Peace Region
3333 - 22nd Avenue
Prince George, B.C., V2N 1B4
Chelsea Coady, Peace Region Manager
chelsea.coady@bchydro.com
250-561-4884 fwcp.ca

Peace Region fish and wildlife project list 2019 – 2020

Conserving and enhancing fish and wildlife in watersheds impacted by existing BC Hydro dams

The Fish & Wildlife Compensation Program (FWCP) conserves and enhances fish and wildlife in watersheds impacted by existing BC Hydro dams. The FWCP is funded annually by BC Hydro. The FWCP funds projects in the Coastal, Columbia and Peace Regions, which fulfills BC Hydro's water licence obligations and voluntary commitments to compensate for fish and wildlife impacts. The FWCP is a partnership between BC Hydro, the Province of B.C., Fisheries and Oceans Canada, First Nations and Public Stakeholders.

In 2019 – 2020 our three regional boards – Coastal, Columbia, and Peace – approved funding for 97 fish and wildlife projects valued at approximately $9.2 million for 2019–2020. Each project went through a three-stage review and evaluation process prior to a final decision by our local Boards. Each project addresses one or more conservation priority in our Action Plans.

In our Peace Region, the Board approved approximately $1.5 million for 26 fish and wildlife projects to be implemented April 1, 2019 – March 31, 2020. First Nations, stewardship groups, consultants, and agencies are leading the 9 fish and 17 wildlife projects that will help conserve and enhance fish and wildlife impacted by existing BC Hydro dams.

About our 2019–2020 project list

This is a final list of projects conditionally-approved by the FWCP's Peace Region Board as of April 1, 2019. Read our annual reports for a final list of projects implemented in 2019–2020 and project outcomes.

Approved budgets are to support the delivery of fish and wildlife projects, and do not include the FWCP administration or communications budget.

Grant-based fish and wildlife project descriptions are based on information provided in the lead proponent's grant application and, in some cases, have been modified to reflect Board-approved project activities and budgets.

Directed projects reflect regional conservation priorities and have been identified by our regional Boards for implementation.

Contact us

Contact Chelsea Coady, Peace Region Manager at 250-561-4884 or chelsea.coady@bchydro.com to learn more about our work in the Peace Region. Subscribe and stay informed about the projects we fund and how you can apply for a grant.

