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Peace Region 2017 – 2018 Fish & Wildlife Project List

Our Peace Region Board approved $2.2 million for 26 fish and wildlife projects to be implemented April 1, 2017 – March 31, 2018. 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.

Caribou, bats, migratory birds, moose, Bull Trout, Arctic Grayling, and wetland and riparian species and others will benefit from these 26 projects. Work will continue this year as part of our multi-year project to gather data on mercury levels in fish in the Williston and Dinosaur reservoirs. We will also continue our multi-year project to investigate limiting factors affecting moose in the Peace Region, alongside the Provincial moose study.

About our 2017 – 2018 project list

This is a final list of projects conditionally-approved by the FWCP's Peace Region Board as of April 1, 2017. These approved budgets are to support the delivery of fish and wildlife projects, and do not include the FWCP administration or communications budget. The total number of projects approved for 2017 – 2018 includes budgets approved for future work this fiscal year to be further defined by the regional Boards (i.e., directed projects).

Grant-based fish and wildlife project descriptions are based on information provided in the lead proponent's grant application.

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

Provincial fish & wildlife projects

Our three regional boards – Coastal, Columbia and Peace – approved funding for 102 fish and wildlife projects valued at $9.4 million for 2017 - 2018. Each project went through a three-stage review and evaluation process prior to a final decision by our local Board. Each project addresses one or more conservation priorities in our action plans.

Contact us

Contact Chelsea Coady, Peace Region Manager at 250-561-4884 or chelsea.coady@bchydro.com to learn more about these projects and the work we fund 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

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	Project ID	2017 - 2018 Grant-Based Fish Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-Region
1	PEA-F18-F-2296	**Monitoring Kokanee in Williston Reservoir** *Ecosystem impact-nutrient enrichment by Kokanee in Williston Reservoir* Kokanee were introduced to the Williston region in the 1990s and are present in large populations. This project will assess the impact of Kokanee returns by monitoring nutrient flow, aquatic invertebrate biodiversity and functional diversity, and lichen diversity in riparian areas. During the first year, surveys were conducted to determine Kokanee presence and absence, and identify specific systems. It also allowed sampling of fish, aquatic insects, and lichens to begin so we could monitor nutrient flow and develop species lists – in a region substantially unsurveyed for biodiversity – for use in later research. Year two funding will allow us to collect data in the specific systems to compare streams with and without Kokanee.	University of Northern British Columbia	$ 153,432	Research and Information Acquisition	Reservoirs Action Plan	Basin-wide
2	PEA-F18-F-2339	**Monitoring Bull Trout in Williston Reservoir** *2017 Bull Trout Spawner Abundance and Critical Habitats* Since 2001, FLNRO and FWCP have conducted annual Bull Trout redd counts in spawning tributaries of Williston Reservoir. McLeod Lake Indian Band and Tsay Keh Dene First Nations are more recent partners. This project will count redds in the established annual index reaches; inclusion of two new index sections from the Ingenika watershed in the 2017 survey to provide a baseline for future comparison; and an application of the aerial redd count methodology (successfully applied to the Ingenika watershed in 2016) to the Mesilinka and Osilinka watersheds to identify critical spawning habitats and estimate Bull Trout population size. This project is designed to address information gaps about Bull Trout in the reservoir which will lead to a faster start to on-the-ground conservation and enhancement actions.	Ministry of Forests, Lands and Natural Resource Operations (Omineca Region)	$ 68,648	Monitoring and Evaluation	Streams Action Plan	Basin-wide

