



# Annual Report

## FWCP Peace Region

### 2016-2017



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

# Message from the Board Chair

On behalf of the Fish & Wildlife Compensation Program’s Peace Region Board, I invite you to read our Annual Report for Fiscal Year 2017, covering the period April 1, 2016 to March 31, 2017. Our work in the Peace Region is dedicated to advancing the objectives of the Fish & Wildlife Compensation Program (FWCP) partnership – conservation, sustainable use and community engagement – in watersheds impacted by existing BC Hydro generation facilities.

Fiscal Year 2017 built upon the achievements of the last few years in our Peace Region. We continued to successfully utilize 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 continue to improve the FWCP website, providing up-to-date information on some of the many projects underway province-wide. In addition to application-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 the FWCP Peace Region’s Basin and Action Plans. This year, we entered Year 2 of the Moose Limiting Factors study and initiated a multi-year Mercury in Fish investigation. We made significant progress on our Riparian and Wetland Mapping project, and have recently completed a data gap analysis for Arctic Grayling with guidance for grant applicants wishing to submit Arctic Grayling projects. This guidance will be available to grant applicants in summer 2017, prior to the Fiscal 2019 grant application intake.

We received a good response to our call for grant applications this year, with 58 Notices 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. Of these, the Board approved 21 grant applications, representing a broad spectrum of projects that will benefit a variety of species, including Bull Trout, Lake Trout, bats, caribou, migratory birds and amphibians. Funds not allocated in this past funding cycle will remain available for allocation through future proposal calls.

Thank you to all members of our Board, First Nations Working Group, Fish and Wildlife Technical Committees and staff, for contributions to the FWCP Peace Region during this past year, and for helping to make FWCP a success. 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,

Eric Lofroth,  
FWCP Peace Region, Board Chair



Front Cover: Arctic Grayling are a priority species for our Peace Region. Photo: Istock/Pi-Lens

# 1. Organizational overview

## INTRODUCTION

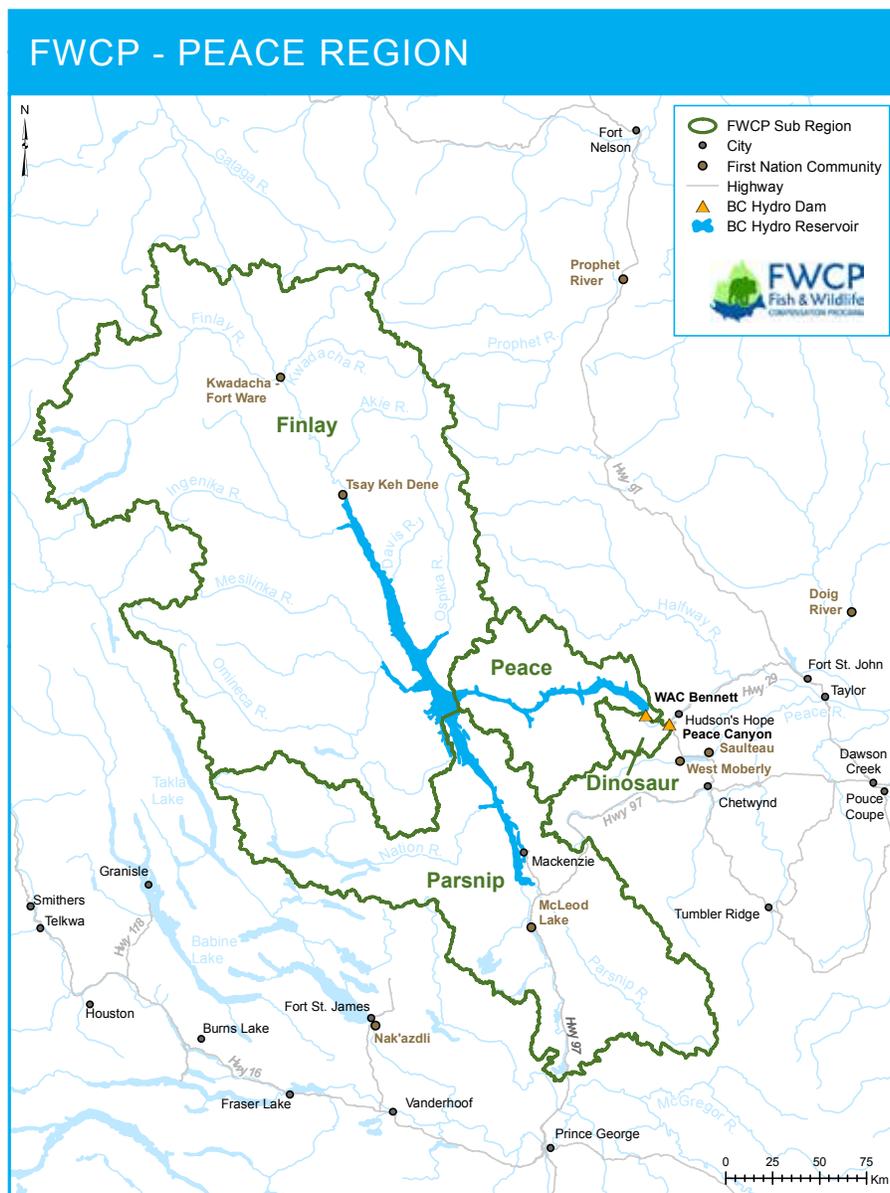
The Fish & Wildlife Compensation Program (FWCP) was established to compensate for the impacts resulting from the construction of BC Hydro dams by conserving and enhancing fish and wildlife in the Coastal, Columbia and Peace regions of British Columbia. FWCP operates as a partnership between BC Hydro,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

