FWCP Fish & Wildlife COMPENSATION PROGRAM

Annual Report

FWCP Peace Region 2017–2018

fwcp.ca

BC Hydro | British Columbia | Fisheries and Oceans Canada / Pêches et Océans Canada

The FWCP is a partnership of BC Hydro, the Province of B.C., Fisheries and Oceans Canada, First Nations and Public Stakeholders, to conserve and enhance fish and wildlife in watersheds impacted by BC Hydro dams.

Message from the Board Co-Chairs

On behalf of the Fish & Wildlife Compensation Program's (FWCP) Peace Region Board, we invite you to read our Annual Report for Fiscal Year 2018 (F18), covering the period April 1, 2017 to March 31, 2018. Our work in the Peace Region is dedicated to advancing the objectives of the FWCP partnership—conservation, sustainable use and community engagement—in watersheds impacted by existing BC Hydro generation facilities.

Fiscal Year 2018 built upon the achievements of the last few years in our Peace Region. We continued to successfully utilize and improve our online Grant Management System, which creates administration efficiencies, allows for robust data-collection and reporting, and helps automate some of the application review process. We also continued to improve the FWCP website, providing up-to-date information on some of the many projects underway province wide. Supporting caribou projects continues to be a significant investment for us, with more than half-a-million dollars provided to various caribou-focused projects in F18. Due to this significant investment, we dedicated a webpage focused on the caribou projects we fund in our Peace Region and encourage you to take a look fwcp.ca/supporting-risk-caribou-herds.

We received a good response to our call for grant applications in 2017–2018, with 45 Notice of Intent submissions for review to the First Nations Working Group and a total of 39 applications submitted for subsequent review by our committees and Board. The Notice of Intent process is unique to the Peace Region and allows for early engagement between First Nations and grant applicants prior to submission of the applications. Of these, the Board approved 20 grant applications, representing a broad spectrum of projects that will benefit a variety of species, including Bull Trout, Lake Trout, bats, caribou, amphibians and their habitat.

In addition to grant-based projects, the Board has continued to increase efforts on "directed projects," those projects prioritized by the Board to address specific informational needs, as identified in our Peace Region Basin and Action Plans. We continued to support year three of the five-year Moose Limiting Factors directed project and year two of the three-year Mercury in Fish Investigation directed project. Building on an Arctic Grayling directed project in Fiscal Year 2017, we also developed a monitoring framework document that provides priority monitoring needs for Arctic Grayling. This document was made available to guide FWCP project applicants and resulted in five Arctic Grayling grant applications being received in fall 2017, with four of them approved for funding in Fiscal Year 2019.

We also offer Community Engagement Grants which provide an opportunity for our stakeholders (e.g. environmental groups, rod and gun clubs, non-profits, stewardship organizations, government) and First Nations to apply for small amounts of funding (up to $1,000 maximum) to support their conservation and enhancement work. In F18, we were able to support the following five projects, for a total of $4,100: Father's Day Fishing Derby, Dinosaur Lake Campground (Hudson's Hope Ski Association); Mesocarnivore—"Weaselfest"—Workshop, Gwillim Lake (Fisher Working Group); North Peace Rod and Gun Club Annual Fundraising Banquet, Fort St. John; Bat Action Team Meeting (Wildlife Conservation Society); Ducks Unlimited Spring Fundraising Banquet, Prince George; and the Tsay Keh Dene Community Caribou Workshop (Tsay Keh Dene Nation).

Thank you to all members of the Board, the Fish and Wildlife Technical Committees, First Nations Working Group, and staff, for contributions to the FWCP Peace Region during this past year, and for helping to make FWCP a success. We also would like to acknowledge the contributions of the previous Board Chair, Eric Lofroth. Thank you Eric for all your dedication to the FWCP Peace Region over the last several years!

We now have a well-established program in place with a balanced focus on application-based and directed projects that will support our ongoing vision of thriving fish and wildlife populations, in healthy and sustainable ecosystems.

Sincerely,

Wayne Sawchuk
FWCP Peace Region, Board Co-Chair

Trevor Oussoren
FWCP Peace Region, Board Co-Chair

Front Cover: Efforts are underway to locate and protect bat hibernacula (winter roosts), even at high elevations, to reduce the threat of Whitenose Syndrome. Photo: Inge Jean Hansen.

1. Organizational Overview

INTRODUCTION

The Fish & Wildlife Compensation Program (FWCP) was established to compensate for the impacts resulting from the construction of BC Hydro dams by conserving and enhancing fish and wildlife in the Coastal, Columbia and Peace regions of British Columbia. FWCP operates as a partnership between BC Hydro, the Province of B.C., Fisheries and Oceans Canada (DFO), First Nations, and Public Stakeholders.

FWCP has invested nearly $160 million and delivered more than 1,850 projects since 1988 that increase understanding, and conserve and enhance fish, wildlife and their supporting habitats impacted by existing BC Hydro generation facilities. Our three regional Boards approved more than $9.4 million for 102 fish and wildlife projects to be implemented in F18.

The Peace program was established in 1988 to support the conservation and enhancement of fish, wildlife and habitat in watersheds impacted by the footprint created by the impoundment of the Peace River, and creation of the Williston and Dinosaur reservoirs (Figure 1.1). In the Peace and Columbia regions, FWCP is in place as a mechanism to implement conditions in BC Hydro's water licenses issued under the provincial Water Act; FWCP is voluntary by BC Hydro in the Coastal Region.

This Annual Report provides an overview of FWCP's activities in the Peace Region for Fiscal Year 2018 (F18), covering the period April 1, 2017 to March 31, 2018. It includes an overview of financial performance, project funding summary and alignment of the year's work with strategic objectives.

