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 2018 - 2019

## 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 license 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.

Our three regional boards – Coastal, Columbia, and Peace – approved funding for 118 fish and wildlife projects valued at approximately $10 million for 2018 - 2019. 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 priorities in our Action Plans.

In our Peace Region, the Board approved $2.1 million for 30 fish and wildlife projects to be implemented April 1, 2018 - March 31, 2019. First Nations, stewardship groups, consultants, and agencies are leading the 10 fish and 20 wildlife projects that will help conserve and enhance fish and wildlife in watersheds impacted by existing BC Hydro dams.

## About our 2018 - 2019 project list

This is a final list of projects conditionally-approved by the FWCP's Peace Region Board as of April 1, 2018. Read our annual reports for a final list of projects implemented in 2018 - 2019 and project outcomes.

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 2018 - 2019, 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 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 through a request for proposals (RFP) process.

## 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 2018 - 2019 Project List

Final

| # | Project ID | 2018 - 2019 Grant-Based Fish Projects | Project Lead | FWCP Funding | Project Type | Action Plan Alignment | Watershed |
|---|---|---|---|---|---|---|---|
| 1 | PEA-F19-F-2593 | **Studying Arctic Grayling and Bull Trout interactions in Williston Reservoir**<br>*Spatial ecology of Arctic Grayling in the Parsnip core area* This 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. The 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 moderate and high immediacy 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) | $ 168,253 | Research & Information Acquisition | Streams Action Plan | Parsnip Arm |
| 2 | PEA-F19-F-2622 | **Studying Lake Trout in Williston Reservoir**<br>*Peace Reach Lake Trout movements* In Year one (2016-2017) of this project, 66 adult Lake Trout were sampled and acoustic transmitters were implanted in 40. In Year two (2017-2018), data from of 27 data-logging hydrophone receivers (maintained by Carleton University and BC Hydro as part of a concurrent study) and four additional hydrophones deployed in the Finlay and Parsnip reaches, were used to focus field sampling in fall 2017. In Year three (2018-2019), acoustic transmitters will be implanted on 20 additional Lake Trout, additional receivers will be placed in the Finlay and Parsnip reaches, a second year of movement data will be recovered and fall survey work will focus on potential Lake Trout spawning or fall congregation areas, identified in 2017. | Diversified Environmental Services | $ 78,874 | Research & Information Acquisition | Reservoirs Action Plan | Basin-Wide |
| 3 | PEA-F19-F-2624 | **Studying kokanee in Williston Reservoir**<br>*Ecosystem impact/nutrient enrichment by kokanee in Williston Reservoir* Kokanee were introduced to Williston Reservoir in the 1990s and are present in large populations. This project will assess the impact of kokanee return by monitoring nutrient flow, aquatic invertebrate biodiversity, functional diversity, and lichen diversity in riparian areas. In years one and two, surveys were used to identify systems with, and without, kokanee for use in research, systems were surveyed to develop species lists, and biodiversity and nutrient flow were monitored in a comparative manner between streams with, and without, kokanee. Year three of this three-year project, will allow for data analysis completion, conducting of additional field monitoring where data gaps exist, and work with local First Nations and communities on the dissemination of project results. | University of Northern British Columbia (UNBC) | $ 95,550 | Research & Information Acquisition | Reservoirs Action Plan | Basin-Wide |
| 4 | PEA-F19-F-2625 | **Studying Arctic Grayling in our Peace Region**<br>*Parsnip watershed Arctic Grayling monitoring* This project will resume Arctic Grayling abundance monitoring in the Anzac and Table rivers, which were surveyed from 1995-2004, using snorkeling surveys. This project will also use snorkeling surveys to describe the distribution of critical Arctic Grayling habitats and abundance in the Missinka River watershed for the first time. Resulting monitoring data will address two major information gaps identified within the FWCP's Arctic Grayling synthesis and monitoring framework documents: 1) the lack of Arctic Grayling abundance monitoring since 2007, and 2) poor understanding of Arctic Grayling abundance and critical habitats in areas upstream of the Table River. These data are required to assess conservation status, identify locations for conservation or enhancement actions, and identify new opportunities for human use of fish. | Ministry of Forests, Lands, Natural Resource Operations and Rural Development | $ 64,137 | Monitoring & Evaluation | Streams Action Plan | Parsnip Arm |

