FWCP
Fish & Wildlife
COMPENSATION PROGRAM

Annual Report

Columbia Region
2022–2023

fwcp.ca

BC Hydro

British Columbia

Fisheries and Oceans Canada | Pêches et Océans Canada

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 in watersheds impacted by BC Hydro dams.

Message from our board co-chairs

Our Columbia Region board was pleased to support new organizations this year that are helping us further our mission to conserve and enhance fish and wildlife in watersheds impacted by BC Hydro dams. Our Columbia Region board approved funding for 40 projects—10 fish and 30 wildlife—for a total of $6.1 million in 2022–2023 (F23).

Congratulations and thank you to all of the project proponents who are carrying out this vital work. If you'd like to know more about the projects we funded in our Columbia Region in F23, review our project list.

As co-chairs of the Columbia Region board, we're pleased to say we've continued our ongoing work to strengthen engagement with First Nations. We formally launched our Columbia Region First Nations Working Group with representatives from the Ktunaxa Nation Council, Syilx Okanagan Nation, and Secwepemc Nation; group members reviewed each grant application we received and made recommendations to the board. And we increased First Nations representation on our Columbia Region board from one board member for each Nation to three, for a total of nine First Nations board members. Together, these changes are strengthening engagement of First Nations in our leadership and decision-making, and project planning and delivery.

While most of the new seats on our First Nations Working Group have yet to be filled, we warmly welcome Marc Steynen and Michael Zimmer, both with the Syilx Okanagan Nation. We would also like to welcome our newest public representative to the board, Samara Kolasko from Revelstoke.

Last but not least, we bid a fond—and appreciative—farewell to Crystal Klym, who admirably led the Columbia Region in the manager's role for eight years. After being the acting manager in our Peace Region, Jen Walker-Larsen took over as Columbia Region manager in November 2022. Welcome, Jen! If you have any questions about our projects, grants, or this annual report, please feel free to contact her.

Monique Stevenson
FWCP Columbia Region
Board Co-Chair

John Krebs
FWCP Columbia Region
Board Co-Chair

Cover: Underpass improvements at Alexander Creek and three other bridges will help reduce collisions between vehicles and wildlife like these bighorn sheep. The project, along Highway 3 near Sparwood, also installed four kms of fencing. COL-F23-W-3733. Photo: A. Glass

1.0 Organizational overview

INTRODUCTION

With annual funding from BC Hydro, the Fish & Wildlife Compensation Program (FWCP) conserves and enhances fish and wildlife in watersheds impacted by 31 BC Hydro dams. The FWCP directs those funds toward priority actions across its three regions—Coastal, Columbia, and Peace.

BC Hydro has water licence obligations in the Columbia and Peace regions and has made voluntary commitments to address the impacts of dams in the Coastal Region. BC Hydro fulfills the applicable obligations through the work of the FWCP.

The FWCP is governed through a framework that recognizes the regulatory accountabilities of agency partners (i.e., BC Hydro, the Province of B.C., and Department of Fisheries and Oceans Canada—DFO) and ensures active participation and input from First Nations and public stakeholders. Independent regional boards review, evaluate, and approve funding for all projects. Our boards include representatives from each of our FWCP partners: BC Hydro, the Province of B.C., First Nations, and public stakeholders. The Coastal Region board also has a representative from DFO[1]. When it comes to decision-making, input from each board member is given equal consideration through collaborative discussion. Learn more at fwcp.ca/our-story.

Combined, our three regional boards have seats for the following representatives:

- BC Hydro: 5
- Federal government: 1
- First Nations: 21
- Provincial government: 5
- Public stakeholders: 9

Board representation by region is shown in Figure 1.1.

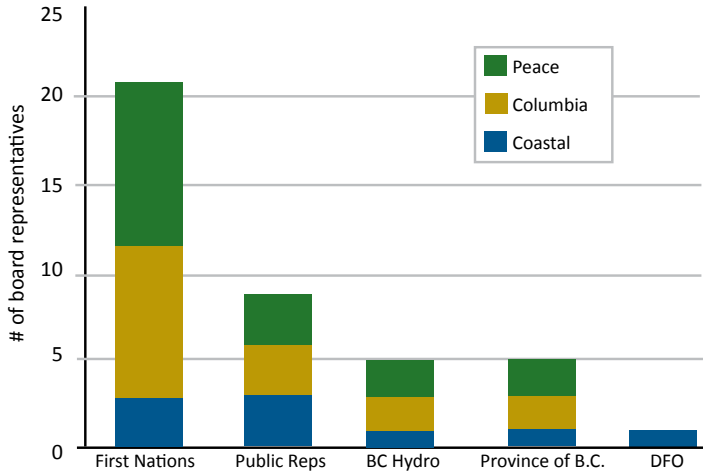


Figure 1.1: Board representation across all three FWCP regions

Since 1988, BC Hydro has provided more than $210 million to the FWCP to compensate for dam impacts, and the FWCP has funded more than 2,300 projects across our three regions.