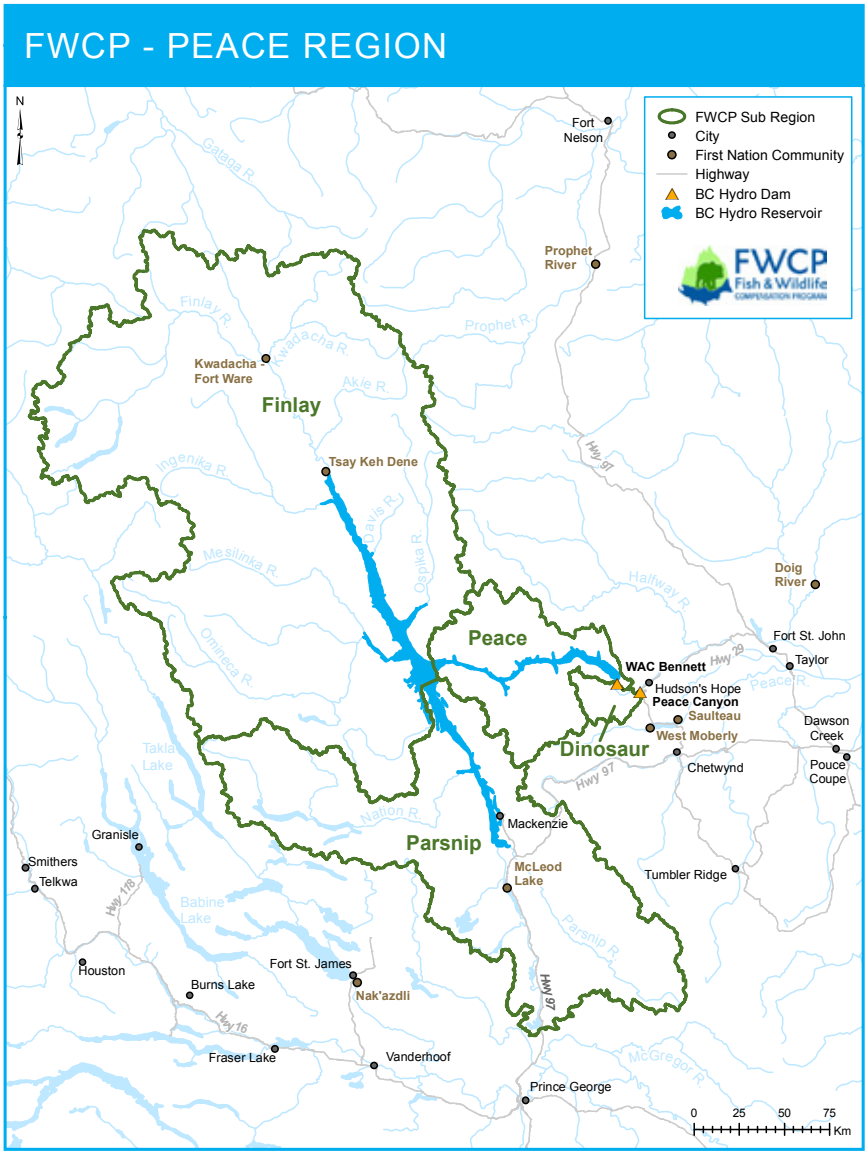

Figure 1.1 Map of the FWCP Peace Region

GOVERNANCE

The FWCP is governed through a framework that recognizes the regulatory accountabilities of agency partners (BC Hydro, the Province of B.C., and DFO), and ensures active participation and input from First Nations and Public Stakeholders. Specifically, each region has a Board to provide local oversight to the planning and implementation of the FWCP at the regional level, and to make local decisions on strategic priorities and on FWCP annual expenditures and investments. The FWCP Governance Manual can be found on our website at fwcp.ca.

In the past year, our work in the Peace Region operated with a Board of 16 members representing First Nations, Public Stakeholders, the Province of B.C., and BC Hydro.

We welcomed Brian Paterson as a new Public Representative, Ray Pillipow as the new Forests, Lands, Natural Resource Operations & Rural Development (FLNR) Representative, and Rob Chaisson as the new BC Hydro Representative. We currently have a Ministry of Environment & Climate Change Strategy (MOECCS) vacancy with the departure of Eric LoFroth. First Nations representatives that we welcomed this year include: Carolyn McCook (Kwadacha Nation), Naomi Owens (Saulteau First Nations), Bruce Muir (Prophet River First Nation) and Michael Freer (Treaty 8 Tribal Association). Thank you to departing representatives Norm Bilodeau (FLNR), Rian Hill (BC Hydro), Luke Vince (Kwadacha Nation), Teena Demeulemeester (Saulteau First Nations), Robin Tsakoza (Prophet River First Nation) and Jason Lee (Treaty 8 Tribal Association) for all your dedication to the Board over the last several years.

The F18 Board Members, as of March 31, 2018, were:

First Nation Representatives:

Luke Gleeson, Tsay Keh Dene Nation
Naomi Owens, Saulteau First Nations
T. Rosemarie Sam, Nak'azdli Whut'en
Alec Chingee, McLeod Lake Indian Band
Carolyn McCook, Kwadacha Nation
Tamara Dokkie, West Moberly First Nations
Bruce Muir, Prophet River First Nation
Gord Haines, Doig River First Nations
Michael Freer, Treaty 8 Tribal Association

Public Representatives:

Wayne Sawchuk (Board Co-Chair)
Ross Peck
Brian Paterson

Agency Representatives:

Ray Pillipow, FLNR
Trevor Oussoren, BC Hydro (Board Co-Chair)
Rob Chaisson, BC Hydro
(Vacancy), MOECCS

The Board reports to the Policy Committee, representing the federal and provincial government regulators (DFO and the Province of B.C.), as well as BC Hydro, which exists to allow the agencies to provide oversight on a range of fish- and wildlife-related issues relevant to BC Hydro including, but not limited to, the FWCP.