Learn more at fwcp.ca

FWCP Peace Region 2019-2020 Project List

#	Project ID	2019-2020 Grant-Based Fish Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-Region
1	PEA-F20-F-2948	**Studying Lake Trout in our Peace Region** *Peace Reach Lake Trout movements* This project is year four of a multi-year project to study Lake Trout movements in the Peace Reach. In 2019, data from year three will be analyzed and survey work will occur near the Wicked River to identify potential Lake Trout spawning sites at this location. Movements of adult Lake Trout in Williston Reservoir were monitored in the past by using acoustic transmitters and data-logging receivers, stationed in the Peace, Finlay, and Parsnip reaches. Data suggest Williston Reservoir Lake Trout are a single, wide-ranging population that moves extensively within and beyond the Peace Reach, and concentrate in the vicinity of the Wicked River during the October spawning period.	Diversified Environmental Services	$ 85,851	Research & Information Acquisition	Reservoirs Action Plan	Basin-Wide
2	PEA-F20-F-2956	**Assessing Bull Trout spawning and habitats in our Peace Region** *Bull Trout spawner abundance and critical habitats 2019-2020* This multi-year project will estimate Bull Trout spawner abundance to identify important populations and critical habitats. The results will inform conservation and enhancement actions. This project will include: 1) counts of Bull Trout spawning sites (redds) within index sites in four streams monitored annually; 2) redd counts in new index sections, located in other watersheds, to provide baseline data for future comparisons; and 3) rapid, aerial redd counts from a helicopter, where Bull Trout abundance and habitat use are unknown. Aerial redd counts, calibrated using on-the-ground foot surveys in the usual manner, allow whole watersheds to be surveyed in as little as a single day.	Ministry of Forests, Lands, Natural Resource Operations and Rural Development, Omineca Region	$ 67,921	Monitoring & Evaluation	Streams Action Plan	Basin-Wide
3	PEA-F20-F-2963	**Studying Arctic Grayling in our Peace Region's Ingenika River** *Ingenika Watershed Arctic Grayling monitoring 2019-2020* This project will continue successful 2018 Arctic Grayling snorkeling surveys in the Ingenika River. This work supports a proposed framework of long-term population monitoring in three rivers (Ingenika, Finlay, Mesilinka) within the Tsay Keh Dene traditional territory. Snorkeling surveys provide key information indicating abundance, trend, critical habitats, potential threats, and limiting factors for Arctic Grayling. The population is of importance within FWCP's Arctic Grayling Monitoring Framework because of: 1) high cultural importance to the Tsay Key Dene people; 2) high feasibility of the methodology due to exceptional water clarity; and 3) the population is one of concern, due to isolation from the Finlay Arctic Grayling population and small population size.	Chu Cho Environmental LLP	$ 62,187	Monitoring & Evaluation	Streams Action Plan	Finlay Sub-Region
4	PEA-F20-F-2965	**Studying Arctic Grayling in Williston Reservoir with eDNA** *Williston grayling distribution: eDNA monitoring* 2019-2020 This project builds on work funded by FWCP in 2017 and 2018, and will include eDNA sampling in priority streams identified in earlier work. Surveys will be expanded to investigate the distribution and habitat use of Arctic Grayling in small tributaries entering Finlay and Parsnip reaches. These Arctic Grayling are of high cultural importance to the Tsay Key Dene people and McLeod Lake Indian band. Surveys will be expanded southward, to include tributaries entering the Parsnip Arm and River.	Chu Cho Environmental LLP	$ 64,183	Monitoring & Evaluation	Streams Action Plan	Finlay Sub-Region

FWCP Peace Region 2019-2020 Project List

#	Project ID	2019- 2020 Grant-Based Fish Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-Region
5	PEA-F20-F-2959	**Studying Arctic Grayling in our Peace Region** *Parsnip Watershed Arctic Grayling monitoring* This multi-year project will continue Arctic Grayling abundance monitoring in the Anzac and Table rivers, which were surveyed over the 1995-2007 period and again in 2018, using snorkeling surveys. In 2019, the team will repeat 2018 surveys and describe the distribution of critical Arctic Grayling habitats in the Missinka River for the first time. The monitoring data will address two major information gaps identified within the FWCP Arctic Grayling Synthesis and Monitoring Framework documents: 1) the lack of Arctic Grayling abundance monitoring since 2007; and 2) poor understanding of abundance and critical habitats upstream of the Table River. These data are required to assess conservation status, and identify locations for conservation/ enhancement actions, limiting factors, and opportunities for human use.	Ministry of Forests, Lands, Natural Resource Operations and Rural Development, Omineca Region	$ 68,931	Monitoring & Evaluation	Streams Action Plan	Parsnip Sub-Region
6	PEA-F20-F-2961	**Studying Arctic Grayling and Bull Trout interactions in Williston Reservoir** *Spatial ecology of Arctic Grayling in the Parsnip River core area* Year two of this multi-year project will investigate the spatial ecology of juvenile and adult Arctic Grayling, and their interactions with Bull Trout in the Parsnip River and its tributaries. Objectives will be addressed using a combination of approaches, including acoustic telemetry, capture-recapture, temperature data-logging, stable isotope analysis, and spatial modelling. The findings of the project will address a number of data gaps related to: 1) the spatial ecology (migration, distribution, and habitat use) of Arctic Grayling that were identified for the Parsnip River core area; and 2) potential interactions with Bull Trout, which may be limiting the growth of Arctic Grayling populations throughout the Williston Reservoir Watershed.	University of Northern British Columbia (UNBC)	$ 184,609	Research & Information Acquisition	Streams Action Plan	Parsnip Sub-Region
7	PEA-F20-F-2967	**Improving fish passage in our Peace Region** *Fish passage assessments and habitat confirmations* The goal of this project is to create a shortlist of candidate culverts for restoration of fish passage in the Parsnip River Watershed based on watershed-wide ecological and cultural values, while building capacity, awareness, and momentum for fish passage restoration in the Peace Region. This will be achieved through a data analysis exercise, First Nations input, First Nations training, fish passage assessments, and habitat confirmation assessments. Assessments will follow standardized protocols developed by the Province of B.C., and the Fish Passage Technical Working Group. Data from this project will be entered into the Provincial Stream Crossing Inventory System database (PSCIS).	Society For Ecosystem Restoration in North Central BC	$ 65,221	Research & Information Acquisition	Streams Action Plan	Parsnip Sub-Region
			Fish Project Total:	**$ 598,904**			