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3	PEA-F18-F-2352	**Studying Arctic Grayling in Williston Reservoir** *Williston grayling distribution: Environmental DNA Study* This seed project is examining the feasibility of using Environmental DNA in the Williston Reservoir watershed to identify Arctic Grayling distribution and habitat use in small tributaries of the reservoir. This project will determine costs, methods, and limitations associated with environmental DNA sampling data, and will establish contact with a lab that appears to have already developed primers specific for Arctic Grayling.	Stamford Environmental	$ 5,000	Monitoring and Evaluation	Streams Action Plan	Basin-wide
4	PEA-F18-F-2341	**Planning future fish studies in Williston Reservoir** *Strategic plan for Tsay Keh Dene fisheries studies* Allowing for opportunities for human use of fish and fish habitat while ensuring conservation of fish stocks is difficult to achieve without special efforts to acquire certain types of key population data, due to the high sensitivity of some species to habitat degradation and overexploitation threats. Strategic planning is necessary to identify and prioritize requirements for fish population data, in order to enable a quicker start to Tsay Keh Dene-led field studies and conservation and enhancement actions. This seed project is to develop a proposal to conduct strategic planning for future fisheries studies in the Finlay Watershed including the Finlay Arm of Williston Reservoir.	Chu Cho Environmental	$ 5,000	Species-based Actions	Streams Action Plan	Finlay

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5	PEA-F18-F-2328	**Improving fish passage in Williston Reservoir** *Priority culvert assessment for fish passage* This seed project is to develop a proposal for a multi-year project that will identify stream crossings that impede fish passage to important habitat within the Parsnip River Basin. The proposal will include field-based fish passage evaluation techniques, GIS habitat mapping, and optimization decision tools to identify and prioritize culverts that impede passage that can be repaired or replaced. The goal is to identify priority remediation sites that will open access to the largest amounts of high-quality upstream habitat.	DWB Consulting Services Ltd.	$ 5,000	Research and Information Acquisition	Streams Action Plan	Parsnip
6	PEA-F18-F-2311	**Monitoring Bull Trout in Williston Reservoir** *Peace Reach Bull Trout spawning zones* This project will build on results from 2016 and conduct follow-up monitoring in four tributary drainages to the Peace Reach of the Williston Reservoir where Bull Trout spawning activity was identified. Follow-up surveys in 2017 will document Bull Trout and redd abundance and delineate spawning zone boundaries as well as survey additional drainages.	Diversified Environmental Services	$ 41,966	Research and Information Acquisition	Streams Action Plan	Peace
7	PEA-F18-F-2313	**Monitoring Lake Trout in Williston Resevoir** *Peace Reach Lake Trout movements* This project is year two of a multi-year project examining Peace Reach Lake Trout movements. In 2016, 66 adult Lake Trout were sampled, 40 of which were implanted with acoustic transmitters. In 2017, this project will analyze movement data from 27 data-logging hydrophones currently maintained in the Peace Reach by Carleton University and BC Hydro. These data will guide field activities intended to identify critical habitat features including potential spawning areas.	Diversified Environmental Services	$ 54,755	Research and Information Acquisition	Reservoirs Action Plan	Peace
			Fish Project total:	**$ 333,802**			

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8	PEA-F18-W-2294	**Hosting discussions with UNBC: Colloquium Series** *2017-18 Colloquium Presentation Series* This project provides an education and outreach for building connections and developing relationships. As well, provide an opportunity to share knowledge and expertise that is being developed in, or could be applied to, the Peace Region. The project will consist of a series of three speaker events which will take place in the fall, winter and spring of each year; two in communities within or near the FWCP's Peace Region, with a third at UNBC campus in Prince George. Two of these events will feature researchers from British Columbia or Alberta, while the third will feature a national or international speaker; all of whom will present information, or engage in discussion, on topics related to fish and/or wildlife species in the Peace Region.	University of Northern British Columbia	$ 16,920	Research and Information Acquisition	Peace Basin Plan	Basin-wide
9	PEA-F18-W-2319	**Preparing for whitenose syndrome in the Peace Region** *Williston Reservoir Bat Ecology Program* Bats are integral to healthy ecosystems, yet little is known about bat populations, habitat requirements, and threats to bat species around Williston Reservoir and the Peace Region. Across North America bats are experiencing precipitous population declines due to a devastating disease, Whitenose Syndrome (WNS), warranting two bat species in northern B.C. to be federally listed as endangered. Because WNS strikes in the winter, killing bats while they hibernate, our team seeks to identify important bat habitat and establish baseline winter bat data to help monitor populations and inform future plans for dealing with WNS. The study will help answer critical questions about bat ecology in the Williston Reservoir.	Ingebjorg Jean Hansen	$ 89,458	Research and Information Acquisition	Species of Interest Action Plan	Basin-wide
10	PEA-F18-W-2323	**Collaring caribou to improve knowledge** *Distribution and Abundance of the Finlay Caribou Herd* Population monitoring of Woodland Caribou is used to 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. Assessed in 2002, little is known of the current abundance and distribution of the Finlay caribou herd. FLRNO is planning to conduct a population assessment for caribou in the Finlay range. This project supports the purchase and deployment of 20 GPS collars which will provide detailed information on the distribution of the herd and allow for a sightability correction during the population census.	Ministry of Forests, Lands and Natural Resource Operations (Omineca Region)	$ 66,562	Monitoring and Evaluation	Species of Interest Action Plan	Basin-wide