Columbia Region

The FWCP's Columbia Region (Figure 1.2) was established in 1995 to compensate for fish and wildlife populations affected by the construction of BC Hydro dams in Canada's portion of the Columbia River Basin.

The FWCP Columbia Region has received just over $121 million since it started, delivering between 40 and 50 projects each year.

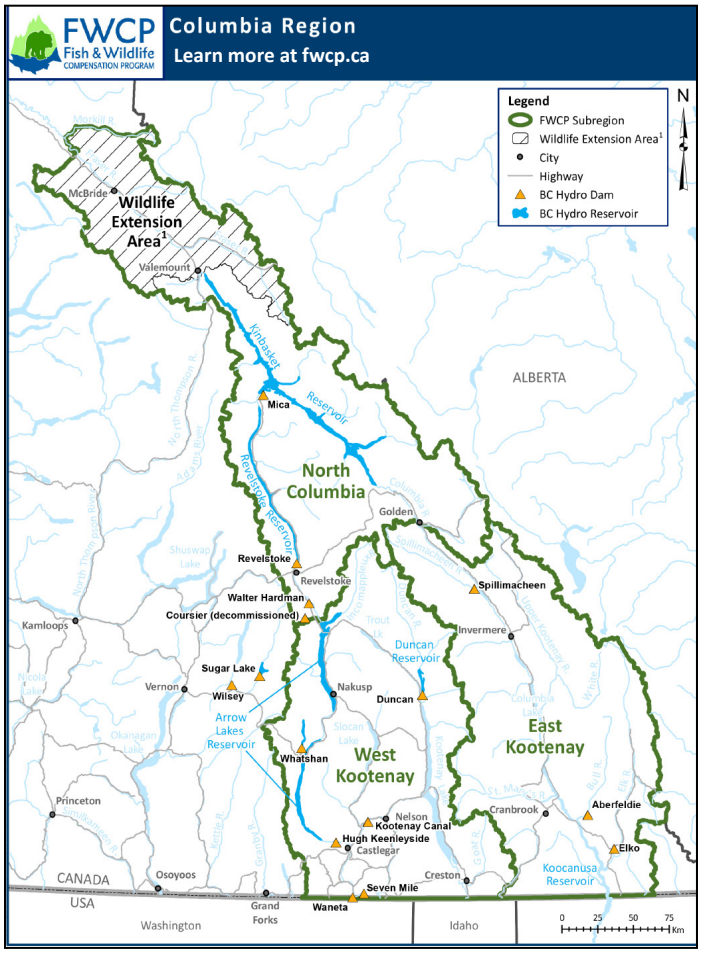


Figure 1.2: Map of the FWCP's Columbia Region

1. Currently, DFO does not have representation on the Peace and Columbia Region boards but does have the opportunity.

2. Our strategic approach

VISION AND MISSON

Our vision is for thriving fish and wildlife populations in watersheds that are functioning and sustainable, and our mission is to compensate for fish and wildlife in watersheds impacted by BC Hydro dams.

We take a forward-looking, ecosystem-based approach that defines the desired outcomes and takes actions to restore, enhance, and conserve priority species and their habitats. The FWCP's strategic objectives are:

Conservation

Maintain or improve the status of species or ecosystems of concern. Maintain or improve the integrity and productivity of ecosystems and habitats.

Sustainable use

Maintain or improve opportunities for sustainable use, including harvesting and other uses. Harvesting includes First Nations, recreational, sport, and commercial harvests. Other uses may include cultural, medicinal, or non-consumptive uses.

Community engagement

Build and maintain relationships with stakeholders and Indigenous communities. This objective stems from BC Hydro's social responsibility policy and the Province of B.C.'s shared stewardship objective.

More details on these three objectives can be found in our Governance Manual.

ACTION PLANS

Our action plans guide FWCP investments in fish and wildlife projects. They are referenced annually by our regional boards to track progress toward implementation, set priorities, and guide decision-making in setting out and approving the annual operating plan for each region. Actions in our action plans are eligible for FWCP funding and align with our vision, mission, and geographic scope.