# FWCP Peace Region 2018 - 2019 Project List

Final

| # | Project ID | 2018 - 2019 Grant-Based Fish Projects | Project Lead | FWCP Funding | Project Type | Action Plan Alignment | Watershed |
|---|---|---|---|---|---|---|---|
| 5 | PEA-F19-F-2626 | **Studying Bull Trout in Williston Reservoir**<br>*2018 Bull Trout spawner abundance and critical habitats* This multi-year project is a partnership between the Province of B.C., McLeod Lake Indian Band, Tsay Keh Dene Nation, and consultant John Hagen. The key objective is to monitor trends in abundance of Bull Trout populations in the Williston Reservoir watershed. This project will perform redd counts in index sections of the Davis, Misinchinka, Scott, and Point systems, and will also study critical habitats and abundance in the Omineca River watershed. In 2015, the five-year review of the redd count program identified two key priorities for the next five years: 1) additional index sections to increase the spatial coverage of the program; and 2) additional calibrated aerial redd surveys to estimate critical habitats and abundance in watersheds with low information adequacy (e.g. Omineca River). | Ministry of Forests, Lands, Natural Resource Operations and Rural Development | $ 62,583 | Monitoring & Evaluation | Streams Action Plan | Basin-Wide |
| 6 | PEA-F19-F-2647 | **Studying Arctic Grayling in our Peace Region's Ingenika River**<br>*Snorkeling to monitor Ingenika River Arctic Grayling abundance* This project will apply a standardized snorkeling survey methodology to index reaches of the Ingenika River to estimate Arctic Grayling abundance. An Ingenika snorkeling survey for grayling was designed and implemented in 2004. The methodology, index reaches, and recommendations for crew size and time budget are detailed in Cowie and Blackman (2012). This project will establish surveys in new reaches, as well as a preliminary time series for estimating trend. This project aligns with the FWCP Arctic Grayling synthesis report and monitoring framework, which identifies that the lack of population abundance monitoring since 2007 is one of six key gaps limiting the ability to assess Arctic Grayling conservation status, or to design and implement conservation and enhancement measures. | Chu Cho Environmental LLP | $ 66,146 | Species-Based Actions | Streams Action Plan | Finlay Arm |
| 7 | PEA-F19-F-2659 | **Studying Arctic Grayling in Williston Reservoir**<br>*Williston Grayling distribution: environmental DNA study II* This project, which builds on work supported through an FWCP seed grant in 2017-18 (PEA-F18-F-2352), aims to identify the distribution and habitat use of Arctic Grayling in small tributaries entering directly into Williston Reservoir: streams where populations have declined most significantly due to flooding. Identifying small tributaries that continue to provide Arctic Grayling habitat is key to understanding the existing (surviving) life history variation in the watershed and will facilitate further conservation and enhancement actions. A proven methodology for rapidly identifying Arctic Grayling presence in streams is the use of the environmental DNA assay (eDNA) using water samples collected from potential habitats. The project team proposes to use the eDNA analysis technique in order to identify the distribution and habitat use of Arctic Grayling in the reservoir basin. | Stamford Environmental | $ 55,418 | Monitoring & Evaluation | Streams Action Plan | Basin-Wide |
| | | | **Fish Project Total:** | **$ 590,961** | | | |

