, the distribution of eDNA presence in Ospika River and Collins Creek suggest these streams might provide critical habitats for early life histories. To investigate this possible scenario, fish sampling will be used to identify life histories present, begin estimating densities, and identify movements.</p> <p>Filling these data gaps might detect a possible new core area for Arctic grayling and determine its conservation status.</p>	Stamford Environmental	\$ 60,478	Research & Information Acquisition	Rivers, Lakes, & Reservoirs	Finlay Sub-region
5	PEA-F22-F-3424	<p><b>Assessing bull trout populations and habitats</b>  <i>Bull Trout Spawner Abundance and Critical Habitats 2021: Year 1</i>            This multi-year information-gathering project will provide estimates of bull trout spawner abundance by performing counts of bull trout spawning sites (e.g., redds) within index sites in four streams monitored annually since 2001.</p>	Chu Cho Environmental LLP	\$ 85,408	Research & Information Acquisition	Rivers, Lakes, & Reservoirs	Basin-wide

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#	Project ID	2021–2022 Grant-based Fish Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-region
6	PEA-F22-F-3433	<p><b>Assessing bull trout spawning habitat</b>  <i>Peace Reach Bull Trout Spawning Zones</i> This project will use aerial and ground-based surveys in Peace Reach tributaries to refine estimates of bull trout critical spawning habitat boundaries and adult spawner abundance. The results of this project will address high-priority data gaps identified in the FWCP’s <a href="#">Bull Trout Information Synthesis and Monitoring Framework</a>.</p> <p>This project also builds on several past FWCP projects in which bull trout spawning zones and critical habitat were identified and redd abundance assessed, including the Nabesche and West Nabesche rivers, and Schooler, Carbon, Doucette, and Clearwater creeks.</p>	Diversified Environmental Services	\$ 43,832	Research & Information Acquisition	Rivers, Lakes, & Reservoirs	Peace Sub-region
<b>Fish Project Total:</b>				<b>\$ 442,891</b>			

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#	Project ID	2021–2022 Grant-based Wildlife Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-region
7	PEA-F22-W-3386	<p><b>Improving the science about moose limiting factors</b> <i>Identifying Moose Summer Diets and Associated Habitat Use: Year 1</i> This multi-year project aims to improve understanding of the summer diets of moose in the Parsnip sub-region, where current research shows moose are dying of apparent starvation. Multiple techniques (i.e., microhistology and DNA barcoding analysis) will be applied to summer moose droppings collected in 2021 and 2022 to determine summer diets.</p> <p>This work will identify plants—and, by association, habitats—important to moose in summer. The results of this two-year project could inform habitat mitigation actions for summer ranges.</p>	University of Northern British Columbia	\$44,453	Research & Information Acquisition	Riparian & Wetlands	Parsnip Sub-region
8	PEA-F22-W-3394	<p><b>Improving caribou calf survival and herd size through maternity penning</b> <i>Enhancing Caribou Survival in the Klinse-Za/Scott East Herd Area: Year 8</i> This multi-year project aims to enhance the survival rate of caribou cows and calves in the Klinse-Za and Scott East herds.</p> <p>Pregnant cow caribou will be captured in early March and transported to a protective maternity pen located in natural calving range. The cows will be fed and monitored through late July, until calves have grown to a point where they are less susceptible to predation by wolves and bears. Then they will all be released back to the wild.</p>	Nîkanêse Wah tzee Stewardship Society	\$41,205	Species-based Action	Uplands	Peace Sub-region