In our Columbia Region, we have five ecosystem-based action plans that were updated in 2019.

All F23 projects approved for funding by our Columbia Region board align with the priority actions identified in the Columbia Region action plans.

UPDATE: EVALUATION AND FINANCIAL AUDIT

Responding to the nine recommendations from our 2019 independent evaluation and financial audit remains a priority. Steady progress is being made on all recommendations and in 2024 we intend to report on the progress made to address these recommendations.

Across all our regions, the evaluation and financial audit recommended exploring a potential increase in the use of directed projects—recommendation #5. Each region is now delivering between five and 16 directed projects, in addition to the grant-based projects. Engaging with our partners in the process, we also made significant progress on updating the FWCP Governance Manual—recommendation #8. We are aiming to finalize updates to the manual next fiscal. Proposed changes include updates to the sustainable use strategic objective—recommendation #1—in addition to refreshing FWCP's other strategic objectives. Other planned updates revolve around FWCP's obligations under UNDRIP—recommendation #9—which we will continue to advance throughout F24.

In our Columbia Region, there was significant progress this year on increasing the engagement of First Nations—recommendation #6—with the formation of the Columbia Region First Nations Working Group. In addition, the number of board members for our existing First Nations partners increased from one to three for each Nation, and dedicated funds to support First Nations leadership in directed projects continued. The Columbia Region initiated a review of one key annual and ongoing project—the Nutrient Restoration Program—advancing work on recommendation #2 to ensure long-term projects reflect the intent and priorities of the partnership, and that the intended outcomes are achieved. The final technical review report on the Nutrient Restoration Program, including findings and recommendations, is available online.

In our Coastal Region, planning was initiated to update the Coastal Region watershed action plans. During the planning phase, the Coastal Region board identified that they intend to significantly reduce the number of priority actions in the updated plans—recommendation #4—to support the region in being more focused and strategic when establishing priorities.

Learn more about our evaluation and financial audit: https://fwcp.ca/evaluation-audit-2018-2019/

Rainbow trout use 28 spawning pools in Murphy Creek near Trail. The spawning pools are maintained and monitored by the Syilx Okanagan Nation in partnership with the Trail Wildlife Association, with funding approved by our Columbia Region board. Photo: A. Glass

3.0 Board, committee members, and staff

The board guides our work and is responsible for approving our Columbia Region projects and budget. In addition to funding projects through our annual grants, the board may choose to direct projects.

Columbia Region board members during F23 were:

Monique Stevenson, Co-Chair	BC Hydro
Brent Meger	BC Hydro
Misun Kang	Ktunaxa Nation Council
Vacant	Ktunaxa Nation Council
Vacant	Ktunaxa Nation Council
John Krebs, Co-chair	Province of B.C.
Vacant	Province of B.C.
Samara Kolasko	Public
Moss Giasson	Public
Wendy Booth	Public
Mark Thomas	Secwepemc Nation
Vacant	Secwepemc Nation
Vacant	Secwepemc Nation
Michael Zimmer	Syilx Okanagan Nation
Marc Steynen	Syilx Okanagan Nation
Vacant	Syilx Okanagan Nation

TECHNICAL COMMITTEES

The board is supported by two fish and wildlife technical committees. They act in an advisory role by providing technical review, evaluation, and ranking of fish and wildlife grant applications; supporting the development of strategic plans; assisting in the development and oversight of directed projects; and providing advice on the effective implementation of action plans.

Fish technical committee

James Crossman	BC Hydro
Karen Bray, Chair	BC Hydro
Ben Meunier	Ktunaxa Nation Council
Tyler Weir	Province of B.C.
Will Warnock	Province of B.C.
Robyn Laubman	Secwepemc Nation
Amy Duncan/Evan Smith	Syilx Okanagan Nation

Wildlife technical committee

Toby Michaud	BC Hydro
Cathy Conroy/Nikki Heim	Ktunaxa Nation Council
Lindsay Anderson, Chair	Province of B.C.
Patrick Stent	Province of B.C.
David DeRosa	Syilx Okanagan Nation
Vacant	Secwepemc Nation

FIRST NATIONS WORKING GROUP

The board is supported by a First Nations Working Group—newly formed in F23 —that provides an advisory role, including early engagement with proponents prior to submitting grant applications.