The F18 Policy Committee Members were:

Karen Popoff, Director of Environment, BC Hydro
Kaaren Lewis / Jennifer McGuire, Assistant Deputy Minister, B.C. Ministry of Environment & Climate Change Strategy
Cheryl Webb, Regional Director Pacific Region, Fisheries and Oceans Canada

This year, the Board has been supported by the First Nations Working Group (FNWG) and by two Technical Committees, one for wildlife projects, and one for fish projects.

The primary roles of the FNWG are: to provide a First Nations advisory role, including early dialogue with proponents prior to project application submission; to review and score all fish and wildlife project applications received; to advise on cultural, heritage and traditional ecological knowledge aspects that are important to their respective communities; to support the development of Strategic Plans and provide advice on the effective implementation of Action Plans; and to contribute to building strong relationships with all FWCP partners.

The primary roles of the Technical Committees are: to provide a technical advisory role, including fair and objective technical review, evaluation and ranking of fish and wildlife project proposals; support the development of strategic plans; assist in the development and oversight of directed projects; and to provide advice on the effective implementation of Action Plans.

The FNWG and Technical Committee Members, as of March 31, 2018, were:

The First Nations Working Group Members:

Luke Gleeson / Sina Abadzadesahraei (Co-Chair), Tsay Keh Dene Nation
Josh Foerderer and **Lisa McArthur**, Saulteau First Nations
Wayne Sam, Nak'azdli Whu'ten
Alec Chingee, McLeod Lake Indian Band
Shawna Case, Kwadacha Nation
George Desjarlais (Co-Chair) and **Walter Allison**, West Moberly First Nations
James Wolf and **Maurice Wolf**, Prophet River First Nation
Charmayne Brinkworth and **Madeline Oker**, Doig River First Nations
Michael Freer, Treaty 8 Tribal Association

The Fish Technical Committee Members:

Nikolaus Gantner, FLNR
Matt Casselman, (Chair) BC Hydro
Mark Shrimpton, Public
Randy Zemlak, BC Hydro
Carmen Richter, Saulteau First Nations

The Wildlife Technical Committee Members:

Dale Seip, (Chair), MOECCS
Toby Jones, BC Hydro
Kim Hawkins, BC Hydro
Michael Klaczek, FLNR (Omineca Region)
Michael Bridger, FLNR (Peace Region)
Carmen Richter, Saulteau First Nations

In each region, program management and operations are implemented by a full-time Region Manager who administers all aspects of program delivery. FWCP's Peace Region Manager was Chelsea Coady for F18. For all three FWCP regions, the Business Coordinator was Lorraine Ens and the overall Program Manager was Trevor Oussoren.

FWCP Peace Region Board, October 2017. From left: Ray Pillipow, Sina Abad (filling in for Luke Gleeson), Trevor Oussoren, Brian Paterson, Tamara Dokkie, Naomi Owens, Alec Chingee, Michael Freer, Wayne Sawchuk (back row), Ross Peck, Rob Chaisson. Missing: Carolyn McCook, Rosemarie Sam, Gord Haines, Bruce Muir.

2.0 FWCP's Strategic Framework

We use a strategic framework to guide overall planning for compensation investments. The framework (Figure 2.1) has guided the development of strategic plans (Section 3.0) for each basin or watershed within the FWCP program area, which in turn inform Action Plans that focus on specific priorities within each watershed.

VISION

Thriving fish and wildlife populations in watersheds that are functioning and sustainable.

- An effective program will support the maintenance of healthy fish and wildlife populations in basins significantly altered by hydroelectric development. Actions taken should satisfy both the conservation and sustainable-use objectives and, where possible, restore ecosystem function, making species more resilient to emerging pressures, such as climate change.

MISSION

The FWCP compensates for the impacts to fish, wildlife and their supporting habitats affected by BC Hydro-owned and operated generation facilities.

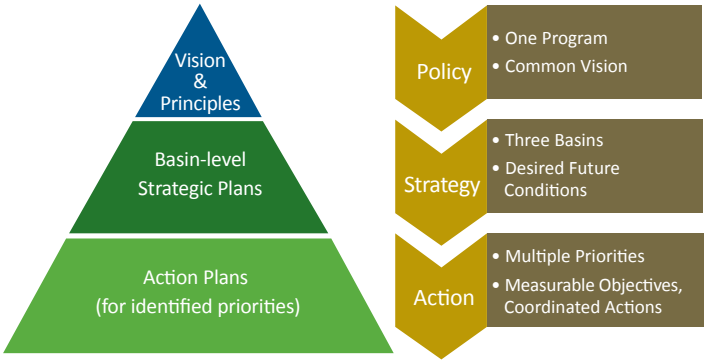

Figure 2.1
Relationship between FWCP's Strategic Framework, Basin Strategic Plans and Action Plans.

Reducing wildlife collisions was one of the projects funded in the Peace Region. Photo: Roy Rea

3.0 FWCP Strategic Objectives and Strategic Plans

3.1 STRATEGIC OBJECTIVES

The strategic objectives for the Fish and Wildlife Compensation Program reflect a synthesis of the core objectives and mandates of partner agencies as they relate to mitigating impacts associated with hydro-power generation in British Columbia:

Conservation

- Maintain or improve the status of species or ecosystems of concern.
- Maintain or improve the integrity and productivity of ecosystems and habitats. This addresses the concept of ecosystem integrity, resiliency, and the functional elements of ecosystems, including efforts to optimize productive capacity.

Sustainable Use

Maintain or improve opportunities for sustainable use, including harvesting and other uses. This objective focuses on our role in restoring or enhancing the abundance of priority species, and in providing information to resource management decision-makers related to providing opportunities for harvesting and other uses. Harvesting includes First Nations, recreational, and commercial harvests. Other uses may include cultural, medicinal, or non-consumptive uses, such as wildlife-viewing.