# FWCP Peace Region 2018 - 2019 Project List

Final

| # | Project ID | 2018 - 2019 Grant-Based Wildlife Projects | Project Lead | FWCP Funding | Project Type | Action Plan Alignment | Watershed |
|---|---|---|---|---|---|---|---|
| 8 | PEA-F19-W-2608 | **Studying amphibians in our Peace Region's Williston Reservoir**<br>*Amphibian wetland connectivity along Williston Reservoir* This four-year project is designed to investigate the ecology of amphibians in the Peace Region along Williston Reservoir. The research is being used to identify potential targets and methods for conservation-based interventions. A replicated occupancy study design is used to track individuals across habitats over time. The goal is to obtain estimates of abundance, occupancy, and biomass in two stage visits: spring and summer. Amphibians are surveyed in their habitats to understand how they are distributed, what environmental features are most important in their wetland and terrestrial habitats, and how they can be best managed in response to climate change, habitat loss, and other threats. Connectivity is a key theme in this project's communications, research, and management objectives. A public engagement program is tied to the research. | DWB Consulting Services Ltd. | $ 86,986 | Species-Based Actions | Species of Interest Action Plan | Basin-Wide |
| 9 | PEA-F19-W-2611 | **Building stewardship through Peace Region school program**<br>*Williston school ecology program* Currently in its fourth year, this program is a community-based outdoor education program that extends classroom curricula and engages students with the northern outdoors. Ten modules (K-11) tie in with expected learning outcomes, and always use local ecology and First Nations knowledge to illustrate concepts and ideas (i.e. caribou to explore adaptation and evolution, spawning trout to explore life cycles). Currently the project is based in, and focused on Mackenzie and benefits from a close partnership with the McLeod Lake Indian Band. The project is well supported by the community, with high and consistent rates of volunteer contributions. The program has been extended to the Moberly Lake community, and many opportunities for further extension exist. | Wildlife Infometrics Inc. | $ 27,457 | Habitat-Based Actions | Peace Basin Plan (Section 4.3) | Parsnip Arm |
| 10 | PEA-F19-W-2617 | **Studying habitat alterations on Chase Caribou herd**<br>*Chase Caribou herd response to habitat alterations: year two* Many caribou herds in B.C. are declining due to unsustainable predation, facilitated by habitat alteration. The Chase Caribou herd was once considered stable but has not been successfully monitored since 2009. Relatively few caribou were found in a survey attempted in 2017. Since 2009 the salvage of dead pine and the occurrence of large wildfires have contributed to extensive habitat disturbance. In year two of this five-year project, the potential impacts of habitat alteration will be assessed by monitoring collared female caribou (habitat use, adult mortality, calf survival) and observations will be contrasted to pre-disturbance parameters. The contrast will allow inferences about: a) potential impacts associated with recent disturbances; and b) conservation measures necessary to ensure resiliency of the herd. | Wildlife Infometrics Inc. | $ 99,476 | Species-Based Actions | Species of Interest Action Plan | Finlay Arm |
| 11 | PEA-F19-W-2621 | **Training forestry industry to conserve fisher habitat in our Peace Region**<br>*Fisher habitat conservation extension and field trials* Williston Reservoir greatly reduced the supply of habitats for fishers in the Upper Peace drainage. Ongoing forest harvesting continues to erode the ability of the landscape to support this priority furbearer. As such, conservation of important habitats on the remaining forested landbase in the region is critical. Using information from fisher research in the Williston region, training, tools, and best management practices will be provided to help forestry staff (from foresters to on-the-ground operators) retain important fisher habitats within their operations. In year two of this multi-year project, we will work with First Nation and industry partners to conduct field trials to determine if efforts are positively affecting the retention of fisher habitat within the landscape. | Ministry of Environment and Climate Change Strategy | $ 58,626 | Habitat-Based Actions | Species of Interest Action Plan | Basin-Wide |