Caitlin Phillips	Ktunaxa Nation Council
Marty Williams	Ktunaxa Nation Council
Tanis Richmond	Ktunaxa Nation Council
Aaron Deans	Secwepemc Nation
Corey Bird	Secwepemc Nation
Dwayne Spence	Secwepemc Nation
Dave DeRosa/Chad Eneas	Syilx Okanagan Nation
Michael Zimmer/Evan Smith	Syilx Okanagan Nation
Nancy Bonneau	Syilx Okanagan Nation

POLICY COMMITTEE

The policy committee sets the FWCP's overall policy direction including the governance structure, establishes the strategic framework, oversees periodic evaluations, approves significant changes to the FWCP, and addresses dispute resolution when necessary, among other responsibilities beyond the FWCP. For more details, refer to our Governance Manual.

Policy committee members:

Brad Fanos
Regional Director, Pacific Region, Fisheries and Oceans Canada

James Mack
Assistant Deputy Minister, Ministry of Environment & Climate Change Strategy

Karen Popoff
Director, Environment, BC Hydro

STAFF

In each region, program management and operations were implemented by a region manager and supported by Monique Stevenson, FWCP program manager, and Melissa Fiel de Sousa, environmental project coordinator. Crystal Klym was our Columbia Region manager for half the year, with Jen Walker-Larsen taking on the role in November 2022.

4.0 Financial report

APPROVED BUDGET AND EXPENDITURES

Our Columbia Region board allocates annual funding toward fish and wildlife projects, land securement, administration, and communications. These allocations form the annual operating plan. Any unallocated funds are carried forward as uncommitted available funds for future spending.

The annual funding provided from BC Hydro to the region for the year was $5,392,032. Our Columbia Region board approved a budget of $6,915,114 for this year, adding previously uncommitted available funds.

Figure 4.1 shows a total of just over $11.68 million available to our Columbia Region as of April 1, 2023. This comprises the approved budget of approximately $6.92 million, uncommitted available funds of approximately $1.88 million, and remaining prior-year funding commitments of approximately $2.71 million, $153,000, and $21,000 from F22, F21, and F20 respectively.

Figure 4.2 illustrates the approved budget for F23 as of April 1, 2022. Funding for fish projects made up nearly 43% of the budget, wildlife projects 36%, and land securement 10%. Administrative costs made up approximately 9% of the budget and include region manager salary and expenses, fees associated with uploading reports to the provincial databases, maintenance and refinements to our grant management system, a portion of the environmental project coordinator's salary and expenses, and board and technical committee costs. The remaining allocation was for communications and was approximately 2% of the approved budget.