Community Engagement

Build and maintain relationships with stakeholders and Indigenous communities. This objective stems from BC Hydro's social responsibility policy, the provincial Ministry of Environment & Climate Change Strategy's shared stewardship goal, and the approach of Fisheries and Oceans Canada's Stewardship and Community Involvement Program. This recognizes the importance of engaging with Indigenous communities, local stakeholders, and other interest groups to contribute toward making good decisions and delivering effective projects.

3.2 STRATEGIC PLANS

The outcome of the strategic planning process was the completion of the Peace Basin Plan and six Action Plans, which were approved by the Policy Committee in June 2014. The Action Plans provide direction and identify areas of focus in our Peace Region. The plans are considered living documents that will be reviewed and refined as required, on an ongoing basis, as determined by the Board. The plans can be found on our website at fwcp.ca.

Action Plans:

- Lakes;
- Reservoirs;
- Riparian and Wetlands;
- Species of Interest;
- Streams; and
- Uplands.

Caribou in a maternity pen to help increase calf survival. Photo: Wildlife Infometrics.

4.0 Report on performance

4.1 RESULTS OF THE 2017–18 GRANT APPLICATION INTAKE

The FWCP undertakes a call for grant applications each year in the fall. The applications are submitted and managed online through the FWCP's Grant Management System (GMS). The GMS has improved administrative efficiency, enhanced data-collection and reporting, and has helped automate some of the application review process.

In the Peace Region, prior to applications being submitted, project proposal ideas must go through the mandatory Notice of Intent (NOI) process. This process allows regional First Nations to speak directly to grant applicants for geographically relevant projects, and ensure they are fully aware of the proposed project activities. This process allows for early dialogue with First Nations prior to the grant application deadline and may lead to opportunities for First Nations participation in the proposed project.

All grant applications received go through a three-stage review process. This consists of a review by:

- the Regional Manager and Business Coordinator who conduct a Program Office review of each application, including alignment of program mandate, project location, and connection to previous projects and deliverables;
- the Fish or Wildlife Technical Committee to determine technical merit and the First Nations Working Group to evaluate for inclusion of traditional ecological knowledge, First Nation cultural values, and involvement of First Nations in the proposed project, where appropriate; and
- the FWCP Peace Board considers the review results from both the Technical Committees and the First Nations Working Group, and evaluates how well the proposed projects align with the FWCP strategic objectives of conservation, sustainable use and community engagement.

In the Peace Region, 45 Notice of Intent submissions were received for review to the First Nations Working Group and a total of 39 applications submitted for subsequent review by our committees and Board. Applications were primarily submitted by consultants/registered businesses (28 applications), followed by government agencies (nine applications) and non-government organizations/societies (two applications). Although First Nations did not submit any applications directly, First Nations were identified as participating in 38 of the 39 submitted applications (e.g. First Nation technicians in the budget). Of the 39 submitted applications, the Board approved 20 grant applications (i.e. 50% approval rate).

A summary of F18 Board approved fish and wildlife projects, including FWCP funding amounts, is provided in Table 4.2.

4.2 2017–18 FINANCIAL REPORT

The FWCP is funded by BC Hydro through a notional fund that is indexed to the Consumer Price Index (CPI). For F18 BC Hydro provided $1.488 million to the FWCP Peace Region. Unspent funding from prior years totaled $4.086 million which resulted in a total of up to $5.574 million available to be spent in the Peace Region in F18.

Each year, annual funding is allocated by our Peace Region Board toward fish and wildlife projects and other program costs. In F18, these other costs included administrative costs (e.g. salaries, travel and expenses, office expenses, and committee costs) and communications costs (e.g. communications support and advertising). Any unallocated funds are carried forward ("unspent surplus dollars") and available for future spending.

Similarly, not all allocated "committed" funds are expended by the end of a given fiscal year, due to the seasonal nature of some field-based projects. The unspent committed funds (e.g. "F17 remaining commitment to spend in F18") are the difference between the committed funds and what has actually been spent. These committed funds are carried forward and remain available for spending on the respective committed projects. All committed funds are associated with the fiscal year in which the spending was approved, and tracked separately.

As of April 1, 2017, the FWCP Peace Board approved a F18 budget of $2.511 million. In addition, there were prior year funding commitments of $382,000 from F17 and $396,000 from F16, resulting in an expected unspent surplus of $2.285 million (Figure 4.1). The F18 budget was 169% ($2.511 million of $1.488 million) of the annual funding provided by BC Hydro, up from F17 where only 94% ($1.382 million of $1.466 million) of the annual BC Hydro funding was allocated. Meaning over $1 million of the unspent surplus budget was planned to be utilized in F18.