# FWCP Peace Region 2018 - 2019 Project List

Final

| # | Project ID | 2018 - 2019 Grant-Based Wildlife Projects | Project Lead | FWCP Funding | Project Type | Action Plan Alignment | Watershed |
|---|---|---|---|---|---|---|---|
| 12 | PEA-F19-W-2623 | **Helping UNBC share fish and wildlife knowledge**<br>*2018-19 FWCP colloquium presentation series* This project provides an education and outreach venue for building connections and developing relationships with those who have an interest in the area. This series of presentations is an opportunity to share knowledge and expertise that is being developed in, or could be applied to, our Peace Region. The project will consist of a series of three invited speaker events, which will take place in the fall, winter and spring of each year; two in communities within the FWCP's Peace Region and a third in Prince George on the UNBC campus. 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 of topics related to fish and/or wildlife species in our Peace Region. | University of Northern British Columbia (UNBC) | $ 16,920 | Research & Information Acquisition | Peace Basin Plan (Section 4.3) | Basin-Wide |
| 13 | PEA-F19-W-2628 | **Studying Wolverine Caribou herd population**<br>*Population assessment of the Wolverine Caribou herd* The Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNR), in collaboration with Tsay Keh Dene Nation and Nak'azdli Whut'en, initiated a three-year population assessment of the Wolverine herd in 2016. Years one and two were funded by FWCP and included deploying 30 GPS radio collars 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. The objective was to identify the primary limiting factors of adult female caribou and their calves. Year three will continue mortality site investigations and calf recruitment surveys within the Wolverine Caribou range for one more year (April 2018 to March 2019). The results of this project will support a survival analysis to assess the factors that influence caribou population dynamics in the Wolverine range. | Ministry of Forests, Lands, Natural Resource Operations and Rural Development | $ 95,004 | Species-Based Actions | Species of Interest Action Plan | Finlay Arm |
| 14 | PEA-F19-W-2629 | **Studying Finlay Caribou herd population**<br>*Distribution and abundance of the Finlay Caribou herd In 2017* , FWCP funded the first year of a three-year population assessment of the Finlay Caribou herd, led by the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNR), in collaboration with Tsay Keh Dene Nation and Kwadacha Nation (PEA-F18-W-2323). In this first year, a total of 20 GPS radio collars will be deployed on adult female caribou, followed by a population census in February-March 2018. For the second year of this project, FWCP funding will support late-winter calf surveys planned in March 2019, and collar data fees for the duration of collar life cycle (three years). The ultimate goal of this 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. | Ministry of Forests, Lands, Natural Resource Operations and Rural Development | $ 30,262 | Monitoring & Evaluation | Species of Interest Action Plan | Finlay Arm |
| 15 | PEA-F19-W-2631 | **Creating wildlife trees in our Peace Region**<br>*Enhancing habitat for wildlife tree-dependent species* Dead and dying trees (aka wildlife trees) provide denning, roosting, nesting and feeding habitat for over 70 species of wildlife in B.C., including woodpeckers and sapsuckers, numerous cavity nesting birds such as small owls, some ducks and swallows, kestrels, bats and furbearers including fishers, martens, and squirrels. Some of these species, including Pileated Woodpecker and fisher, are considered keystone species in forest ecosystems. Consequently, wildlife trees are a critical component of all healthy forests. However, in some landscapes their supply has decreased as a result of natural and anthropogenic disturbances. This project seeks to create wildlife trees within the Finlay Reach of Williston Reservoir through fungal inoculation treatments that will benefit a variety of wildlife tree-dependent species. | Strategic Resource Solutions | $ 31,235 | Species-Based Actions | Species of Interest Action Plan | Finlay Arm |