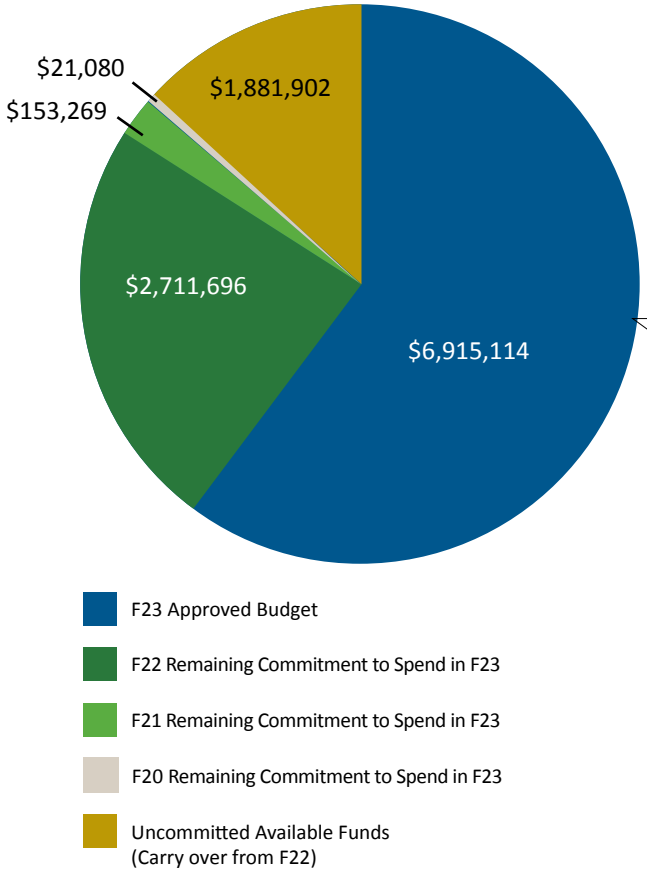


Figure 4.1: FWCP Columbia Region financial summary on April 1, 2022

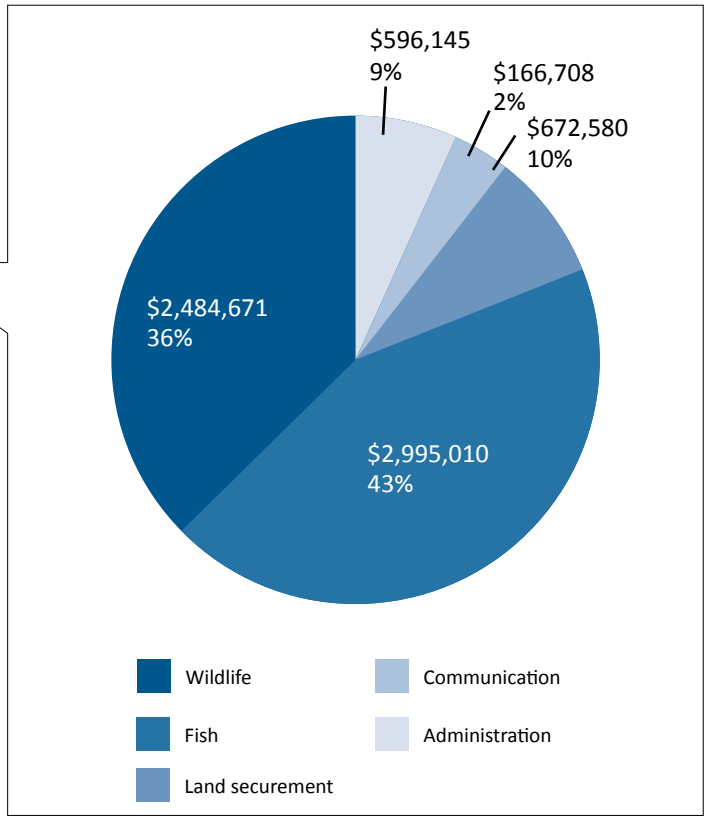


Figure 4.2: Allocation of the approved Columbia Region budget of approximately $6.92 million as of April 1, 2022

Columbia Region expenditures up to the end of fiscal, March 31, 2023, are shown in Table 4.1. This reflects a snapshot of actual and planned payments made related to this year's projects. Project funding each year may not be fully allocated by year-end and—as shown in Table 4.1—F23 allocated funds not yet expended by March 31, 2023, are labelled as planned payments.

Occasionally, projects come in under budget (unspent funds in Table 4.1). Funds not spent during the fiscal year will be carried forward as unspent surplus budget and made available for new spending in future fiscal years.

Table 4.1: F23 budget status as of March 31, 2023

Fund category	F23 approved budget	Paid up to March 31, 2023	Planned payments[1]	Unspent funds[2]
Administration	$596,145	$261,560	$150,837	$178,748
Communications	$166,708	$118,417	$48,291	-
Land Securement	$672,580	$41,981	$9,000	$621,599
Fish	$2,995,010	$2,285,558	$1,068,425	(358,973)
Wildlife	$2,915,114	$1,035,253	$1,449,418	-
TOTAL	$6,915,114	$3,742,769	$2,730,971	$441,373

Note 1: Planned payments 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 next fiscal year.

At the end of this reporting period, approximately $3.74 million of the annual budget had been spent, and $2.73 million[1] remained as an F23 commitment to spend in F24—see Table 4.1.

In addition to the planned payments of approximately $2.73 million, the balance of prior-year funding commitments anticipated to be spent in F24 was approximately $460,000 from F22, and $24,000 from F21, with nearly $875,000 available in uncommitted funds (Figure 4.3).