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11	PEA-F18-W-2334	**Working with industry to support amphibians and reptiles** *Best Management Practices Workshops for Herpetofauna* The government of BC has released multiple best management practice documents for the management of herpetofauna across the Province, including extensive guidance on salvage. However, many in the resource industry are not fully aware of the regulations or how to establish the management practices contained within these practice documents. The goal of this seed project is to develop a proposal for an outreach program, including extension materials, workshop, and presentations to communities within the Peace Region on the management of northern herpetofauna.	DWB Consulting Services Ltd.	$ 4,988	Species-based Actions	Riparian and Wetlands Action Plan	Basin-wide
12	PEA-F18-W-2336	**Working with communities to steward wetlands** *Enhancing Wetland Stewardship and Engagement in the Peace Region* This seed project is to develop a proposal for a project that will engage members of the public, First Nations, and wetland practitioners through the delivery of two targeted workshops to support knowledge exchange and identification of opportunities to enhance wetland restoration and protection. A wetland-keepers workshop will target engaged citizens and practitioners and will provide training of various assessments suitable within the region. Where possible, BCWF will aim to support individuals who attend with a project idea. A workshop will target current practitioners and experts in the region to exchange knowledge and explore gaps and opportunities for enhanced wetland conservation and protection. Bursaries will be made available for 10 First Nations representatives to participate in each event.	British Columbia Wildlife Federation	$ 5,000	Research and Information Acquisition	Peace Basin Plan	Basin-wide
13	PEA-F18-W-2312	**Enhancing fisher habitat in Peace Region** *Enhancing Fisher denning habitat using fungal inoculation* Large diameter trees which contain heart rot decay columns are selectively used by fishers for reproduction denning. Naturally occurring fisher den trees are relatively scarce in the FWCP Peace Region. This seed project is to develop a proposal for a project that aims to enhance fisher habitat in the Peace Region using fungal inoculation treatments that can provide accelerated creation and recruitment of wildlife trees in areas where there is a shortage of such habitat. The project outcomes would include increased critical denning habitat supply for fishers in the region, and unique skills training and experience for local First Nations who would be hired to assist with project field work.	SRS Avimetrics Inc.	$ 5,000	Species-based Actions	Species of Interest Action Plan	Dinosaur