FWCP has invested more than \$151 million and delivered nearly 1,750 projects since 1988 that increase understanding, and conserve and enhance fish, wildlife and their supporting habitats impacted by existing BC Hydro generation facilities.

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). 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 2017 (F17), covering the period April 1, 2016 to March 31, 2017. It includes an overview of financial performance, project funding summary and alignment of the year's work with strategic objectives.



## 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](http://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 Bob Coyle as a new Public Member; however, due to new employment opportunities for Bob, he was unable to continue this role with the FWCP and resigned in December 2016. George Desjarlais stepped down as the West Moberly First Nations Board Member and was replaced with Tamara Dokkie, the current Lands Manager for West Moberly. The F17 Board Members were:

### First Nation Representatives:

**Luke Gleeson**, Tsay Keh Dene

**Teena Demeulemeester**, Saulteau

**T. Rosemarie Sam**, Nak'azdli

**Alec Chingee**, McLeod Lake

**Luke Vince**, Kwadacha

**George Desjarlais / Tamara Dokkie**, West Moberly

**Robin Tsakoza**, Prophet River

**Gord Haines**, Doig River

**Jason Lee**, Treaty 8 Tribal Association

### Public Representatives:

**Wayne Sawchuk**

**Ross Peck**

**Bob Coyle** (resigned December 2016)

### Agency Representatives:

**Eric Lofroth**, (Chair), Ministry of Environment

**Norm Bilodeau**, Ministry of Forests, Lands and Natural Resource Operations

**Trevor Oussoren**, BC Hydro

**Rian Hill**, BC Hydro

The Board reports to the Policy Committee, representing the federal and provincial government regulators (DFO and the Province), 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 F17 Policy Committee members were:

**Edie Thome / Karen Popoff**, Director of Environmental Risk Management, BC Hydro  
*Karen Popoff replaced Edie Thome for BC Hydro part way through the year.*

**Kaaren Lewis**, B.C. Ministry of Environment

**Cheryl Webb**, Fisheries and Oceans Canada (DFO)

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 First Nations Working Group 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 First Nations Working Group Members:

**Luke Gleeson**, Tsay Keh Dene

**Fernie Garbitt / Josh Foerderer**, Saulteau

**Wayne Sam**, Nak'azdli

**Alec Chingee**, McLeod Lake

**Darryl McCook**, Kwadacha

**George Desjarlais**, West Moberly

**Robin Tsakoza / Maurice Wolf**, Prophet River

**Sam Acko / Robert Dominic**, Doig River

**Jason Lee**, Treaty 8 Tribal Association

### The Fish Technical Committee Members:

**Ray Pillipow**, (Chair), Ministry of Forests, Lands and Natural Resource Operations

**Mike McArthur / Eduardo Martins**, BC Hydro

**Greg Wilson**, Ministry of Environment

**Randy Zemlak**, BC Hydro

**Carmen Marshall**, Saulteau

**Jeff Richert**, Treaty 8 Tribal Association

**Bruce Muir**, Prophet River

### The Wildlife Technical Committee Members:

**Dale Seip**, (Chair), Ministry of Forests, Lands and Natural Resource Operations

**Toby Jones**, BC Hydro

**Mike Klaczek**, Ministry of Forests, Lands and Natural Resource Operations

**Kim Hawkins**, BC Hydro

**Carmen Marshall**, Saulteau

**Jeff Richert**, Treaty 8 Tribal Association

**Bruce Muir**, Prophet River

In each region, program management and operations are implemented by a full-time Region Manager who administers all aspects of program delivery, including contribution agreements and contracts. FWCP's Peace Region Manager was Dan Bouillon until September 2016, when he moved on to a new position outside FWCP. The role was vacant until mid-November 2016 when Chelsea Coady began as the Peace Region Manager. For all three FWCP regions, the Business Coordinator was Lorraine Ens and the Program Manager was Trevor Oussoren.



FWCP Board in the Peace Region, June 2016.

## 2.0 FWCP 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) for each watershed within the FWCP program area, which are in turn informing 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.

## 3.0 FWCP strategic objectives and strategic plans

### 3.1 STRATEGIC OBJECTIVES

The strategic objectives for the FWCP 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 Aboriginal communities. This objective stems from BC Hydro's social responsibility policy, the provincial Ministry of Environment'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 Aboriginal 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](http://fwcp.ca).

#### Action Plans:

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



Collecting samples as part of our mercury investigations in Williston Reservoir. Photo: Azimuth Consulting

## 4.0 Report on performance

### 4.1 Results of the 2016-2017 project application intake

2016-17 marked the second year of implementation of the online grant application and management system. The Grant Management System (GMS) has allowed for administrative management efficiencies, more robust data-collection and reporting, and helps automate some of the application review process.

This was the third year the application intake was guided by the finalized Peace Basin and Action Plans, as well as the third year of the mandatory Notice of Intent (NOI) process. The NOI process allows First Nations who are responsible in the areas of proposed projects to speak directly to grant applicants and ensure they are fully aware of the proposed project activities. This process allows for early dialogue with First Nations prior to the project application deadline.

A total of 58 NOIs were received for F17, resulting in 39 grant application submissions. This number was down from F16, when 49 project applications were received (71 NOIs).

The NOI submission process was not part of the new GMS system, and grant applicants completed and submitted their NOIs directly to FWCP via email for the F17 intake. The NOI submission process is now automated through GMS and was implemented for the F18 intake.

### 4.2 2016-2017 Financial Report

The FWCP is funded by BC Hydro through a notional fund, which is indexed to the Consumer Price Index. For F17, spanning the time period April 1, 2016 to March 31, 2017, the annual FWCP Peace Region funding was \$1.466M.

Each year, annual funding is allocated by our Peace Region Board toward fish and wildlife projects and other program costs. In F17, 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 (“F16 remaining commitment to spend in F17”) is the difference between the committed funds and what has actually been spent. These funds are carried forward as a liability on the balance sheet and remain available for spending on the respective committed projects to ensure payment in full. All committed funds are associated with the fiscal year in which the spending was approved, and tracked separately.

Our financial situation in the Peace Region at the start of F17 (April 1, 2016) included a Board-approved budget of \$1.382M, a funding commitment of \$837K to be spent from F16, and \$186K from F15, and an unspent surplus of \$3.255M (Figure 3.1)