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#	Project ID	2021–2022 Grant-based Wildlife Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-region
9	PEA-F22-W-3403	<p><b>Testing drones to monitor corridor restoration</b> <i>Monitoring Linear Corridor Restoration Using Drones</i> This Seed Grant project will investigate the utility of monitoring linear corridor restorations using unoccupied aerial vehicles (UAVs, or drones) through a literature review and a small-scale field trial. The intent is to apply drone monitoring to future linear corridor restoration projects in the FWCP’s Peace Region.</p> <p>This approach is more cost-effective than other methods (e.g., camera-trap arrays and field-based vegetation assessments), and it might be an alternative tool for monitoring restoration success.</p>	Chu Cho Environmental LLP	\$ 5,000	Monitoring & Evaluation	Cross-ecosystem	Finlay Sub-region
10	PEA-F22-W-3409	<p><b>Improving the science about at-risk water shrews</b> <i>Studying American Water Shrew in the Peace with eDNA Methods</i> This Seed Grant project will focus on the Blue-listed American water shrew.</p> <p>It includes a literature review of the existing species data and an evaluation of the feasibility, costs, and limitations of using environmental DNA (eDNA) to aid in determining this shrew’s range and distribution in the FWCP’s Peace Region, and potential population threats.</p>	Blackbird Environmental Ltd.	\$ 4,200	Research & Information Acquisition	Riparian & Wetlands	Basin-wide

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#	Project ID	2021–2022 Grant-based Wildlife Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-region
11	PEA-F22-W-3413	<p><b>Supporting habitat restoration trials for amphibians in our Peace Region</b>  <i>Habitat Restoration and Priority Trials for Amphibians: Year 2</i> This multi-year project will support recovery actions for the at-risk western toad and will benefit other amphibians.</p> <p>The team will work with communities and organizations to identify and advance restoration projects that work in amphibian habitats (terrestrial and aquatic) across the FWCP’s Peace Region.</p>	Ecologic Consultants Ltd.	\$107,584	Research & Information Acquisition	Riparian & Wetlands	Basin-wide
12	PEA-F22-W-3414	<p><b>Caribou: confirming the benefits of supplemental feeding</b>  <i>Physiological Effects of Supplemental Feeding in Caribou: Year 1</i> This multi-year project will provide insights into the mechanisms by which supplemental feeding influences caribou pregnancy rates and calf survival, and it will help evaluate whether feeding is most beneficial in spring or fall.</p> <p>Seven years of supplemental feeding of the Kennedy Siding herd appears to be increasing calf recruitment, but the mechanism by which population increases are occurring is unclear.</p>	University of Northern British Columbia	\$49,896	Research & Information Acquisition	Uplands	Parsnip Sub-region



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#	Project ID	2021–2022 Grant-based Wildlife Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-region
13	PEA-F22-W-3415	<p><b>Restoring caribou habitat for Peace Region herd</b> <i>Restoring Caribou Habitat in the Klinse-Za/Scott East Herd: Year 3</i> This multi-year project will focus on the continued implementation and monitoring of the functional and ecological restoration of linear corridors, including three new road networks that have been identified for restoration in 2021.</p> <p>Outcomes from year three will include the restoration of ~23 km of linear corridors, ultimately resulting in the reduction of human access and predator use, and the acceleration of forest regeneration to support the at-risk Klinse-Za/Scott East caribou herd.</p>	Nîkanêse Wah tzee Stewardship Society	\$114,769	Habitat-based Action	Uplands	Basin-wide
14	PEA-F22-W-3419	<p><b>Developing a moose habitat enhancement project</b> <i>McLeod Lake Moose Habitat Enhancement Project</i> This Seed Grant project will support the development of a Large Grant application for a multi-phased moose habitat enhancement project in the McLeod Lake area.</p> <p>Recent declines in moose abundance across the central interior of B.C. have resulted in increased concerns over sustenance harvest requirements for First Nations.</p> <p>While the direct cause of population decline is unknown, the leading hypotheses are the loss of mature forest canopy for thermal cover and security, more roads providing access for hunters and predators, and reduced forage quality.</p>	McLeod Lake Indian Band	\$ 5,000	Habitat-based Action	Riparian & Wetlands	Parsnip Sub-region