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14	PEA-F18-W-2306	**Monitoring caribou in the Peace Region** *Pink Mountain Caribou Monitoring Project* The Ministry of Forests, Lands and Natural Resource Operations (FLNRO) is proposing a monitoring program in the Pink Mountain Northern Mountain Caribou herd to 1) improve understanding of abundance and distribution of caribou in this herd, and confirm range boundaries, and; 2) determine caribou use of the east side of the Williston Reservoir. A monitoring program was initiated in the Pink Mountain range in March 2016, with the deployment of 21 radio collars. FLNRO will be monitoring these collared caribou throughout 2017-18, using a combination of fixed-wing aircraft surveys, GPS data, and recruitment surveys. FLNRO plans to investigate caribou use of the eastern side of the Williston Reservoir, north of the Ospika Arm, through aerial surveys and traditional knowledge.	Ministry of Forests, Lands, and Natural Resource Operations	$ 74,142	Research and Information Acquisition	Species of Interest Action Plan	Finlay
15	PEA-F18-W-2322	**Studying caribou in the Peace Region** *Population Assessment for the Wolverine Caribou Herd* In 2016-2017, the Ministry of Forests, Lands, and Natural Resources Operations, in collaboration with Tsay Keh Dene Nation and the Nak'azdli Band, initiated a three-year population assessment of the Wolverine herd with funding support from FWCP. A total of 30 GPS radio collars were deployed on adult female caribou followed by a population census in February/March 2016. The census was followed by calf recruitment surveys and mortality site investigations with the objective to identify the primary limiting factors of adult female caribou and their calves. This is year two of the three-year project that will continue mortality site investigations and calf recruitment surveys within the Wolverine caribou range.	Ministry of Forests, Lands and Natural Resource Operations (Omineca Region)	$ 95,004	Species-based Actions	Species of Interest Action Plan	Finlay
16	PEA-F18-W-2327	**Exploring habitat changes on the Chase Caribou herd** *Chase Caribou Herd Response to Extensive Habitat Alterations* The Chase Caribou herd's population trend is considered 'unknown', while declines in most other mountain caribou herds are driven by unsustainable levels of predation, facilitated by habitat alteration. Since 2010, salvage of dead pine trees has been expanding within the core of the Chase herd area and large wildfires occurred there in 2014; both contributing to large-scale habitat disturbance. This project will assess the impacts of these habitat alterations by contrasting current and pre-disturbance population parameters (i.e., herd size, distribution, habitat selection, mortality causes, and calf recruitment). The results of the contrast will allow us to infer: a) the potential impacts associated with recent disturbances; and b) the conservation measures necessary to mitigate the impacts.	Wildlife Infometrics Inc.	$ 129,966	Species-based Actions	Species of Interest Action Plan	Finlay

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17	PEA-F18-W-2342	**Defining impacts to caribou forage lichen** *Effects of logging and Mountain Pine Beetle on caribou forage lichens* This project builds on work conducted in 2016-17 to assess effects of Mountain Pine Beetles (MPB) and logging on terrestrial caribou forage lichens. In 2017-18, this project will re-measure previously established permanent plots at the Jackfish Creek site on the Wolverine caribou range to assess the effects of MPB. Re-measuring the Jackfish Creek site is part of a broader project that will sample additional previously established permanent plots on logged, MPB and prescribed burn sites on another caribou range to assess a broader range of ecological conditions. Results from this project will supplement information collected in 2016-17 and will be used to develop conservation practices for the sustainable supply of forage for caribou.	Wildlife Infometrics Inc.	$ 39,415	Monitoring and Evaluation	Species of Interest Action Plan	Finlay
18	PEA-F18-W-2346	**Tracking caribou herd boundaries in Peace Region** *Refinement of Caribou Herd Boundaries - Finlay Herd* Northern ecotype caribou are sparsely distributed throughout the FWCP's Peace Region. The Finlay herd, located north of the Akie River, is currently designated as "special concern" by COSEWIC, and has declined from ~300 animals in 1996 to 26 individuals in 2002. Since the early 1990s, studies have documented the movements and distribution of individual caribou across all seasonal ranges. From these studies, there is evidence of caribou moving over the height-of-land to the east, into what is currently designated as the Pink Mountain herd. Similar results in the Pink Mountain herd have shown movement between the two herds. This project will use existing data to refine the Finlay and Pink Mountain caribou herd boundaries to reflect more accurate and biologically relevant boundaries.	Wildlife Infometrics Inc.	$ 18,437	Species-based Actions	Species of Interest Action Plan	Finlay
19	PEA-F18-W-2333	**Working with schools in Williston Area** *Williston School Ecology Program* The goal of the school ecology program is to improve connection with, and understanding of, local ecology for elementary and secondary school students in the Peace Region. Students gain hands-on experience with species and habitats of interest in their own communities through: 1) field trips, 2) interaction with local First Nation's elders and natural resource experts, and 3) classroom activities integrated with standard curriculum. Grade-specific modules are tailored to complement standard curriculum and be age-appropriate. Importance of natural resources to human livelihoods and well-being, necessity of good environmental stewardship, diverse professional opportunities in the environmental fields, and appreciation of native, local flora and fauna, is emphasized.	Wildlife Infometrics Inc.	$ 23,332	Habitat-based Actions	Peace Basin Plan	Parsnip