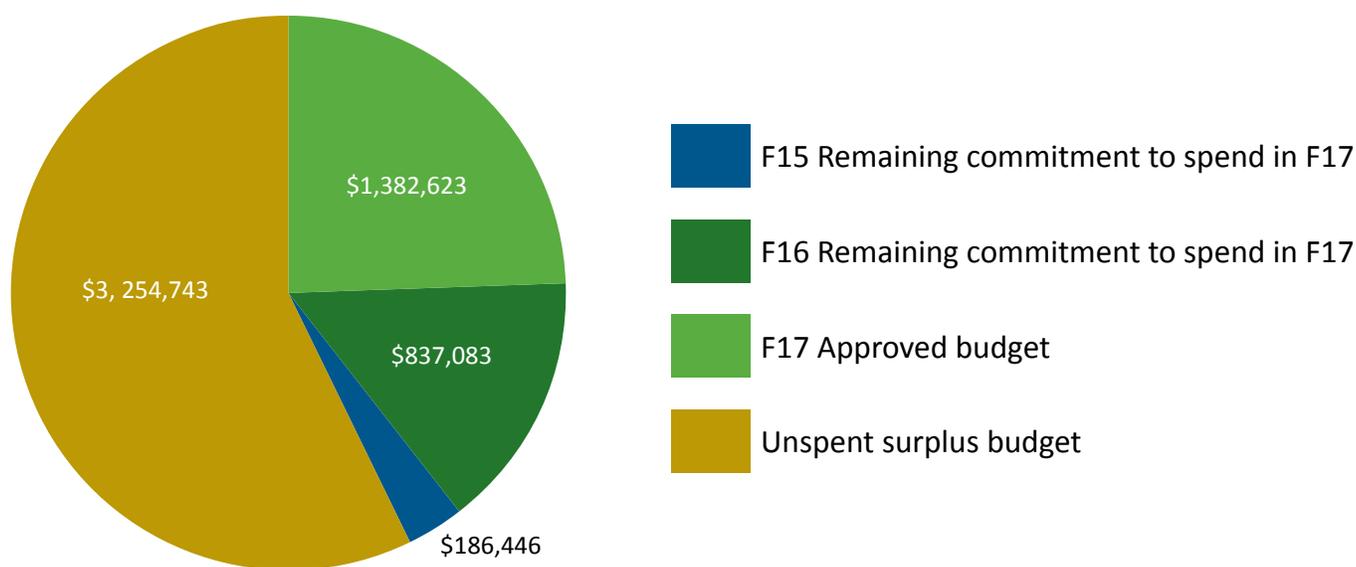


Figure 4.1 FWCP Peace Region Financial Summary at April 1, 2016

In F17, 94% (\$1.382 of \$1.466) of the available annual budget was allocated, up from F16 where only 80% (\$1.149M of \$1.444M) of the total available annual budget was allocated. The approved F17 budget directed funding toward administration (including committee meeting costs), communications, and fish and wildlife projects (application-based projects and directed projects) (Figure 4.2).

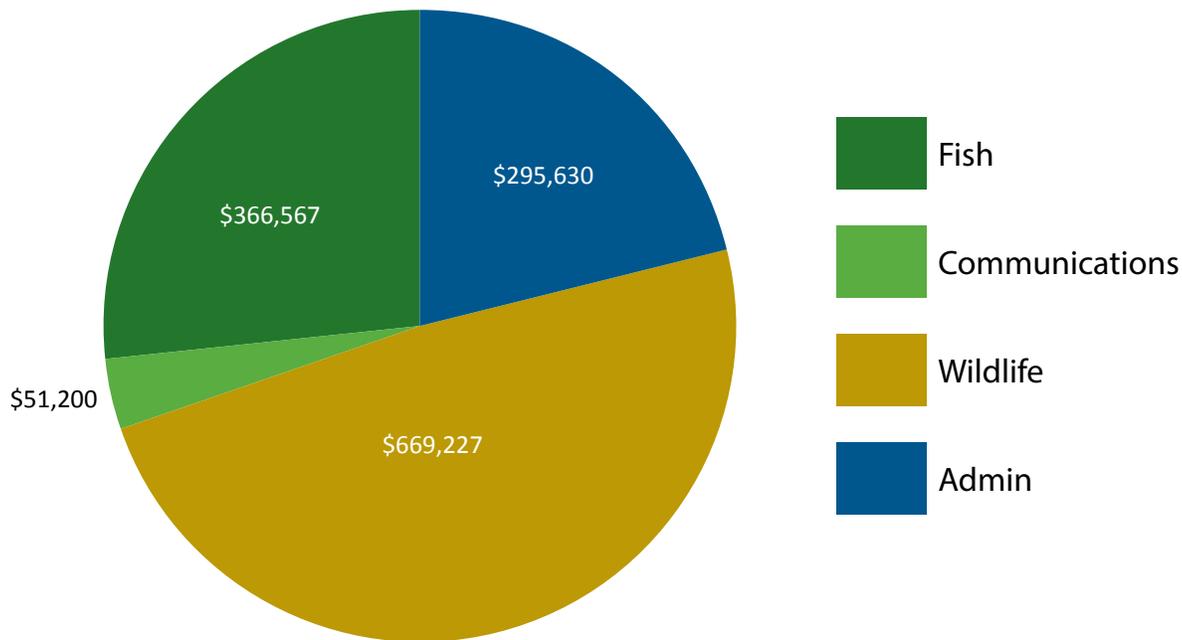


Figure 4.2 Approved budget as at April 1, 2016

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 F17, the FWCP funding allocation for application-based projects was \$1.036M. The total value of the projects was just under \$2 million as a result of financial partnerships and in-kind contributions, increasing the value of the FWCP investment overall.

