

FWCP Peace Region 2022–2023 Project List

#	Project ID	2022–2023 Grant-based Fish Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-region
1	PEA-F23-F-3631	<p>Arctic grayling: filling important data gaps in our Peace Region</p> <p><i>Parsnip Arctic Grayling Abundance and Critical Habitat Year 5:</i> This multi-year project—delivered in partnership with the Province of B.C., McLeod Lake Indian Band, and the University of Northern British Columbia—will address important information gaps identified in the FWCP’s Arctic Grayling Synthesis Report and Monitoring Framework.</p> <p>This final year of the five-year study of Arctic grayling abundance and critical habitat in the Parsnip River Watershed will include surveys in long-term index sections of the Table and Anzac rivers to estimate trends, a key indicator of population health.</p> <p>The project will also estimate critical habitats and abundance in the previously unsurveyed Missinka, Wichcika, Hominka, Reynolds, Colbourne, and Misinchinka watersheds.</p>	John Hagen and Associates	\$92,132	Research & Information Acquisition	Rivers, Lakes & Reservoirs	Parsnip Sub-region

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2	PEA-F23-F-3632	<p>Supporting cold-water fish in the face of climate change</p> <p><i>Investigating Thermal Regimes of the Upper Peace River Basin:</i> This project will focus on the cumulative effects of land use, climate change, and water flow regulation on river water temperatures in the upper Peace River Basin.</p> <p>Using a three-scale temperature monitoring and modelling approach, the project’s primary goal will be to quantify and predict the spatial distribution of thermal habitat for cold-water fish. A secondary objective is to construct a network of water temperature loggers in the Williston Watershed, from headwater streams down to the Peace River.</p> <p>The project outcomes will provide valuable information for the management of cold-water-adapted fish.</p>	Chu Cho Environmental LLP	\$69,717	Research & Information Acquisition	Rivers, Lakes & Reservoirs	Basin-wide
3	PEA-F23-F-3633	<p>Examining bull trout spawner abundance and critical habitats</p> <p><i>Bull Trout Spawner Abundance and Critical Habitats:</i> This multi-year project will provide estimates of bull trout spawner abundance by performing aerial counts of bull trout spawning sites (e.g., redds) within index sites in four streams that have been monitored annually since 2001.</p> <p>This work will inform a framework to estimate bull trout spawner abundance and limiting factors at the scale of the Williston Watershed, which will be used to identify appropriate habitat conservation and enhancement actions.</p>	Chu Cho Environmental LLP	\$73,199	Research & Information Acquisition	Rivers, Lakes & Reservoirs	Basin-wide

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4	PEA-F23-F-3636	<p>Improving understanding of critical fish habitat using eDNA</p> <p><i>Application of an Aquatic eDNA Degradation Rate Assay:</i> Following up on the results of an FWCP Seed Grant to establish an environmental DNA (eDNA) degradation rate assay, this project will pair eDNA fish surveys for Arctic grayling with field trials that investigate associated degradation rates.</p> <p>Understanding eDNA degradation rates is critical to the interpretation of eDNA projects and will ultimately provide more information about critical habitats that would benefit from conservation or enhancement.</p>	University of Northern British Columbia	\$60,010	Research & Information Acquisition	Rivers, Lakes & Reservoirs	Basin-wide
5	PEA-F23-F-3644	<p>Improving understanding of lake trout abundance</p> <p><i>Assessing Techniques for Monitoring Lake Trout Abundance:</i> There is a lack of reliable data on lake trout abundance in the Williston Reservoir Watershed. As a result, analysis of limiting factors for this focal species is incomplete.</p> <p>This Seed Grant project will assess possible methods for and approaches to lake trout monitoring in the Williston Reservoir.</p> <p>This proposal builds directly off the work of past FWCP-funded projects. A literature review and round table will be conducted, and the results will be included with a feasibility assessment, cost estimate, and data analysis framework.</p>	Chu Cho Environmental LLP	\$4,626	Research & Information Acquisition	Rivers, Lakes & Reservoirs	Basin-wide