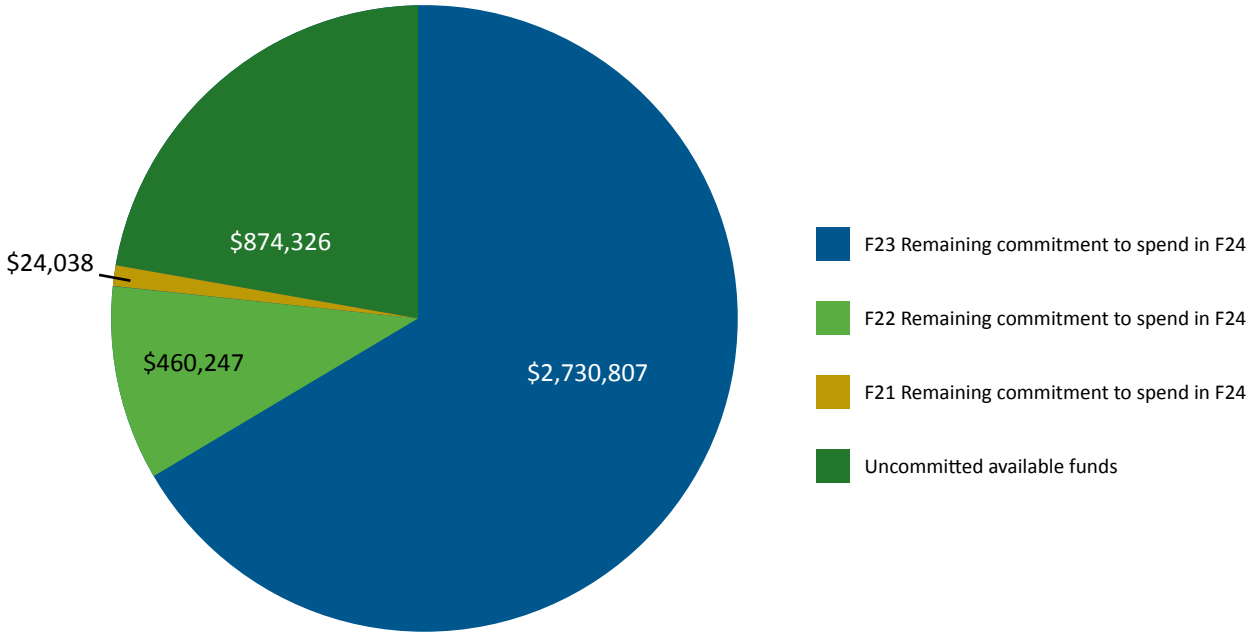


Figure 4.3: Financial summary of the FWCP's Columbia Region, as of March 31, 2023 (end of fiscal year)

1. The end of F23 and the year-end deadline for project reporting are on the same day, therefore reports—and potentially statement of accounts—are not reviewed and accepted until after the March 31 deadline causing them to be associated with the next fiscal (F24). Many final payments for F23 projects are processed in the first few months of F24, and unused funds are allocated for future spending.

5.0 Project funding and grants

PROVINCIAL PROJECT FUNDING

This year, the three regional boards approved 95 projects for a total FWCP contribution of approximately $9.81 million. The total value of these projects—including leveraged funding from other organizations and in-kind resources—was $22.36 million.

Final reports for all FWCP-funded projects are uploaded to Ecocat or SIWE provincial databases, and searchable spreadsheets of reports for each FWCP region are available at fwcp.ca/results.

COLUMBIA REGION PROJECT FUNDNG

In our Columbia Region, the FWCP funds the delivery of fish and wildlife projects in a variety of ways, including grant applications, long-term agreements, and directed projects. Forty projects were approved this year, for approximately $6.15 million in funding from our Columbia Region board.

Grant-based projects

The FWCP's annual grant intake opens each August and closes in late October. All grant applications go through a three-stage review process. For more details, visit our FAQs at fwcp.ca/apply-for-funding/.

Grant applicants are required to develop a project idea that aligns with one or more priority action in any action plan and will achieve the intended outcome. Each priority action in our action plans is identified as Open, Open/Directed, or Directed. The proposed project must be aligned to an Open or Open/Directed priority action to be eligible for a grant.

Our Columbia Region board received 60 grant applications for fish (13) and wildlife (47) projects in this reporting period, resulting in a request of approximately $8.12 million in funding.

Our Columbia Region board approved just over $835,000 in funding for 24 projects through our annual intake of grant applications: four fish—nearly $92,000—and 20 wildlife—approximately $743,000.