A summary of planned and realized expenditures at the end of Fiscal Year 2017 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 F17 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.

A total of 28% (\$382,272) of the approved budget remained unspent by March 31, 2017 (i.e. planned payments) due to ongoing projects that had not yet submitted final expenditures. An additional 5% (\$66,885) was not spent and represents cost-savings. These cost-savings were achieved primarily as a result of a fish project that was cancelled at the beginning of 2017. Later in the year, the Board approved \$5,000 to support development of an Arctic Grayling Monitoring Framework document (directed project), which is identified as “X-Plan” below.

Table 4.1 F17 actual budget at March 31, 2017.

Fund category	F17 approved budget (as of April 1, 2016)	Paid up to March 31, 2017	Planned payments <sup>1</sup>	Unspent funds <sup>2</sup>
Fish	\$366,567	\$216,703	\$77,195	\$72,669
Wildlife	\$669,227	\$400,086	\$272,569	\$(3,427)
Administration	\$295,630	\$280,697	\$11,439	\$3,494
Communications	\$51,200	\$33,982	\$18,069	\$(851)
<b>SUB-TOTAL</b>	<b>\$1,382,624</b>	<b>\$931,467</b>	<b>\$379,272</b>	<b>\$71,885</b>
X-Plan	\$5,000	\$2,000	\$3,000	\$(5,000)
<b>TOTAL</b>	<b>\$1,387,624</b>	<b>\$933,467</b>	<b>\$382,272</b>	<b>\$66,885</b>

Note<sup>1</sup>: Planned payments represent expected invoices for approved, ongoing projects that have not yet submitted final reports by March 31st.

Note<sup>2</sup>: Unspent funds are carried forward and available for future spending.

### 4.3 F17 Projects

**Table 4.2 F17 Application-based projects (as of March 31, 2017).**

2016-17 FWCP Peace Region application-based projects – fish								
No.	Project ID	Project title	Sub-region	Project lead	Action Plan alignment	Project type	FWCP funding	Project outcome <sup>2</sup>
1	PEA-F17-F-1426	Hosting Discussions With UNBC: Colloquium Series	Basin-Wide	University of Northern British Columbia (UNBC)	Peace Basin Plan (Section 4.3)	Research & Information Acquisition	\$16,920	Delivered three presentations which discussed emerging research projects and the current state of knowledge on natural resource issues relating to the FWCP Peace Region. The presentations provided an opportunity to develop relationships between UNBC and local stakeholders and to assess current FWCP Peace Region information needs.
2	PEA-F17-F-1475	Monitoring Bull Trout Spawner Abundance in Williston Reservoir	Basin-Wide	Ministry of Forests, Lands and Natural Resource Operations	Streams Action Plan	Monitoring & Evaluation	\$64,277	Applied the aerial redd count methodology to new areas in Ingenika Watershed. New index sections of the Anzac River watershed were monitored to establish a baseline redd abundance. Recommend establishing and maintaining index sections in the Williston basin next year.
3	PEA-F17-F-1468	Monitoring Fish Habitat Structures Along Dinosaur Reservoir Shoreline	Dinosaur	Diversified Environmental Services	Reservoirs Action Plan	Habitat-Based Actions	\$7,679	The status and condition of remaining habitat enhancement structures was largely unchanged from 2015, with only 16 of the original 84 structures remaining intact. Recommend inspecting remaining structures each spring from navigation hazard perspective.

<sup>1</sup> FWCP funding identified in Table 4.2 may vary from the approved budget as of April 1, 2016, due to project budget increases or decreases as projects progress throughout the fiscal year. In addition, one Board approved fish project for \$64,575 was cancelled by the proponent and is not included in the list of projects.

<sup>2</sup> Final reports for all projects are posted to the appropriate Provincial databases once available. Visit [fwcp.ca/search](http://fwcp.ca/search) for an updated list of all available final reports.