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6	PEA-F23-F-3652	<p>Taking steps toward conserving critical habitats for Arctic grayling</p> <p><i>Critical Habitats of Arctic Grayling in Parsnip Tributaries:</i> For Northern B.C.'s river-dwelling Arctic grayling populations, the reservoir created by the W.A.C. Bennett Dam on the Peace River permanently reduced the availability of critical habitat by converting river habitat into lake habitat.</p> <p>This research will combine radio telemetry, snorkel surveys, and drone visual and thermal imaging to show how the fine-scale behaviour and distribution of Arctic grayling can be used to locate and inform conservation actions for critical habitats in the Anzac and Table rivers.</p>	University of Northern British Columbia	\$89,277	Research & Information Acquisition	Rivers, Lakes & Reservoirs	Parsnip Sub-region
Grant-based Fish Project Total:				\$388,961			

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7	PEA-F23-W-3616	<p>Moose: improving the science about limiting factors</p> <p><i>Identifying Moose Summer Diets and Associated Habitat Year 2:</i> There are reports of some moose dying of apparent starvation in some parts of north central B.C. The FWCP is helping to fund a project led by University of Northern British Columbia that puts moose droppings under the microscope to find out why.</p> <p>The project will analyze summer droppings using microhistology, which examines indigestible fragments, to find out the plants and habitats that moose rely on. This information is critical to future conservation actions.</p>	University of Northern British Columbia	\$47,135	Research & Information Acquisition	Riparian & Wetlands	Dinosaur & Parsnip Sub-regions
8	PEA-F23-W-3627	<p>Helping prioritize wetlands for conservation and enhancement</p> <p><i>Wetlands Function and Health Assessments:</i> This project will focus on field work to calibrate the Wetland Ecosystem Services Protocol model and assess wetlands impacted by resource roads and industrial development.</p> <p>This information will directly support the prioritization of wetlands for both conservation and enhancement actions.</p>	B.C. Wildlife Federation	\$63,600	Habitat-based Action	Riparian & Wetlands	Basin-wide

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9	PEA-F23-W-3629	<p>Restoring caribou habitat for a Peace Region herd</p> <p><i>Restoring Caribou Habitat in the Klinse-Za Herd Year 4:</i> In the fourth year of this multi-year project, work will continue to implement and monitor the functional and ecological restoration of 12 linear corridors in the herd area.</p> <p>Outcomes expected in 2022–2023 include the site preparation of three road networks totalling ~35 kilometres, adding to the ~45 kilometres of linear corridors treated to date.</p> <p>Ultimately, this project will result in reduced human access, predator use, and predator movement rates, leading to accelerated forest regeneration.</p>	Níkanêse Wah tzee Stewardship Society	\$94,282	Habitat-based Action	Uplands	Peace Sub-region
10	PEA-F23-W-3630	<p>Improving science and knowledge of bat populations</p> <p><i>North American Bat Monitoring Program: Williston Expansion:</i> The North American Bat Monitoring Program is a multi-national, multi-agency coordinated bat monitoring program. It uses standardized protocols to gather data to assess population status and trends, inform responses to stressors, and sustain viable populations.</p> <p>Data will be gathered from areas including the Williston Reservoir Watershed, specific locations to be determined—an area where information is lacking. The project also represents an opportunity for interested First Nations to learn bat monitoring skills, use specialized tools, and contribute to bat conservation on both a local and continental scale.</p>	Wildlife Conservation Society Canada	\$63,029	Research & Information Acquisition	Uplands	Basin-wide

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11	PEA-F23-W-3642	<p>Caribou: confirming the benefits of supplemental feeding</p> <p><i>Physiological Effects of Supplemental Feeding in Caribou:</i> This project will provide insights into how supplemental feeding influences caribou pregnancy rates and calf survival, and it may help evaluate whether feeding is most beneficial in spring or fall.</p> <p>This project will examine physiological bioindicators in hair and pellets collected from the Kennedy Siding herd to investigate whether supplemental feeding increases the proportion of females that breed in multiple years and whether feeding increases the viability of calves.</p>	University of Northern British Columbia	\$52,580	Research & Information Acquisition	Uplands	Parsnip Sub-region
12	PEA-F23-W-3646	<p>Expanding data collection for birds and bats</p> <p><i>Motus Wildlife Tracking System: Peace Basin Expansion:</i> This project, led by Birds Canada, will continue to expand the Motus Wildlife Tracking System to track birds and bats affixed with digitally encoded radio transmitters.</p> <p>Results from this array can track animals across a diversity of landscapes, covering thousands of kilometres, and will support projects on key species, such as little brown myotis bat and white-throated sparrow.</p> <p>This project will involve community groups installing stations at schools and other locations to incorporate the Motus Education Program, which builds knowledge about birds, bats, and conservation, for grades 7–12.</p>	Bird Studies Canada	\$87,932	Research & Information Acquisition	Uplands	Basin-wide