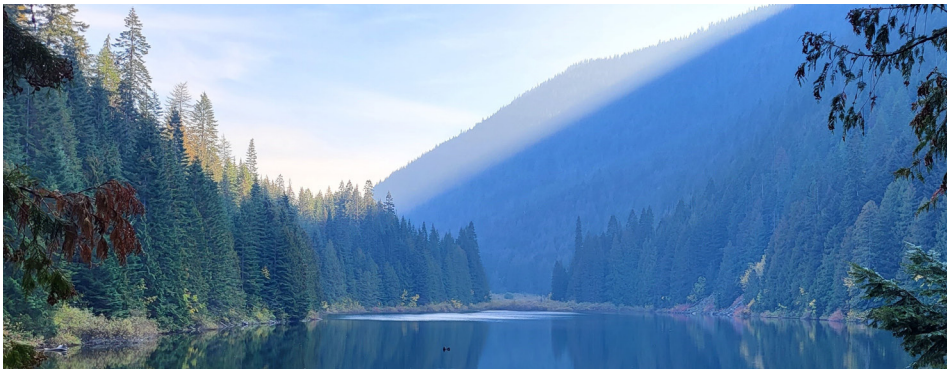
The FWCP encourages grant applicants to seek additional funding sources (e.g., other funding agencies and in-kind contributions) to leverage FWCP funding contributions. We recognize the value of partnerships to help plan, deliver and fund projects and we encourage grant applicants to build funding and project partnerships into their projects. In F23, as stated, the FWCP funding allocation for grant-based projects was approximately $835,000; as a result of financial partnerships and in-kind contributions, the total value of the projects was just over $3.62 million. In other words, for every $1 invested by the FWCP, others contributed more than $3, greatly increasing the value of the FWCP's investment overall.

Annual and ongoing projects

Our Columbia Region board approved just over $4.8 million to support 12 annual and ongoing fish and wildlife projects. These projects are typically comprised of multiple sub-projects and activities and are delivered with support from the Province of B.C. through a letter of agreement, and other regional partners through contracts and contribution agreements.

This year, there were four fish projects approved for approximately $2.66 million. These projects included adding nutrients to both Kootenay Lake and Arrow Lakes Reservoir, and operating and maintaining both the Hill Creek and Meadow Creek spawning channels.

Eight wildlife projects were also approved for more than $2.14 million. These projects included stewardship of conservation lands, enhancing upland and dryland species in the East and West Kootenay, enhancing non-game habitat, recovering caribou and northern leopard frog populations, restoring and enhancing wetlands, and securing conservation lands.



Our Columbia Region board allocated nearly $700,000 towards land securement, with $75,000 helping to purchase conservation land at Cottonwood Lake near Nelson. At the community celebration, board member Moss Giasson spoke about the board's priority of protecting lands with high fish and wildlife values. Read more.
Photos: A Glass

Directed projects

Our Columbia Region board may choose to direct projects and approve funding to address regional priorities. A total of four directed projects were approved this year for $515,000.

For the second year, the board approved an overall funding amount for two projects ($225,000 each for fish and wildlife) to be put towards Indigenous-led directed projects by Ktunaxa, Secwepemc, and Syilx Okanagan Nations. The FWCP Columbia Region board is committed to strengthening First Nations engagement in decision-making, leadership, and project planning and delivery. Indigenous-led directed projects align with action plan priorities and the priorities and interests of the Nations. Directed projects advanced this year included managing invasive bullfrogs, and learning more about the North American racer snake. Any unspent funds are rolled over for future year spending on First Nations-led projects that align with the Columbia Region action plans.

Two other directed projects were also funded: the Kootenay Conservation Program's work for land securement, and the Syilx Okanagan Nation's monitoring and maintenance of Murphy Creek Spawning Channel for rainbow trout, near Trail.

Approved projects by proponent type

Our Columbia Region board approved 40 projects, including 24 grant application projects, 12 annual and ongoing projects, and four directed projects. The majority—over three-quarters—were led by government agencies, and non-government organizations such as stewardship groups or non-profit environmental groups. The full split of projects led by proponent type is shown in Figure 5.1.

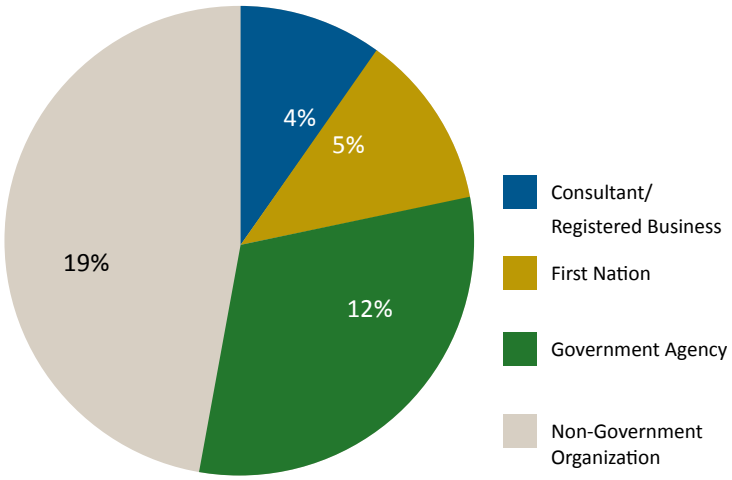


Figure 5.1: Columbia F23 approved projects by lead proponent type

Approved projects by action type

Priority actions in our Columbia Region action plans are grouped into five broad action types:

1) research & information acquisition
2) habitat-based
3) species-based
4) monitoring and evaluation
5) land securement

This year, approximately 65% of projects funded were for habitat-based projects and a further 18% for species-based projects. Figure 5.2 shows the approved projects by action type.