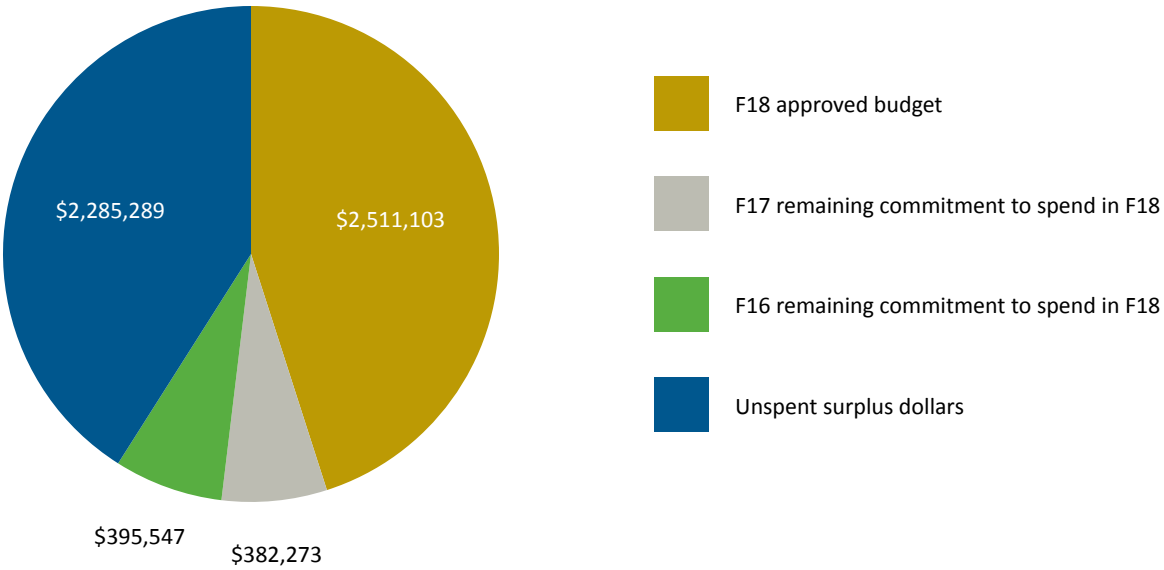

Figure 4.1: Financial Summary of FWCP Peace Region as of April 1, 2017 (start of fiscal year)

The approved F18 budget of $2.511 million directed funding toward administration (including committee meeting costs), communications, and fish and wildlife projects (grant-based projects and directed projects) is shown below in Figure 4.2.

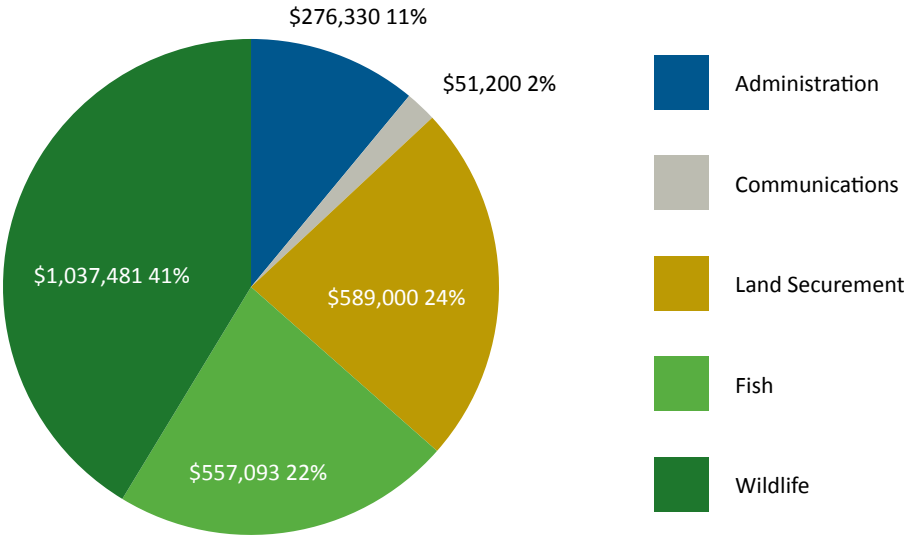

Figure 4.2: Breakdown of FWCP Peace Region F18 Approved $2.511 million budget as of April 1, 2017

The FWCP encourages grant applicants to seek additional funding sources (e.g. other funding agencies, in-kind contributions) to leverage FWCP funding contributions. Demonstration that funds have been leveraged for a project is a consideration for the Board's decision-making. In F18, the FWCP funding allocation for grant-based projects was $1.11 million (Table 4.2). The total value of the projects was just under $2.42 million as a result of financial partnerships and in-kind contributions. In other words, for every $1 dollar invested by FWCP, others contributed $1.18, greatly increasing the value of the FWCP investment overall.

A summary of planned and realized expenditures at the end of F18 by major budget category is provided in Table 4.1. This represents a "snapshot" in time of actual expenditures, as these values will change over the following months, as F18 approved projects become finalized and final payments are issued. Any funds not spent once a project is completed will be carried forward as unspent surplus budget and made available for future spending. The fund category of "x-plan" as outlined in Table 4.1 below is a new budget item approved by the Board after April 1, 2017 that is not associated with a currently funded project or administrative category.

A total of 51% ($1.35 million) of the approved budget remained unspent by March 31, 2018 (i.e. committed spend) due to ongoing projects that had not yet submitted final expenditures. There were no unspent funds available at March 31, 2018 and instead the budget was overspent by $35,000. This overspend was primarily a result of some within year administrative budget items approved by the Board, totalling $50,000 and an underspend for wildlife projects primarily because $29,000 of the Moose Limiting Factors directed project spending was paid directly by BC Hydro to support First Nations training associated with the project. This additional BC Hydro funding allowed for the originally dedicated FWCP funding to go unspent.

Table 4.1: F18 budget status as of March 31, 2018

Fund Category	F18 Approved Budget	Paid up to March 31, 2018	Committed Spend[1]	Unspent Funds[2]
Fish	$557,093	$476,771	$85,905	($5,584)
Wildlife	$1,037,481	$412,050	$596,155	$29,276
Land Securement	$589,000	$0.00	$589,000	$—
Administration	$276,330	$299,934	$31,884	($55,488)
Communications	$51,200	$49,211	$5,965	($3,976)
SUB-TOTAL	$2,511,103	$1,237,966	$1,308,910	($35,772)
X-Plan	$125,075	$87,704	$37,196	$175
TOTAL	**$2,636,178**	**$1,325,670**	**$1,346,106**	**($35,597)**

Note[1]: Committed spend represents expected invoices for approved, ongoing projects that have not yet submitted final reports by March 31.