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20	PEA-F18-W-2338	**Using pens to support caribou calf survival** *Enhancing caribou survival within the Klinse-Za/Scott herds* Our goal is to increase the survival rate of cows and calves during the calving period in order to stop, or even reverse, the rapid decline of caribou that inhabit the Klinse-Za and Scott caribou herd areas. Pregnant cow caribou are captured in early March and relocated to a pen that is located in natural calving range. The cows are fed and protected during the calving season until calves have grown to a point where they are less susceptible to predation by wolves and bears (late July). The maternal pen project has been a success in its first three years of operation, and this project is will continue the maternal pen for a fourth year.	Wildlife Infometrics Inc.	$ 81,008	Species-based Actions	Species of Interest Action Plan	Peace
21	PEA-F18-W-2345	**Testing silviculture to improve caribou habitat** *Testing approaches to restore habitat for caribou* This project will test the feasibility of using silvicultural methods to restore legacy disturbance features (e.g., roads, seismic lines, abandoned pipelines, and well sites) that exist within areas designated for conservation of habitat for caribou (i.e., UWRs and WHAs). Silviculture that has been used elsewhere for similar restoration projects include planting appropriate conifer species, slash roll back, mounding, sight-line blockages, falling of adjacent trees across right of ways, blocking ATV access and the spreading of coarse woody debris. If the methods are judged to be feasible (i.e., permitted, efficient, effective, non-conflicting, and/or protected) then protocols for use could be established and the methods extrapolated to other designated areas throughout the Williston Basin.	Wildlife Infometrics Inc.	$ 47,104	Species-based Actions	Species of Interest Action Plan	Peace
			Wildlife Project Total:	**$ 696,336**			

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	Project ID	2017 - 2018 Fish and Wildlife Directed Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-Region
22	--	**Managing Fish Habitat Enhancement Structures** *Management of fish habitat enhancement structures in Dinosaur Reservoir* Large woody debris structures were added to embayments of the Dinosaur Reservoir in an attempt to enhance fish habitat several years ago. These enhancement structures need to be monitored and managed.	TBD in 2017	$ 10,000	Research & Information Acquistion	Reservoirs Action Plan	Dinosaur
23	--	**Supporting Mugaha Marsh Bird Banding Station** *Mackenzie Nature Observatory - Mugaha Marsh Banding Station* MacKenzie Nature Observatory operates the Mugaha Marsh Sensitive Area bird banding station on the Parsnip Reach of the Williston Reservoir. The 2017 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	$ 18,750	Monitoring and Evaluation	Peace Basin Plan	Parsnip
24	--	**Acquiring land for conservation in Peace Region** *Land securement in the Peace Region for habitat conservation purposes* The Peace Region Board has approved funding to support the purchase of land for conservation purposes.	The Nature Trust	$ 589,000	Land Securement	Uplands Action Plan	Peace
25	--	**Investigating Mercury levels in fish** *Mercury Investigations in the Williston Reservoir Watershed* The purpose of this project is to continue to implement a robust mercury sampling plan that will gather enough information to improve our understanding of mercury levels in fish tissue in the Williston Reservoir Watershed. This project aims to directly engage First Nation communities in data collection who fish in the reservoir and tributaries.	Azimuth Consulting Group Partnership	$ 213,291	Research & Information Acquistion	Reservoirs Action Plan	Peace and Findlay
26	--	**Investigating Factors Limiting Moose** *Moose Limiting Factors Investigation in the Peace Region* Investigation of limiting factors affecting moose survival in the 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.	$ 322,395	Research & Information Acquistion	Species of Interest Action Plan	Peace and Parsnip
			Directed Project Total:	**$ 1,153,436**			
			2017-2018 PROJECT SPEND TOTAL:	**$ 2,183,573**			