FWCP Peace Region 2019-2020 Project List

#	Project ID	2019-2020 Grant-Based Wildlife Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-Region
8	PEA-F20-W-2934	**Restoring habitat to support endangered caribou in our Peace Region** *Bickford habitat restoration pilot* Due to rapid population declines of the Klinse-Za caribou herd, emergency recovery actions, such as predator removal and maternal penning have occurred since 2014. To support long-term sustainability of the herd, habitat restoration and access management are needed to reduce the negative impacts of disturbance. To-date, the Bickford Habitat Restoration Pilot project has resulted in the restoration of 2.3 kms of the Fisher Creek forest service road. In this final project year, post-treatment monitoring to determine the effectiveness of the restoration treatments will continue. Outcomes expected include: measures of success in reducing human access to caribou habitat and accelerated vegetation succession. Results will also inform future habitat restoration projects for the Klinse-Za/Scott East herd and others.	Nikanese Wah tzee Stewardship Society	$ 19,936	Species-Based Actions	Species of Interest Action Plan	Basin-Wide
9	PEA-F20-W-2937	**Improving Caribou calf survival and herd size through maternity penning** *Enhancing caribou survival in the Klinse-Za/Scott East herd area* The goal of this project is to enhance the survival rate of caribou cows and calves in the Klinse-Za and Scott East herd areas, to allow for a positive population trajectory. Pregnant cow caribou are captured in late winter and relocated to a protective pen in natural calving range. The cows are fed, protected, and monitored during the calving season and afterwards. Cows and calves are released when calves have grown to a point where they are less susceptible to predation by wolves and bears (late July). Surveys will be undertaken to assess effectiveness of maternal penning, relative to other management measures undertaken as part of the overall population recovery program.	Nikanese Wah tzee Stewardship Society	$ 72,257	Species-Based Actions	Species of Interest Action Plan	Basin-Wide
10	PEA-F20-W-2943	**Restoring caribou habitat for herds in our Peace Region** *Restoring caribou habitat in the Klinse-Za/Scott East herd* Due to rapid population declines of the Klinse-Za and Scott East caribou herds, emergency recovery actions, such as predator removal and maternal penning have occurred since 2014, to avert extirpation of the herds. To support long-term sustainability of the herd, habitat restoration and access management are needed to reduce the negative impacts of disturbance. Based on the results of the Bickford Habitat Restoration Pilot (PEA-F20-W-2934) and recommendations in the Klinse-Za/Scott East Habitat Restoration Strategic Plan, the goal of this multi-year project is to functionally and ecologically restore linear corridors identified as near-term, high-priority sites. Outcomes expected include restoration of high-priority linear corridors, ultimately resulting in the reduction of human access, predator use and movement rates, and accelerated vegetation growth.	Nikanese Wah tzee Stewardship Society	$ 83,900	Species-Based Actions	Species of Interest Action Plan	Basin-Wide
11	PEA-F20-W-2947	**Studying endangerd bats in our Peace Region** *Northern Myotis maternal roost study - year two* This project will continue efforts to improve science and understanding of bats. Efforts in 2018 that confirmed reproductive Northern Myotis bats are present in the Peace Arm, will be expanded. Telemetry will locate maternal roosts, contribute to a habitat management tool, and provide information for potential Wildlife Habitat Areas (WHA). Specific habitat requirements for this species in the Peace Region are poorly understood and there are no confirmed occurrences west of Williston Reservoir in the Basin, though the species has been confirmed in Hazelton. Unlike the common Little Brown Myotis, which readily occupies anthropogenic structures, Northern Myotis is an interior forest specialist, generally utilizing mature trees near riparian habitat for maternal colonies.	Zonal Ecosystem and Wildlife Consultants, Ltd.	$ 41,670	Research & Information Acquisition	Species of Interest Action Plan	Basin-Wide