Note[2]: Unspent funds are carried forward and available for future spending.

At the end of F18 (March 31, 2018), $1.325 million of the F18 budget had been spent, while $1.308 million remained as an F18 commitment to spend in F19 and $37,196 remained as an F18 x-plan commitment to spend in F19 (Table 4.1, Figure 4.3). In addition, the F16 carry-over commitments spent in F18 were $213,909 with $100,780 anticipated to be carried over and spent in F19. The F17 carry-over commitments spent in F18 were $272,568 with $7,162 anticipated to be carried over and spent in F19, resulting in an expected unspent surplus of $2.308 million (Figure 4.3).

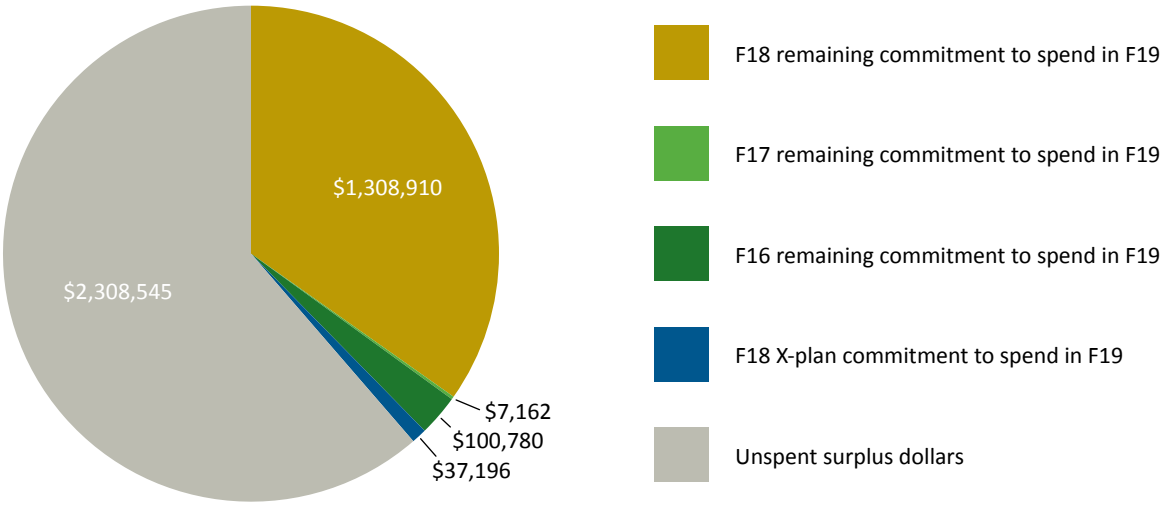

Figure 4.3: Financial Summary of FWCP Peace Region as of March 31, 2018 (end of fiscal year)

4.5 F18 PROJECTS

Table 4.2: 2017–2018 Projects

Project ID	2017–2018 Grant-Based Fish Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-Region	Project Outcomes
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 nutrient flow could be monitored and species lists developed—in a region substantially un-surveyed for biodiversity—for use in later research. Year two funding will allow the project 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	Assessed the transfer of nutrients into streams in the Williston watershed, using namely aquatic insects and riparian lichen communities, to assess differences in abundance and community composition, as well as collected samples for stable isotope analysis to track the potential delivery of nutrients from the reservoir to tributary streams and their riparian ecosystems. Findings to-date are strongly suggestive that Kokanee provide a significant source of nutrients to tributary streams where they spawn.
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: a) count redds in the established annual index reaches; b) include two new index sections from the Ingenika watershed in the 2017 survey to provide a baseline for future comparison; and c) use 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	In 2017, new ground survey index sections were delineated and surveyed in Pelly Creek (Ingenika River watershed), Lay Creek (Mesilinka River watershed), and the upper Osilinka River. The calibrated, aerial redd count methodology was applied to accessible reaches (totaling roughly 420 km of the Mesilinka River and Osilinka River watersheds. Aerial redd counts can be considered reliable for estimating the distribution of the most important critical habitats, but are insufficiently precise for monitoring abundance trends or effectiveness monitoring.
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	Primers were validated using DNA from Finlay River Arctic Grayling and found the qPCR reliably detected concentrations down to 1pg DNA, and will provide rigorous distinctions between Arctic Grayling presence or absence among locations based on filtered eDNA samples. A priority list of eDNA sample sites include 22 streams that potentially contain low densities of Arctic Grayling. A multi-year sampling plan was suggested that builds on initial results from a sub-set of candidate streams.

Project ID	2017–2018 Grant-Based Fish Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-Region	Project Outcomes
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	This project resulted in the development of a strategic plan for partnered fisheries programs focussed on Bull Trout and Arctic Grayling. This strategic plan should be considered a short-term guide to partnered, Bull Trout and Arctic Grayling fisheries studies and should be considered a living document, and expanded at future dates to include priority populations of other fish species following a systematic study of Tsay Keh Dene traditional knowledge of distribution, abundance, and fisheries, in both past and present contexts.
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	Project cancelled.
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 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	The results of the 2016 and 2017 surveys indicate that adfluvial Bull Trout use of Peace Reach tributaries is limited and candidate index streams do not appear to exist in the streams surveyed to-date. Annual monitoring of spawner and redd abundance in these tributaries is not warranted, however some monitoring would be beneficial in order to track long-term population trends in Peace Reach tributaries. It is recommended that periodic monitoring (three- to five-year cycle) be conducted on select reaches of Carbon Creek, West Nabesche River, and Clearwater Creek where the highest abundance of redds were identified in 2016 and 2017.
PEA-F18-F-2313	**Monitoring Lake Trout in Williston Reservoir** *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	During Year 2, 432,197 Lake Trout detection records were recovered from the Peace Reach receiver array and a preliminary analysis was undertaken of these 2016 data. As a result of the preliminary analysis, four additional VR2W automated receivers were acquired and deployed in the Finlay and Parsnip reaches to assess movement of Lake Trout in those reaches. The 2017 Lake Trout detection data recorded by the Peace Reach receiver array, and the Finlay and Parsnip Reach receiver stations will be reported in the Year three report.
		Fish Project total:	**$333,802**				