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13	PEA-F23-W-3648	<p>Threatened olive-sided flycatchers: filling important data gaps</p> <p><i>Olive-sided Flycatcher Habitat across a Disturbance Gradient:</i> This project will evaluate olive-sided flycatcher occupancy, habitat characteristics, and prey abundance and diversity at various sites across a natural and anthropogenic disturbance gradient.</p> <p>Habitat loss or reduced habitat quality due to land conversion (i.e., human development) have been identified as threats to populations, but there is a little field-based understanding of limiting factors, predictors of habitat occupancy, and habitat quality related to disturbance.</p> <p>Results from this project will inform the development of habitat-based actions or land management strategies that could benefit this priority bird species.</p> <p>This project is a collaboration between the Tsay Keh Dene Nation, Chu Cho Environmental, Chu Cho Forestry, and Environment and Climate Change Canada.</p>	Chu Cho Environmental LLP	\$36,883	Research & Information Acquisition	Riparian & Wetlands	Finlay Sub-region

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#	Project ID	2022–2023 Grant-based Wildlife Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-region
14	PEA-F23-W-3649	<p>Conserving ecologically and culturally significant plants</p> <p><i>Creating an Herbarium for Plant Conservation:</i> This Seed Grant project will investigate the potential of establishing an herbarium of culturally important and native plant species for the Tsay Keh Dene Nation.</p> <p>This herbarium would be an education and stewardship resource comprising ecologically and culturally significant plants. It would be valuable to the Tsay Keh Dene Nation and conservation researchers.</p>	Chu Cho Environmental LLP	\$5,000	Research & Information Acquisition	Cross-ecosystem	Finlay Sub-region
15	PEA-F23-W-3655	<p>Caribou: improving calf survival and herd size through maternity penning</p> <p><i>Enhancing Caribou Survival in the Klinse-Za Herd Year 9:</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>Maternity penning was used to successfully arrest population decline and avoid the extirpation of the Klinse-Za caribou herd. Having achieved that, the goal of this project is now population supplementation to offset low wild-calf recruitment and maintain a positive population trend.</p> <p>Pregnant cow caribou will be captured in early March and transported to a protective 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, and then released back to the wild.</p>	Níkanêse Wah tzee Stewardship Society	\$41,250	Species-based Action	Uplands	Basin-wide

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16	PEA-F23-W-3658	<p>Restoring the Rochfort caribou maternity pen</p> <p><i>Post-operation Restoration of the Rochfort Maternity Pen:</i> A maternity pen for caribou near Hudson’s Hope has been used for four years, and vegetation at the ~15-hectare site has been degraded by operations and caribou foraging in the pen.</p> <p>The goal of this project is to plant native species within the pen and surrounding area to stimulate the restoration process and restore vegetation at this valuable calving range to pre-disturbance conditions.</p>	Níkanêse Wah tzee Stewardship Society	\$18,566	Habitat-based Action	Uplands	Peace Sub-region
17	PEA-F23-W-3659	<p>Enhancing winter range for moose</p> <p><i>McLeod Lake Moose Habitat Enhancement Project:</i> Building on an FWCP Seed Grant, this project will assess and enhance priority areas of winter range for moose west of McLeod Lake. The project responds to declines in moose and concerns over sustenance harvest requirements for First Nations.</p> <p>The direct cause of moose population decline is unknown. Leading hypotheses include the loss of mature forest cover for warmth and security, increased roads that provide access for hunters and predators, and reduced forage quality.</p>	McLeod Lake Indian Band	\$61,254	Habitat-based Action	Riparian & Wetlands	Parsnip Sub-region