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#	Project ID	2021–2022 Grant-based Wildlife Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-region
15	PEA-F22-W-3428	<p><b>Monitoring lichen restoration for caribou</b> <i>Monitor Cladonia Subgenus Cladina Lichen Restoration Trials</i> This monitoring project will collect monitoring data from years five and six following two terrestrial lichen transplant trials within the boundary of the Chase caribou herd’s range. This monitoring data will help determine the viability of <i>Cladonia</i> subgenus <i>cladina</i> lichen transplants—an important winter food source for caribou—as a tool to restore post-wildfire environments to functional winter caribou habitat.</p> <p>This project supports the Species at Risk Act section 11 agreement, which recommends that existing lichen seeding restoration trials within the Chase caribou range are monitored.</p>	Chu Cho Environmental LLP	\$ 35,116	Monitoring & Evaluation	Cross-ecosystem	Finlay Sub-region
16	PEA-F22-W-3430	<p><b>Assessing Chase caribou response to habitat alterations in our Peace Region</b> <i>Chase Caribou Herd Response to Habitat Alterations: Year 5</i> In the final year of this multi-year project work will continue to assess the influence of habitat changes on caribou by monitoring collared caribou—including habitat use, adult mortality, and calf survival—and their habitat.</p> <p>These results will be compared to similar data collected before 2009. This contrast will help identify the potential impacts associated with recent disturbances and the conservation measures necessary to ensure the resiliency of the Chase herd for future generations.</p>	Wildlife Infometrics Inc.	\$ 59,982	Research & Information Acquisition	Uplands	Finlay Sub-region

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#	Project ID	2021–2022 Grant-based Wildlife Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-region
17	PEA-F22-W-3431	<p><b>Assessing the health of Stone’s sheep in our Peace Region</b> <i>Health and Behaviour of B.C.’s Southernmost Stone’s Sheep: Year 3</i> This multi-year project started as a Seed Grant. It focuses on the two southernmost functionally viable Stone’s sheep populations: the Dunlevy and Schooler herds. Due to their proximity to domestic farms and overlap with elk, these wild sheep are at high risk.</p> <p>The project will assess their health and examine population demographics, behaviour, distribution, and habitat use through the use of GPS collars. In this year of the project, health reassessments will continue and up to 14 more sheep will be collared.</p> <p>Information gained from this project could be used to inform future conservation and enhancement actions for Stone’s sheep.</p>	Wild Sheep Society of British Columbia	\$ 38,387	Research & Information Acquisition	Uplands	Peace Sub-region

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#	Project ID	2021–2022 Grant-based Wildlife Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-region
18	PEA-F22-W-3432	<p><b>Building ecological awareness in our Peace Region</b> <i>Williston School Ecology Program: Year 8</i> This multi-year project will improve understanding of local ecology for Peace Region elementary and high-school students.</p> <p>Students will gain hands-on experience with species and habitats of interest in their own communities through field trips, interaction with local First Nations elders and natural resource experts, and classroom activities integrated with the provincial curriculum. Grade-specific modules are tailored to complement standard curricula.</p> <p>This project will emphasize the importance of natural resources to human livelihoods and well-being, and it will foster an appreciation of native flora and fauna.</p>	Wildlife Infometrics Inc.	\$ 28,194	Research & Information Acquisition	Cross-ecosystem	Basin-wide
19	PEA-F22-W-3435	<p><b>Monitoring waterfowl nesting structures</b> <i>Monitoring Parsnip &amp; Dinosaur Waterfowl Nesting Enhancements</i> This project will monitor and assess the initial use and efficacy of waterfowl nesting enhancements installed in 2020.</p> <p>The novel nesting island design was developed and launched throughout the Parsnip and Dinosaur reaches as a way of creating cost-effective, portable, suitably buoyant nesting structures with increased longevity and habitat benefits equivalent to or better than the traditional wooden designs.</p>	Blackbird Environmental Ltd.	\$ 18,937	Monitoring & Evaluation	Cross-ecosystem	Basin-wide