Project ID	2017–2018 Grant-Based Wildlife Projects	Project Lead	Funding	Project Type	Action Plan Alignment	Sub-Region	Project Outcomes
PEA-F18-W-2294	**Hosting discussions with UNBC: Colloquium Series** *2017–18 Colloquium Presentation Series* This project provides education and outreach for building connections and developing relationships. The project also provides 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 that 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 the 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	Presentations were held in Mackenzie, Prince George, and Fort St. John, which related to an FWCP-funded project on amphibians (led by DWB consulting), in addition to two other wildlife management focussed presentations in Prince George and Fort St. John. Future presentation topics should continue to focus on FWCP-funded project results and regionally appropriate topics.
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 Williston Reservoir.	Ingebjorg Jean Hansen	$89,458	Research and Information Acquisition	Species of Interest Action Plan	Basin-Wide	Preliminary results provide evidence that Peace Region bats may over-winter in smaller groups in cracks and crevices compared to other areas of North America. Data loggers deployed will be retrieved in August 2018, and data will be analysed to determine species use and hibernacula habitat characteristics throughout the study area, to support management measures for potential high priority hibernacula sites.
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	In 2017 and 2018, nine GPS-radio collars were deployed on adult female caribou. Within the Finlay range, a total of 19 caribou were counted in five different groups based on observations during pre-capture recon flights and during collar deployment. An additional 18 caribou were observed during a census flight north of Ospika Arm. The GPS collars are programmed to collect four to six locations each day over three years. Collection of GPS telemetry locations is ongoing and aerial surveys are planned for March 2019 and 2020.

Project ID	2017–2018 Grant-Based Wildlife Projects	Project Lead	Funding	Project Type	Action Plan Alignment	Sub-Region	Project Outcomes
PEA-F18-W-2334	**Working with industry to support amphibians and reptiles** *Best Management Practices Workshops for Herpetofauna* The government of B.C. 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	To support development of a future FWCP proposal, discussions and presentations to industry, NGOs, and First Nations occurred, resulting in several individuals identifying that they will send someone to attend the proposed BMP workshops. An FWCP grant application was prepared, which was refined based on feedback from those engaged, including letters of support. The application was not submitted in October 2017 and will be submitted October 2018.
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	To support development of a future FWCP grant application on wetland enhancement, BCWF delivered a Wetland-keepers workshop in Fort. St John in July 2017. Local stakeholders and First Nations were engaged, allowing BCWF to develop connections for future work and gain a better understanding of the wetland restoration challenges in the north. An FWCP application was submitted in October 2017.
PEA-F18-W-2312	**Enhancing Fisher habitat in the 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	To support development of a future FWCP grant application related to Fisher habitat enhancement, communication with First Nations (trappers, elders) occurred to identify concerns and candidate sites in the study area. Government and industry were also engaged to determine appropriate sites for enhancement efforts. An FWCP grant application was submitted in October 2017.

Project ID	2017–2018 Grant-Based Wildlife Projects	Project Lead	Funding	Project Type	Action Plan Alignment	Sub-Region	Project Outcomes
PEA-F18-W-2306	**Monitoring caribou in the Peace Region** *Pink Mountain Caribou Monitoring Project* The Ministry of Forests, Lands and Natural Resource Operations (FLNR) 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 Williston Reservoir. A monitoring program was initiated in the Pink Mountain range in March 2016, with the deployment of 21 radio collars. FLNR 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 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	Reporting in progress.
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 (FLNR), 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	Four mortality site investigations were conducted during Year two for this three year project; proximate causes of death were three wolf kills and one accidental death (i.e. caribou fell off a cornice). Adult female survival was estimated at 84%. An additional 12 collars were deployed in January 2018, three of which were recaptures to replace non-functioning GPS collars. Three calf surveys were conducted during 2017/18: mid-late June, late-October, and mid-March and annual calf survival was estimated at 42% (± 13%). A complete census of the Wolverine subpopulation was conducted in 2018 and the subpopulation was estimated at 266 caribou (95% CI 245 – 312) with calves representing 15% of the population. After remaining stable over the last decade (2007-2016), the Wolverine subpopulation is now declining.
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 the project 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	In year one, 23 GPS collars were deployed on the Chase herd caribou. Only three caribou were caught in low elevation habitats, the rest were in high alpine areas. During the capture activities, 287 caribou in 24 groups were observed. Currently, natural disturbance represents the largest footprint on the landscape. A newsletter series was started and oral presentations about the project were delivered, to support the community engagement objectives of the project.

Project ID	2017–2018 Grant-Based Wildlife Projects	Project Lead	Funding	Project Type	Action Plan Alignment	Sub-Region	Project Outcomes
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	The project results support predictions that whole tree harvesting and winter harvesting provide the best conditions for caribou terrestrial lichens. Management strategies for caribou terrestrial lichens on low elevation winter ranges should consider level of MPB attack, and should focus on protecting and retaining lichens at pyroclimax sites and on re-establishing lichens at successional sites. Recommend developing predictive models for lichen recovery and conducting the next sampling session in five years.
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 approximately 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	Historical collar data were analyzed to quantify inter-herd movements and to identify potential distinctions among groups of caribou within the Finlay herd in particular. Results of the analysis were used to determine if existing caribou herd boundaries are appropriate or if changes were required to better address management needs of the Finlay herd. Although there is evidence of inter-herd movement between the Finlay and Pink herds, based on the results of the analyses, the existing Finlay-Pink caribou herd boundary is supported by the historical data collected between 1999 and 2004. Recommendations for next steps include future collaring and monitoring where data gaps exist, investigating potential travel corridors and consideration for adjusting the Chase-Finlay herd boundaries.
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	This project has delivered school ecology modules to a majority of Mackenzie's student population, as well as the entire student population of Moberly Lake Elementary. High school modules were also implemented this year. The Moberly Lake pilots, which were conceived last program year, were implemented this year to excellent student and school feedback, and strong community support. This project is recommended to continue in the future, due to continued community interest.