# FWCP Peace Region 2018 - 2019 Project List

Final

| # | Project ID | 2018 - 2019 Grant-Based Wildlife Projects | Project Lead | FWCP Funding | Project Type | Action Plan Alignment | Watershed |
|---|---|---|---|---|---|---|---|
| 16 | PEA-F19-W-2635 | **Supporting Kwadacha land guardians in our Peace Region**<br>*Kwadacha Nation Dene Nan Yǻdā' land guardian program* The Kwadacha land guardians (Dene Nan Yǻdā') program will monitor, collect information, and engage with the community on culturally important wildlife and plants. The main objectives of the project are to achieve:<br>• information collection, including traditional and community knowledge, on the distribution, abundance, and health of culturally important plants and wildlife;<br>• tools for community-based decision-making on culturally important wildlife, plants, and habitat, including distribution, health, medicinal uses, land uses, and harvesting; and<br>• capacity training for guardians, such as cultural/environmental monitoring, sampling, digital tools (tablets), first aid, land-use monitoring, standardized reporting and information collection. | Kwadacha Nation | $ 66,650 | Research & Information Acquisition | Species of Interest Action Plan | Finlay Arm |
| 17 | PEA-F19-W-2639 | **Restoring habitat to support endangered caribou**<br>*Bickford habitat restoration pilot* Due to population declines of the Klinse-Za Caribou herd, recovery actions such as predator control and maternal penning have occurred since 2014. To ensure long-term sustainability of these populations, habitat restoration and access management are needed to reduce the impacts of disturbance features. This project proposes to continue to test the feasibility of using mechanical and ecological restoration methods to block human access, and restore ecosystem function along the upper portion of the Fisher Creek FSR, adjacent to Bickford Mountain. Outcomes expected include measures of success in reducing human access to caribou habitat and accelerated vegetation response. Results will also guide landscape-level habitat restoration planning for the Klinse-Za and Scott East herds. | Nun wa dee Stewardship Society | $ 43,698 | Species-Based Actions | Species of Interest Action Plan | Basin-Wide |
| 18 | PEA-F19-W-2640 | **Improving berry distribution and abundance knowledge to support traditional use and bears**<br>*Characterizing edible berry distribution in the Peace Basin* Berries are an important food resource for people and wildlife across B.C.'s northern interior, but baseline information about abundance and distribution of berry types is lacking, preventing meaningful management. This seed funding will be used to write a proposal for developing a predictive, spatial model for key berry species based on field sampling, Traditional Knowledge and expert opinion. Engagement with First Nations and regional ecology experts during proposal development will help identify key project partners, and develop a meaningful sampling design and useful deliverables. Depending on partner interest, the model can be used to ask if berry resources are meeting traditional use needs, applied to Grizzly Bear inventory and habitat mapping, and used to develop management recommendations. | Wildlife Infometrics Inc. | $ 4,994 | Research & Information Acquisition | Species of Interest Action Plan | Basin-Wide |
| 19 | PEA-F19-W-2645 | **Studying threatened Olive-sided Flycatchers in our Peace Region**<br>*Identifying Olive-sided Flycatcher breeding populations* British Columbia supports a large portion of the remaining Olive-sided Flycatcher breeding population. Although northern B.C. has suitable habitat for this songbird, there is limited knowledge regarding abundance and breeding success. Due to a population decline of approximately 70 per cent in the last 45 years, this species has been listed as threatened by COSEWIC (Committee on the Status of Endangered Wildlife in Canada) and blue-listed in British Columbia. The Government of Canada has identified reduced breeding habitat quality as a potential source of population decline, and cites increased monitoring and research on the breeding grounds as high priority actions. This project aims to identify breeding populations of Olive-sided Flycatchers in northern B.C., to establish study populations for future research and monitoring. | Chu Cho Environmental LLP | $ 34,933 | Species-Based Actions | Species of Interest Action Plan | Finlay Arm |