## 2016-17 FWCP Peace Region application-based projects – fish

No.	Project ID	Project title	Sub-region	Project lead	Action Plan alignment	Project type	FWCP funding	Project outcome <sup>2</sup>
4	PEA-F17-F-1470	Assessing Bull Trout in Gething Creek	Dinosaur	Diversified Environmental Services	Streams Action Plan	Research & Information Acquisition	\$9,216	Conducted beach seining of the Gething Falls plunge pool and snorkel and ground surveys of the lower reach of the stream to determine the current status of the Bull Trout spawning activity. No redds were recorded, and these results add to a general declining trend documented over the past 33 years, suggesting that the Gething Creek Bull Trout spawning run may be approaching extirpation.
5	PEA-F17-F-1471	Understanding Nutrients and Kokanee in Williston Reservoir	Finlay	University of Northern British Columbia (UNBC)	Streams Action Plan	Research & Information Acquisition	\$83,824	<p>Preliminary findings suggest Kokanee provide a significant source of nutrients to tributary streams where they spawn.</p> <p>Project team compiled a comprehensive macroinvertebrate database and identified two key groups of lichens often regarded as indicators of nitrogen enriched habitats, which will be a key part of comparisons with Kokanee-run rivers in 2017.</p>
6	PEA-F17-F-1384	Developing Priorities for Angling on Nak'azdli Traditional Territory	Parsnip	Ecofor Consulting BC Ltd.	Streams Action Plan	Habitat-Based Actions	\$11,863	Deferred to Fiscal 2018.
7	PEA-F17-F-1449	Identifying Critical Bull Trout Spawning Zones	Peace	Diversified Environmental Services	Streams Action Plan	Research & Information Acquisition	\$23,995	Using a combination of aerial surveys, ground surveys, and juvenile electro-fishing, surveys of Carbon Creek, Ducette Creek, Clearwater Creek, Nabesche River, and West Nabesche River drainages were completed. Relatively few Bull Trout redds were identified and further investigation during improved flow conditions is recommended.

## 2016-17 FWCP Peace Region application-based projects – fish

No.	Project ID	Project title	Sub-region	Project lead	Action Plan alignment	Project type	FWCP funding	Project outcome <sup>2</sup>
8	PEA-F17-F-1472	Studying Lake Trout Movements in Peace Reach	Peace	Diversified Environmental Services	Reservoirs Action Plan	Research & Information Acquisition	\$76,081	Forty mature adult lake trout were captured by angling and implanted with acoustic transmitters to monitor movements in the Peace reach in relation to other priority species (Bull Trout). Results from Year 1 are not yet compiled, but preliminary results suggest Lake Trout move a significant amount in and out of the Peace reach and recommend expanding monitoring outside of the Peace reach.

## 2016-17 FWCP Peace Region application-based projects – wildlife

No.	Project ID	Project title	Sub-region	Project lead	Action Plan alignment	Project type	FWCP funding	Project outcome <sup>2</sup>
9	PEA-F17-W-1310	Supporting Amphibians in Wetlands Along Williston Reservoir	Basin-Wide	DWB Consulting Services Ltd.	Species of Interest Action Plan	Species-Based Actions	\$73,097	Methods to monitor amphibian movements were employed in addition to gathering habitat data to gain a better understanding of amphibian use and connectivity of wetlands in the Peace region. Recommend continuing to gather information on amphibian movement (seasonal, inter-annual) to inform future Best Management Practices and restoration/enhancement actions.

## 2016-17 FWCP Peace Region application-based projects – wildlife

No.	Project ID	Project title	Sub-region	Project lead	Action Plan alignment	Project type	FWCP funding	Project outcome <sup>2</sup>
10	PEA-F17-W-1315	Supporting Caribou by Studying Forage Lichens	Basin-Wide	Wildlife Infometrics Inc.	Species of Interest Action Plan	Monitoring & Evaluation	\$56,100	Results suggest that post-harvest habitat conditions are unfavourable to Red-Stemmed Feathermoss, as evidenced by the continued decline in abundance, and that stands with lower levels of Mountain Pine Beetle (MPB) attack could continue to provide adequate conditions for caribou terrestrial lichen survival. Recommend continue collecting data to provide a more comprehensive assessment of the effects of MPB, forest harvesting and fire on caribou terrestrial lichens.
11	PEA-F17-W-1463	Improving Wildlife Connectivity in the Peace Region	Basin-Wide	Yellowstone to Yukon Conservation Initiative Foundation	Species of Interest Action Plan	Research & Information Acquisition	\$36,824	Available wildlife-vehicle collision data were analyzed and results show that wildlife collisions in the Peace region have generally increased from 1978 to 2014 for moose, deer, elk and bear. The analyses delineate 17 hotspots where cost-effective mitigation measures to reduce mortality and improve wildlife movement ability could occur. Work is underway to develop site specific mitigation measures in these areas.
12	PEA-F17-W-1223	Restoring Terrestrial Lichen for Threatened Northern Mountain Caribou	Finlay	Chu Cho Environmental	Species of Interest Action Plan	Habitat-Based Actions	\$36,863	An experimental field design to identify techniques for establishing terrestrial lichen in a post-burn environment was employed. A 6,000m <sup>2</sup> area within the Mesilinka fire boundary was seeded with lichen to accelerate the return of the area to high quality caribou winter range. Continued monitoring will inform techniques for restoring terrestrial lichen communities in post burn environments.