Project ID	2017–2018 Grant-Based Wildlife Projects	Project Lead	Funding	Project Type	Action Plan Alignment	Sub-Region	Project Outcomes
PEA-F18-W-2338	**Using pens to support caribou calf survival** *Enhancing caribou survival within the Klinse-Za/Scott herds* This project's 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 will continue the maternal pen for a fourth year.	Wildlife Infometrics Inc.	$81,008	Species-based Actions	Species of Interest Action Plan	Peace	In July 2017, the nine caribou cows that were transported to the maternal pen and their seven calves that were born in the pen, were released. Based on aerial surveys and new calves in 2017, the final population estimate in March 2018 was 66-67 animals, leading to a population increase of about 13 per cent from 2017 to 2018. However, adult mortality and poor recruitment outside the pen seems to be limiting the increase in the number of reproductive females.
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	Approximately 2.3 km of the Fisher Creek Forest Service Road (FSR) was deactivated and restored in Fall 2017, which lies within the Klinse-Za/Scott East herd area. Trail cameras were installed along the length of the road and permanent vegetation plots were established pre-treatment. A habitat restoration strategic plan was developed for the herd and identified priority restoration sites for 2018. Initial engagement and information-sharing has occurred with government and industry.
PEA-F18-W-2569-DCA	**Monitoring amphibian movement and use of wetlands** *Amphibian Wetland Connectivity Along the Williston Reservoir* This multi-year study is designed to investigate and manage amphibians and their habitats. The goals and design of this project follow on recommendations of the Provincial Western Toad Working Group's Management Plan. Six study locations are targeted: 1. Middle Creek, 2. Six Mile / Pothole Lakes, 3. Factor Ross, 4. Ole Creek, 5. Estella Provincial Park, and 6. Chuchi Lake. An active public engagement program parallels the research that includes habitat mapping and spatially explicit capture recapture methods to track migration and further understanding of the distribution, functional ecology, and spatial demographics of amphibians in the Peace.	DWB Consulting Services Ltd.	$84,075	Species-based Actions	Species of Interest Action Plan	Basin-Wide	In Year 3, data collection occurred at the six study locations. 25 wetland surveys were completed and 97 individuals (73 western toads, 24 long-toed salamanders) were PIT-tagged in 2017. Several public presentations occurred in 2017 to increase awareness of the project and amphibians in northern BC. Data entry and analysis and further public outreach is planned in Year 4 (2018-2019).
		Wildlife Project Total:	**$780,411**				

Project ID	2017–2018 Fish and Wildlife Directed Projects	Project Lead	FWCP Funding	Project Type	Action Plan Alignment	Sub-Region	Project Outcomes
—	**Managing fish habitat enhancement structures** *Management of fish habitat enhancement structures in Dinosaur Reservoir* 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.	TBD in 2017	$10,000	Research & Information Acquisition	Reservoirs Action Plan	Dinosaur	BC Hydro Environmental Field Services assessed the current status of the fish habitat structures, many of which are not in their original constructed state. Structures that were considered to pose a boating hazard were secured when possible and flagged for boater awareness. A hazard assessment will be performed annually until a decision can be made by the Board as to how to manage these structures.
—	**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 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	The Mugaha Marsh is located 14.5 km northwest of Mackenzie, B.C., and has operated as a banding station for the past 22 years to monitor fall bird migration in the Northern Rocky Mountain Trench. The 2017 season resulted in a lower-than-average number of birds banded: 2894 of 58 species in standard banding and 32 in non-standard banding, with an average of 43 birds banded per day.
—	**Acquiring land for conservation in the 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	Parsnip	Negotiations are still underway to acquire approximately 230 hectares of valuable ungulate winter-range habitat, for caribou in the Parsnip sub-region. This is a rare opportunity to eliminate the risk of development of privately-owned land known to be highly used by caribou.
—	**Investigating Mercury levels in fish** *Mercury investigations in Williston Reservoir watershed* he 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 Acquisition	Reservoirs Action Plan	Peace and Finlay	Year two of this project included targeted fish tissue sampling in the Peace Reach and opportunistic sampling in other areas of the watershed. In total, 551 samples were collected in 2016 and 2017, with more sampling planned in 2018 to fill remaining data gaps. Next year, a final report will be developed that will provide a summary of the understanding of fish tissue mercury concentrations in the reservoir watershed. This information will be provided to agencies responsible for advising the public on fish consumption.
—	**Investigating Factors Limiting Moose** *Moose Limiting Factors Investigation in the Peace Region* This project is an 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 Acquisition	Species of Interest Action Plan	Peace and Parsnip	Since 2016, 102 cow moose have been captured and collared and 16 mortalities have occurred. In the West Parsnip study area, annual cow survival is 83 per cent, with eight of 11 mortalities due to predators. In the Moberly study area, annual cow survival is 92 per cent, with two of five mortalities due to predators. Recruitment surveys revealed that Moberly calf survival is estimated at 18 per cent and West Parsnip calf survival is estimated at 51 per cent.
		Directed Project Total:	**$1,153,436**				
		2017–2018 TOTAL FWCP PROJECT FUNDING	**$2,267,649**				

BCH18-591