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#	Project ID	2021–2022 Grant-based Wildlife Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-region
20	PEA-F22-W-3436	<p><b>Implementing moose and caribou habitat restoration</b>  <i>TKDN Moose &amp; Caribou Habitat Restoration &amp; Protection Plan</i>            This project will support a joint moose and caribou habitat restoration and protection plan developed by the Tsay Keh Dene Nation.</p> <p>These species are deeply ingrained in the Nation’s culture for their sustenance and their spiritual and ecological value. Today, these species present competing values on the land, as industrial disturbances alter habitat structure and function.</p>	Chu Cho Environmental LLP	\$ 44,452	Research & Information Acquisition	Riparian & Wetlands	Finlay Sub-region
21	-	<p><b>Supporting community-based projects</b>  <i>F22 Community Engagement Grant</i> Our Peace Region board approved funding for <a href="#">Community Engagement Grants</a>. These grants of up to \$1,000 support multiple projects led by stewardship groups, First Nations, and others to benefit fish and wildlife throughout the year.</p>	TBD	\$ 5,000	-	-	Basin-wide
<b>Wildlife Project Total:</b>				<b>\$ 602,174</b>			

## FWCP Peace Region 2021–2022 Project List

#	Project ID	2021–2022 Directed Fish and Wildlife Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-region
22		<p><b>Assessing kokanee in our Peace Region</b>  <i>F22 Kokanee Spawning Surveys: Year 4</i> This multi-year project will provide a fourth year of kokanee spawning surveys to assess the abundance and distribution of kokanee within tributaries of the Williston Reservoir.</p>	DWB Consulting Services Ltd.	\$ 75,650	Research & Information Acquisition	Rivers, Lakes, & Reservoirs	Basin-wide
23		<p><b>Supporting Mugaha Marsh Bird Banding Station</b>  <i>F22 Mackenzie Nature Observatory: Year 4</i> This long-term, multi-year project will add to 20-plus years of bird monitoring data. The 2021 data will provide important information on breeding bird population trends, distribution, and health, which can guide species conservation and habitat enhancement initiatives in the region.</p> <p>Mackenzie Nature Observatory operates the Mugaha Marsh Sensitive Area Bird Banding Station on the Parsnip Reach of the Williston Reservoir.</p>	Mackenzie Nature Observatory	\$ 20,475	Research & Information Acquisition	Cross-ecosystem	Parsnip Sub-region

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24		<p><b>Helping UNBC share fish and wildlife knowledge</b>  <i>F22 UNBC Presentation Series</i> This multi-year project provides education and outreach by building connections and developing relationships through a series of free presentations focused on research that is underway in, or could be applied to, our Peace Region.</p>	University of Northern British Columbia	\$ 14,000	Research & Information Acquisition	Cross-ecosystem	Basin-wide
25		<p><b>Improving fish passage</b>  <i>F22 Fish Passage with Society for Ecosystem Restoration in Northern BC: Year 1</i> This multi-year project will prioritize fish passage restoration options based on recommendations from a previously funded project (PEA-F20-F-2967).</p> <p>Work will include engagement with potential restoration partners, the development of remediation actions to improve fish passage, and the design of monitoring programs that will help inform future research, conservation, and restoration actions.</p>	Society For Ecosystem Restoration in Northern BC	\$ 54,476	Research & Information Acquisition	Rivers, Lakes, & Reservoirs	Parsnip Sub-region

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#	Project ID	2021–2022 Directed Fish and Wildlife Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-region
26		<p><b>Understanding limiting factors for key fish species</b>  <i>F22 Williston Reservoir Pelagic Fish Survey</i> This survey project is an important first step toward understanding current conditions in the complex Williston Reservoir.</p> <p>A hydroacoustic-trawl survey and gillnet calibration over the entire reservoir will assess the abundance, biomass, and relative dominance of pelagic-dwelling fish, mainly kokanee and lake whitefish, which appear to comprise the majority of the diet of piscivorous fish rearing in the reservoir (e.g., bull trout and lake trout). Monitoring shared prey resources is a key part of understanding limiting factors for bull trout and lake trout in the reservoir.</p>	Ministry of Forests, Land, Natural Resource Operations and Rural Development; Consultant/Registered Business (TBD)	\$ 132,500	Research & Information Acquisition	Rivers, Lakes, & Reservoirs	Basin-wide
<b>Directed Project Total:</b>				<b>\$ 297,101</b>			
<b>2021–2022 PROJECT SPEND TOTAL:</b>				<b>\$ 1,342,166</b>			