# FWCP Peace Region 2018 - 2019 Project List

Final

| # | Project ID | 2018 - 2019 Grant-Based Wildlife Projects | Project Lead | FWCP Funding | Project Type | Action Plan Alignment | Watershed |
|---|---|---|---|---|---|---|---|
| 20 | PEA-F19-W-2650 | **Identifying caribou habitat restoration priorities in our Peace Region**<br>*Identifying forest roadways for rehabilitation* The recovery strategy for Woodland Caribou (Southern Mountain population), has identified unnaturally high predation rates resulting from altered predator-prey dynamics, human-caused and natural habitat loss, degradation and fragmentation, as the primary threats to this population of caribou. Conservation efforts must focus on minimizing habitat fragmentation, access to caribou range, and the availability of early seral habitat. This project will identify, map and classify forest roadways within the Chase and Wolverine herd boundaries, according to vegetation cover, site lines, species composition and caribou movement data to identify priorities for the rehabilitation of forest roadways within the Chase and Wolverine Caribou herd boundaries. | Chu Cho Environmental LLP | $ 42,067 | Species-Based Actions | Species of Interest Action Plan | Finlay Arm |
| 21 | PEA-F19-W-2651 | **Helping restore wetlands through training and education in our Peace Region**<br>*Enhancing stewardship capacity for wetland restoration* The BC Wildlife Federation will offer four wetland inventory and restoration design workshops with partnering communities (i.e. Mackenzie, Nak'azdli, Saulteau and West Moberly, Tsay Keh Dene and Kwadacha). The wetland inventory training will enhance local capacity to ground truth and interpret wetland information, which will add value to the FWCP's Williston Reservoir wetland inventory initiative. Participants will also receive hands-on training to identify and develop restoration design prescriptions. BC Wildlife Federation staff, restoration expert, Tom Biebighauser, and at least one First Nation technician will be involved in a minimum of five days of wetland restoration reconnaissance in the FWCP's Peace Region to prepare restoration designs. Restoration would be pursued in future years. | British Columbia Wildlife Federation | $ 39,300 | Habitat-Based Actions | Riparian and Wetlands Action Plan | Basin-Wide |
| 22 | PEA-F19-W-2661 | **Studying use of bat caves by other species in our Peace Region**<br>*Wildlife use of karst and cave features* While completing the three-year, FWCP-funded study to locate bat hibernacula in the Peace Reach (PEA-F18-W-2319), a number of cave and karst features were documented. Many are being used by denning and potentially hibernating wildlife, including bears, porcupines, and wolverine, as well as non-denning animals, such as Mountain Goats. This was considered unusual by the cavers, who have experience throughout B.C. Leveraging existing funding to retrieve bat detectors located in caves in the summer of 2018, game cameras will be installed to document wildlife use of these habitat features. Karst and cave features could represent an important habitat type that is limited on the landscape and this project aims to explore the potential importance of these habitat features. | Zonal Ecosystem and Wildlife Consultants Ltd. | $ 12,750 | Research & Information Acquisition | Uplands Action Plan | Peace Arm |
| 23 | PEA-F19-W-2668 | **Studying Northern Myotis Bats near Williston Reservoir in our Peace Region**<br>*Williston Reservoir Northern Myotis maternal roost study* Northern Myotis is a federally endangered bat species facing devastating population declines in the eastern part of its range due to White Nose Syndrome (WNS). Little is known about the habitat requirements of this species. It is not currently known whether Northern Myotis occur on the western side of Williston Reservoir; the existing range map only assumes a presence east of the northern Rockies. Unlike Little Brown Myotis, which readily occupies anthropogenic structures, Northern Myotis is an interior forest specialist often utilizing mature deciduous trees, rock crevices and sometimes buildings for maternal colonies. This project will focus on acoustic detectors to determine presence with capture and telemetry to follow reproductive females to maternal colony locations. The outcomes of this potential multi-year study would include forestry/industry extension programs to facilitate habitat conservation, land-use planning and management for the benefit of this species at risk. | Zonal Ecosystem and Wildlife Consultants Ltd. | $ 72,018 | Research & Information Acquisition | Species of Interest Action Plan | Basin-Wide |