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18	PEA-F23-W-3661	<p>Building ecological awareness in our Peace Region</p> <p><i>Williston School Ecology Project:</i> This multi-year project will improve understanding of local ecology for Peace Region elementary and high-school students through outdoor-based, hands-on environmental education in rural schools.</p> <p>All modules tie in with provincial curricula and bring in local ecology and First Nations knowledge to illustrate concepts and ideas (e.g., timber cruising to apply statistics and spawning trout to illustrate life cycles).</p>	Wildlife Infometrics Inc.	\$31,514	Research & Information Acquisition	Cross-ecosystem	Basin-wide
19	PEA-F23-W-3663	<p>Stone’s sheep: filling data gaps to inform conservation plans</p> <p><i>Health and Behaviour of B.C.’s Southernmost Stone’s Sheep Year 4:</i> Recent research shows Stone’s sheep are globally unique to B.C. This project to assess sheep health will focus on the two southernmost functionally viable herds of the species: the Dunlevy and Schooler herds.</p> <p>Due to their proximity to domestic farms and overlap with elk, these wild sheep are at high risk. The project will assess their health and examine population demographics, behaviour, distribution, and habitat use through the use of GPS collars. The results will support herd management and inform planning for habitat enhancement.</p> <p>In 2022–2023, the study team will conduct population surveys to assess population trends and range use and compare that information to data collected in the same area during 1999–2005.</p>	Wild Sheep Society of British Columbia	\$38,724	Research & Information Acquisition	Uplands	Peace Sub-region



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20	-	<p>Supporting community-based projects</p> <p><i>F23 Community Engagement Grant:</i> Our Peace Region board approved funding for Community Engagement Grants. These grants of up to \$1,000 support multiple projects led by stewardship groups, First Nations, and others to benefit fish and wildlife.</p>	TBD	\$5,000	-	-	Basin-wide
Grant-based Wildlife Project Total:				\$646,748			

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#	Project ID	2022–2023 Directed Fish and Wildlife Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-region
21	PEA-F23-F-3761-DCA	<p>Improving fish passage in our Peace Region</p> <p><i>F23 Fish Passage with Society for Ecosystem Restoration in Northern BC Year 2:</i> This multi-year project will start implementing fish passage restoration based on priority sites identified from previously funded projects (PEA-F20-F-2967 and PEA-F22-F-3577).</p> <p>The Society for Ecosystem Restoration in Northern BC is working with the FWCP, the McLeod Lake Indian Band, road/rail tenure holders, and other FWCP stakeholders and partners to prioritize, plan, and fund the restoration of fish passage at road crossing structure barriers throughout the Parsnip River Watershed.</p> <p>The project plans to restore one crossing with a bridge in 2022, and it will work with project partners to finalize plans for a second crossing to be restored in 2023.</p>	Society for Ecosystem Restoration in Northern BC	\$150,000	Habitat-based Action	Rivers, Lakes & Reservoirs	Parsnip Sub-region
22	PEA-F23-W-3759-DCA	<p>Building knowledge and understanding with support from UNBC</p> <p><i>2022–2023 Colloquium 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	\$17,911	Research & Information Acquisition	Cross-ecosystem	Basin-wide

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#	Project ID	2022–2023 Directed Fish and Wildlife Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-region
23	PEA-F23-F-3757-DCA	<p>Filling data gaps about kokanee abundance and distribution</p> <p><i>Williston Watershed Kokanee Enumeration Surveys Year 5:</i> This multi-year project will provide a fifth year of kokanee spawning surveys for 29 streams to assess the abundance and distribution of kokanee within tributaries of the Williston Reservoir.</p> <p>This year, additional surveys of three index streams will be conducted before and after the main survey to assess spawning run timing. Also new this year, cameras will be installed at the three index streams from August to October to test the effectiveness of this technology for monitoring kokanee spawning.</p>	DWB Consulting Services Ltd.	\$187,174	Research & Information Acquisition	Rivers, Lakes & Reservoirs	Basin-wide
24	PEA-F23-W-3753-DCA	<p>Gathering important breeding bird data at Mugaha Marsh Bird Banding Station</p> <p><i>Mugaha Marsh Banding Station 2022–2023:</i> This long-term, multi-year project will add to 20-plus years of bird monitoring data.</p> <p>The 2022 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	\$23,290	Research & Information Acquisition	Riparian & Wetlands	Parsnip Sub-region

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25	TBD	<p>Removing outdated fish enhancement structures</p> <p><i>F23 Additional Funds for Dinosaur Fish Habitat Structure Decommissioning:</i> Large woody debris structures were added to embayments of the Dinosaur Reservoir in an attempt to enhance fish habitat in the early 2000s.</p> <p>These enhancement structures have deteriorated due to winter ice damage. The structures are no longer functioning as fish habitat and need to be removed.</p>	BC Hydro Construction Services	\$11,318	Habitat-based Action	-	Dinosaur Sub-region
Fish and Wildlife Directed Project Total:				\$389,693			
2022–2023 PROJECT SPEND TOTAL:				\$1,425,402			