FWCP Peace Region 2019-2020 Project List

#	Project ID	2019-2020 Grant-Based Wildlife Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-Region
12	PEA-F20-W-2949	**Training forest industry professionals to conserve Fisher habitat in our Peace Region** *Fisher habitat conservation: extension and field trials* In year three of this multi-year project, work with First Nation and industry partners will continue to complete field trials to determine if efforts to retain Fisher habitat are being effective. The Williston Reservoir impacted available habitat for Fishers in the Upper Peace Drainage and ongoing forest harvesting continues to erode the ability of the landscape to support this priority furbearer. Conservation of important habitats is critical. Using information from Fisher research in the Williston region, this project uses training, tools, and best management practices to help forestry staff retain important Fisher habitats within their operations.	Ministry of Environment and Climate Change Strategy	$ 26,774	Habitat-Based Actions	Species of Interest Action Plan	Basin-Wide
13	PEA-F20-W-2952	**Helping UNBC share fish and wildlife knowledge** *2019-2020 colloquium presentation series* This project provides an education and outreach venue, builds connections and develops relationships though a series of free presentations focused on research that is underway or could be applied to, our Peace Region. The project will consist of a series of three invited speaker events in the fall, winter, and spring of 2019-2020. Two will feature researchers from British Columbia or Alberta, and the third will feature a national or international speaker, all of whom will present information or engage in discussion of topics related to fish and/or wildlife species in the Peace Region.	University of Northern British Columbia (UNBC)	$ 16,920	Research & Information Acquisition	Peace Basin Plan (Section 4.3)	Basin-Wide
14	PEA-F20-W-2962	**Helping restore wetlands through training and education in our Peace Region** *Advancing wetland stewardship and engagement in the Peace Region* This project will be delivered by the BC Wildlife Federation (BCWF), which will offer two wetland inventory and health assessment workshops, in Fort Ware and McLeod Lake, in partnership with Kwadacha Nation and McLeod Lake Indian Band. The wetland inventory training will enhance local capacity to ground truth and interpret wetland information, which will add value to the FWCP Riparian Areas and Wetland Mapping Project and help identify candidate wetland restoration sites. BCWF will also restore a wetland at Morfee Elementary School in Mackenzie, to provide students with an invaluable educational tool. Additionally, BCWF will continue to explore the other wetland restoration opportunities identified in Mackenzie during 2018 initiatives.	British Columbia Wildlife Federation	$ 48,365	Habitat-Based Actions	Riparian and Wetlands Action Plan	Basin-Wide
15	PEA-F20-W-2970	**Improving understanding of forestry and fire on forage lichens for caribou** *Effect of MPB and forest harvesting on caribou forage lichen* This project will conduct an analysis of the effects of Mountain Pine Beetle forest-harvesting and prescribed fire treatments on the abundance of terrestrial forage lichens on caribou winter ranges in central BC. As part of a long-term adaptive management trial, specific forest harvesting treatments were applied and permanent sampling plots were measured prior to, and following, treatment. All plots were re-measured again in 2016 and 2017, and initial analyses of effects were examined. This work will include a more inclusive (i.e. hierarchical) analysis to better expose effects across sites and factors. Results will lead to recommendations for sustaining forage supply for caribou. This project's purpose is to advance learnings from previous work and deliver a draft manuscript for publication.	Wildlife Infometrics Inc.	$ 15,000	Monitoring & Evaluation	Species of Interest Action Plan	Basin-Wide