# FWCP Peace Region 2018 - 2019 Project List

Final

| # | Project ID | 2018 - 2019 Grant-Based Wildlife Projects | Project Lead | FWCP Funding | Project Type | Action Plan Alignment | Watershed |
|---|---|---|---|---|---|---|---|
| 24 | PEA-F19-W-2670 | **Evaluating caribou health in maternity pens in our Peace Region**<br>*Klinse-Za / Scott East Caribou maternal pen health evaluation* Declines in B.C.'s Caribou herds initiated a cascade of management actions, including two maternal penning pilots. Over four years, the Klinse-Za pen project resulted in improved calf/cow survival. However, capturing and penning wild caribou has direct and indirect health consequences, and little is known of their health overall. This project proposes to evaluate penning on two key health indicators: stress levels and selected pathogens. The project has archived biological samples from caribou captured for the pen and unpenned animals. This project's objective is to: 1) compare acute (from serum), mid-term (fecal) and long-term (hair) cortisol levels between penned and wild animals, and 2) characterize specific pathogen exposure of the entire herd, following a protocol developed by the B.C. Boreal Caribou Health Research Program (BCHRP). | Nun wa dee Stewardship Society | $ 22,943 | Species-Based Actions | Species of Interest Action Plan | Peace Arm |
| 25 | PEA-F19-W-2671 | **Improving Caribou calf survival and herd size through maternity penning**<br>*Enhancing Caribou survival within the Klinse-Za / Scott East herd* The goal of this project is to sufficiently enhance survival of caribou cows and calves within the Klinse-Za and Scott East herd areas to allow for a positive population trajectory. Ultimately, the work aims to achieve a combined herd that is self-sustaining. Pregnant cow caribou are captured in early March and relocated to a protective pen situated in natural calving range. The cows are fed and protected during their advanced pregnancies, the calving season, and after calving. 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). The maternal pen project has been a success in its first four years of operation and this project will continue the maternal pen for a fifth year. | Nun wa dee Stewardship Society | $ 70,055 | Species-Based Actions | Species of Interest Action Plan | Basin-Wide |
| | | | **Wildlife Project Total:** | **$ 855,374** | | | |

# FWCP Peace Region 2018 - 2019 Project List

Final

| # | Project ID | 2018 - 2019 Fish and Wildlife Directed Projects | Project Lead | FWCP Funding | Project Type | Action Plan Alignment | Watershed |
|---|---|---|---|---|---|---|---|
| 26 | | **Monitoring and managing fish enhancement structures**<br>*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 Reservoir |
| 27 | | **Studying kokanee in our Peace Region**<br>*Kokanee assessment study* This project aims to address a priority action in the FWCP 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" | Ministry of Forests, Lands, Natural Resource Operations and Rural Development / University of Northern British Columbia (UNBC) | $ 119,529 | Research & Information Acquisition | Reservoirs Action Plan | Basin-Wide |
| 28 | | **Supporting Mugaha Marsh bird banding station**<br>*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 2018 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 | $ 19,310 | Monitoring & Evaluation | Peace Basin Plan | Parsnip Arm |
| 29 | | **Investigating factors limiting moose**<br>*Moose limiting factors* This project 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. | $ 264,800 | Research & Information Acquisition | Species of Interest Action Plan | Peace and Parsnip Arm |
| 30 | | **Investigating mercury levels in fish**<br>*Mercury in fish investigation* The purpose of this project is to continue to implement a robust mercury sampling plan that will gather enough information to improve understanding of mercury levels in fish tissue in the Williston Reservoir watershed. This project aims to directly engage First Nation communities that fish in the reservoir and tributaries, in the data collection. | Azimuth Consulting Group Partnership | $ 262,267 | Research & Information Acquisition | Reservoirs Action Plan | Basin-Wide |
| | | | **Directed Project Total:** | **$ 670,906** | | | |
| | | | **2018 - 2019 Project Spend Total:** | **$ 2,117,241** | | | |