## 2016-17 FWCP Peace Region application-based projects – wildlife

No.	Project ID	Project title	Sub-region	Project lead	Action Plan alignment	Project type	FWCP funding	Project outcome <sup>2</sup>
13	PEA-F17-W-1345	Assessing Threatened Caribou Population	Finlay	Ministry of Forests, Lands and Natural Resource Operations	Species of Interest Action Plan	Monitoring & Evaluation	\$91,718	Thirty GPS-radio collars were deployed on adult female caribou to assess survival and seasonal range use. A population census in March 2016 estimated herd size at 360 animals, comparable to the previous estimate of 340 animals in 2010. Census results suggest a stable population trend, however, calf recruitment was low (12%). Recommend continuing to perform mortality site investigations and calf recruitment surveys.
14	PEA-F17-W-1481	Enhancing Ungulate Habitat With Prescribed Burns	Finlay	Wildlife Infometrics Inc.	Species of Interest Action Plan	Habitat-Based Actions	\$136,199	The goal of this project is to enhance ungulate habitat using prescribed fires and effectively monitor the results of this management. The proposed burns were not ignited in 2016 due to poor weather and site conditions. However pre-burn monitoring data informed a model to predict potential species-specific forage improvement at the proposed burn sites for use in future prescribed burns.
15	PEA-F17-W-1185	Supporting the Mugaha Marsh Bird Banding Station at Mackenzie Nature Observatory	Parsnip	Mackenzie Nature Observatory	Peace Basin Plan (Section 4.3)	Monitoring & Evaluation	\$16,000	The Mugaha Marsh is located 14.5 km northwest of Mackenzie, BC and has operated as a banding station for the past 22 years to monitor fall bird migration in the Northern Rocky Mountain Trench. 2016 resulted in above-average number of birds banded, with 3390 birds banded, and 4447 net hours (0.76 birds-per-net-hour).

## 2016-17 FWCP Peace Region application-based projects – wildlife

No.	Project ID	Project title	Sub-region	Project lead	Action Plan alignment	Project type	FWCP funding	Project outcome <sup>2</sup>
16	PEA-F17-W-1306	Improving Vegetation in the Drawdown Zone at Williston Reservoir	Parsnip	DWB Consulting Services Ltd.	Riparian and Wetlands Action Plan	Research & Information Acquisition	\$4,920	A total of 10 species were identified as candidates for revegetation of the drawdown zone. Next steps for the project will include initiating seedling propagation with a native plant nursery and work towards the design and implementation of planting trials at a few select locations in the reservoir followed by effectiveness monitoring.
17	PEA-F17-W-1422	Taking the Classroom Outside: School Ecology Program	Parsnip	Wildlife Infometrics Inc.	Peace Basin Plan (Section 4.3)	Habitat-Based Actions	\$23,800	In this third year of the project, the focus was on continuing to implement and improve the existing elementary modules in Mackenzie, and implement pilot modules at the high school and explore opportunities in other communities. Ten ecology learning modules were delivered to 18 classes ranging from kindergarten to grade 10, providing hands-on and outdoor-based learning experiences to students.
18	PEA-F17-W-1478	Searching for Caribou in the Scott West Herd Area	Parsnip	Wildlife Infometrics Inc.	Species of Interest Action Plan	Species-Based Actions	\$18,415	After three years of attempting to determine if there are still caribou left in the Scott West sub-population, only 10 reports of caribou were in the vicinity of the Scott West herd area; 3 of which were confident sightings. Recommend that the Scott West sub-population of the Scott herd be downgraded to “of trace occurrence” with the high likelihood of extirpation due to low probability of recovering the remnant population based on the extremely low population size and the current levels of habitat disturbance.