FWCP Peace Region 2019-2020 Project List

#	Project ID	2019-2020 Grant-Based Wildlife Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-Region
16	PEA-F20-W-2941	**Assessing Chase Caribou response to habitat alterations in our Peace Region** *Chase Caribou herd response to habitat alterations – year three* Alteration of habitat within caribou range is associated with declining caribou populations; a result of an imbalance between rates of cow and calf survival. Prior to 2009, the Chase Caribou herd was stable at 475 caribou, but has since declined to 290. Caribou range in the Chase area has undergone, and continues to undergo, significant alteration from both wildfire and increased salvage of beetle-killed pine trees. During year three of this five-year project, 40 female caribou will be monitored for habitat use, adult mortality, and calf survival. The results will be contrasted to pre-disturbance parameters. The contrast will allow for inferences about: 1) potential impacts associated with recent disturbances; and 2) conservation measures necessary to ensure resiliency of the herd.	Wildlife Infometrics Inc.	$ 99,040	Species-Based Actions	Species of Interest Action Plan	Finlay Sub-Region
17	PEA-F20-W-2945	**Improving understanding of habitat loss for furbearers** *Effects of habitat change on Fisher and marten populations* This project will improve understanding of the abundance, distribution, and trend of furbearing species, including Fisher and marten that have been impacted by signficant habitat loss and change (e.g. reservoir creation, logging of beetle-infested forest). The results of this multi-year project will contribute towards functioning and sustainable Fisher and marten populations in the Williston Basin by helping to inform decision-making for continuing conservation.	Ministry of Environment and Climate Change Strategy	$ 61,530	Research & Information Acquisition	Species of Interest Action Plan	Finlay Sub-Region
18	PEA-F20-W-2958	**Studying the Finlay Caribou herd population** *Distribution and abundance of the Finlay Caribou herd* The goal of this multi-year project is to determine the population status of the Finlay Caribou herd, and provide current information on the distribution and seasonal movements of the herd, to delineate accurate range boundaries and core habitats within the range. Population monitoring helps document and track changes in the population status of each herd over time. For northern caribou, obtaining accurate counts or detecting small changes in the population may be more difficult if animals winter in lower elevations, because the associated forest cover in these areas makes spotting caribou more challenging from the air. This project is monitoring GPS-collared caribou to support the population assessment. Assessed in 2002, little is known of the current abundance and distribution of the Finlay Caribou herd.	Ministry of Forests, Lands, Natural Resource Operations and Rural Development, Omineca Region	$ 36,024	Monitoring & Evaluation	Species of Interest Action Plan	Finlay Sub-Region
19	PEA-F20-W-2966	**Improving understanding of wetlands for fish, wildlife, and cultural use in our Peace Region** *Identifying opportunities for wetland restoration 2019-2020* This project will improve the understanding of historical distribution of wetlands in the Finlay Reach of Williston Reservoir, prior to inundation. This work will also document the cultural importance of wetlands to the Tsay Keh Dene (TKD) Nation, and quantitatively assess the current health of the wetlands. The results of this study will identify opportunities for wetland restoration. Debris scour and wave action is negatively impacting nearshore vegetation and wetlands within the Finlay Reach of Williston Reservoir. In addition, non-hydro-related, landscape-level disturbances have resulted in a loss of inland wetland habitat for fish and wildlife. This process is threatening the ecological benefits provided by wetlands and the ability of TKD Nation to harvest food and medicine from within wetlands.	Chu Cho Environmental LLP	$ 56,324	Research & Information Acquisition	Species of Interest Action Plan	Finlay Sub-Region

FWCP Peace Region 2019-2020 Project List

#	Project ID	2019-2020 Grant-Based Wildlife Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-Region
20	PEA-F20-W-2973	**Studying threatened Olive-sided Flycatchers in our Peace Region** *Identifying Olive-sided Flycatcher breeding populations 2019* This project will continue population surveys for threatened Olive-sided Flycatchers. British Columbia supports a large proportion of the remaining Olive-sided Flycatcher breeding population. Although Northern BC hosts suitable habitat for this songbird, there is limited knowledge regarding abundance and breeding success. In Spring 2018, surveys for breeding Olive-sided Flycatchers were conducted within the Finlay Reach of Williston Reservoir, and successfully located three breeding pairs. Although apparently scarce, further surveys and data are necessary before any conclusions can be made regarding Olive-sided Flycatcher populations in this area.	Chu Cho Environmental LLP	$ 32,020	Species-Based Actions	Species of Interest Action Plan	Finlay Sub-Region
21	PEA-F20-W-2931	**Building ecological awareness in our Peace Region** *Williston school ecology project* The purpose of this project, now in its fifth year, is to improve connection with, and understanding of, local ecology for Peace Region elementary and high school students. 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, in addition to classrooom activities integrated with the provincial curriculum. Grade-specific modules are tailored to complement standard curricula. This project will emphasize the importance of natural resources to human livelihoods and well-being, foster an appreciation of native, local flora and fauna.	Wildlife Infometrics Inc.	$ 22,836	Habitat-Based Actions	Peace Basin Plan (Section 4.3)	Parsnip Sub-Region
22	PEA-F20-W-2933	**Assessing health of Stone's Sheep in our Peace Region** *Williston Lake Stone's Sheep health assessment* This seed grant project is designed to develop a study plan for an aerial baseline population inventory of Stone's Sheep along Williston Reservoir. This population is the region's southernmost and is considered to be high risk due to its proximity to domestic sheep farms. This baseline study will aid in developing a health assessment plan, which would include a radio-collaring and health-testing program for at-risk Stone's Sheep herds in the Peace Region.	Wild Sheep Society of British Columbia	$ 4,990	Species-Based Actions	Species of Interest Action Plan	Peace Sub-Region
			Wildlife Project Total	**$ 637,585**			

FWCP Peace Region 2019-2020 Project List

#	Project ID	2019-2020 Fish and Wildlife Directed Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-Region
23	PEA-F20-F-3359-DC-106374 PEA-F20-F-3143-DCA	**Studying Kokanee in our Peace Region** *Kokanee assessment study* This project aims to address a priority action in our WCP Peace Region Reservoirs Action Plan (Action 2a-1) to "Undertake a Kokanee assessment study to summarize status, trends, and aquatic and terrestrial ecosystem impacts and potential risks of Kokanee introductions. Develop appropriate recommendations for actions, as needed". Year two of this project will provide a second year of Kokanee spawning surveys, to assess the abundance and distribution of Kokanee within tributaries of Williston Reservoir. Kokanee will be collected from key locations, to assess reproductive potential, age at maturity, and whether there is potential genetic introgression of Columbia-origin stocked Kokanee with native Kokanee populations, in the region.	Ministry of Forests, Lands, Natural Resource Operations and Rural Development / University of Northern British Columbia (UNBC)	$ 106,850	Research & Information Acquisition	Reservoirs Action Plan	Basin-Wide
24	-	**Monitoring and managing fish enhancement structures** *Managing fish habitat enhancement structures* Large woody debris structures were added to embayments of Dinosaur Reservoir in an attempt to enhance fish habitat several years ago. These enhancement structures need to be monitored and managed.	BC Hydro	$ 5,000	Research & Information Acquisition	Reservoirs Action Plan	Dinosaur Sub-Region
25	-	**Supporting Mugaha Marsh bird banding station** *Mugaha Marsh bird banding station* Mackenzie Nature Observatory operates the Mugaha Marsh Sensitive Area bird banding station on the Parsnip Reach of Williston Reservoir. The 2019 season will add to the long-term monitoring data set and provide important information on breeding bird population trends, distribution, and health, which can guide species conservation and habitat enhancement initiatives in the region.	Mackenzie Nature Observatory	$ 19,885	Monitoring & Evaluation	Peace Basin Plan	Parsnip Sub-Region
26	-	**Investigating factors limiting moose** *Moose limiting factors* This project is year five of five, and is an investigation of limiting factors affecting moose survival in our Peace Region. This project is designed to improve understanding of the ecological factors that limit moose survival in representative areas of the FWCP's Peace Region, alongside the Provincial moose investigations, currently underway.	Wildlife Infometrics Inc.	$ 159,310	Research & Information Acquisition	Species of Interest Action Plan	Parsnip and Peace Sub-Regions
			Directed Project Total:	**$ 291,045**			
			2019-2020 PROJECT SPEND TOTAL:	**$ 1,527,534**			