## 2016-17 FWCP Peace Region application-based projects – wildlife

No.	Project ID	Project title	Sub-region	Project lead	Action Plan alignment	Project type	FWCP funding	Project outcome <sup>2</sup>
19	PEA-F17-W-1469	Enhancing Caribou Survival in the Klinse-Za Herd	Peace	Wildlife Infometrics Inc.	Species of Interest Action Plan	Species-Based Actions	\$66,649	Maternity penning was implemented in 2014 as a measure to avert extirpation of the herd and has helped to arrest the steep decline in the Klinse-Za and Scott East caribou herds, increasing the herds' size from 38 individuals in 2013 to 61 in 2017. The project team plans to assess the status of natural forage inside the current pen, to inform a decision for continuing or discontinuing penning in 2018.
20	PEA-F17-W-1484	Studying Bat Ecology in Williston Reservoir	Peace	Ingebjorg Jean Hansen	Species of Interest Action Plan	Research & Information Acquisition	\$78,635	Year 2 continued acoustic monitoring for winter bat activity and bat capture and telemetry to attempt to find potential hibernacula locations. Winter activity of Big Brown Bat and Little Brown Myotis was documented within the FWCP Peace arm sub-region. Further cave exploration and acoustic monitoring to detect and confirm winter bat activity across the study areas, and mist-netting and radio telemetry to determine roosting locations will continue next year.

Table 4.3 F17 Directed Projects (as of March 31, 2017).

2016-17 FWCP Peace Region directed projects								
No.	Project ID	Project title	Sub-region	Project lead	Action Plan alignment	Project type	FWCP funding	Project outcome <sup>2</sup>
21	Directed Project	Mercury in Fish Investigation <sup>3</sup>	Basin Wide	Azimuth Consulting Group Partnership	Reservoirs	Research & Information Acquisition	\$17,000	Year 1 of the multi-year study included targeted fish tissue sampling in the Parsnip reach and opportunistic sampling in Finlay reach, Dinosaur reservoir and reference lakes. Next steps will continue to fill data gaps in fish tissue sampling and focus on the Peace reach and strengthen engagement with First Nations in collection of fish tissue and creel survey information.
22	Directed Project	Arctic Grayling Monitoring Framework	Basin Wide	John Hagen and Associates	Species of Interest Action Plan	Research & Information Acquisition	\$5,000	A monitoring framework document was developed that provides guidance to grant applicants interested in implementing an FWCP-funded project related to Arctic Grayling. This document serves as a companion document to an information synthesis report on current status, threats and information needs for Arctic Grayling to inform future conservation and enhancement actions.

<sup>3</sup> An additional \$17,000 was approved in F17 to support the mercury in fish investigations project. This project budget was originally approved in F16 therefore this budget increase is financially tracked in the F16 budget and not included in the F17 budget.

## 2016-17 FWCP Peace Region directed projects

No.	Project ID	Project title	Sub-region	Project lead	Action Plan alignment	Project type	FWCP funding	Project outcome <sup>2</sup>
23	Directed Project	Moose Limiting Factors Investigation <sup>4</sup>	Peace/Parsnip	Wildlife Infometrics and Ministry of Environment	Species of Interest Action Plan	Research & Information Acquisition	\$40,168	In Year 2, 20 additional cow moose were captured and collared (80 total). Ten mortality investigations and three calf surveys were performed. Preliminary analyses on seasonal movement and use of habitat by moose were performed. First Nation crews assessed the use of cutblocks by moose. Year 3 will continue to monitor collared moose, investigate causes of mortality and collect more information to inform habitat use analyses.
24	Directed Project	Caribou Habitat Protection Assessment <sup>5</sup>	Parsnip	The Nature Trust	Uplands Action Plan	Land Securement	\$10,000	Continuing to assess the feasibility of land securement for the purposes of caribou habitat conservation.

<sup>4</sup> An additional \$40,168 was approved in F17 to support the Moose Limiting Factors Investigation. This project budget was originally approved in F16 therefore this budget increase is financially tracked in the F16 budget and not included in the F17 budget.

<sup>5</sup> An additional \$10,000 was approved in F17 to support the Caribou Habitat Protection Assessment. \$5,000 for this project was originally approved in F16 therefore this budget increase is financially tracked in the F16 budget and not included in the F17 budget.