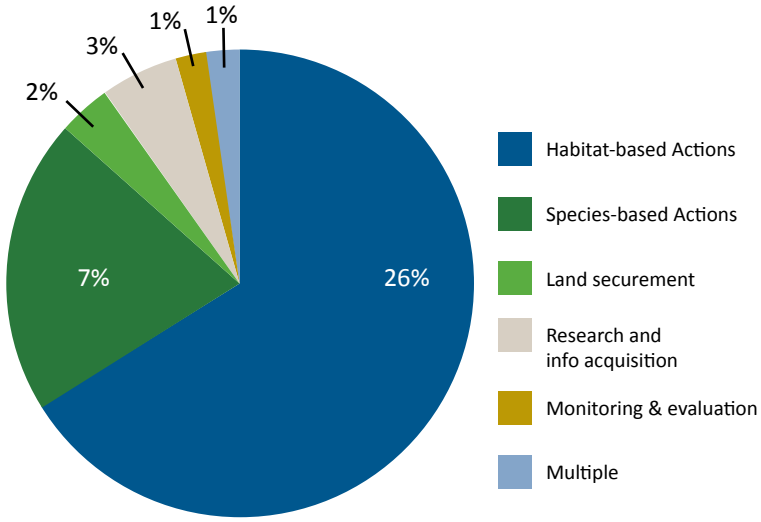


Figure 5.2: Breakdown of approved projects by action type

Approved projects by sub-region

The Columbia Region is made up of three sub-regions: North Columbia, East Kootenay, and West Kootenay. Basin-wide projects are delivered across multiple sub-regions. Figure 5.3 shows the split of projects approved by sub-region this year.

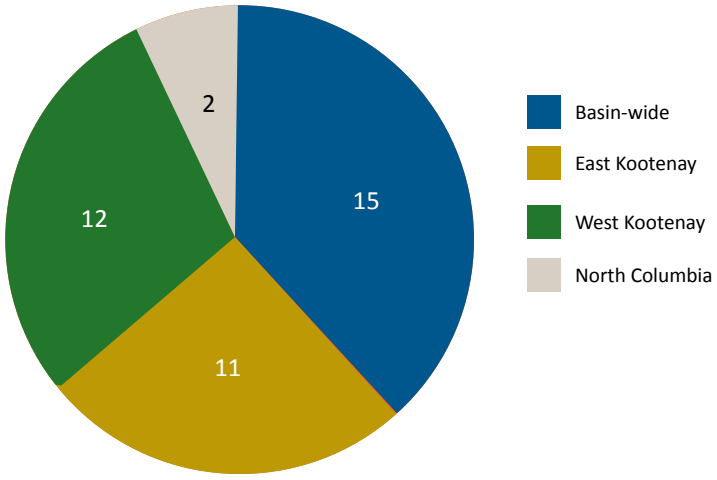


Figure Table 5.3: F23 Approved projects by sub-region

Community Engagement Grant

The goal of the Community Engagement Grant is to provide an opportunity for FWCP stakeholders and First Nations, bands, or groups to apply for a small grant to support conservation and enhancement work that aligns with our action plans. A total annual budget of $7,500 is available in our Columbia Region.

This year, nine applications were received and seven were approved, for a total of $6,500. The full list of approved Community Engagement Grants is shown in Table 5.1.

Table 5.1 Approved F23 Columbia Engagement Grants

Applicant	Project title	$s Appr'd
Friends of Kootenay Lake Stewardship Society	Osprey and Bald Eagle Nest Monitoring	$1,000
Kootenay Native Plant Society	Butterfly Habitat Interpretive Garden (BHIG)—Fall Planting Day	$1,000
Friends of Lois Creek	Lois Creek Wetlands Restoration Project	$1,000
East Kootenay Invasive Species Council	Community Weed Pull Kits	$1,000
Kimberley Nature Park Society	Sunflower Hill Boothbrush Station	$700
The Land Conservancy	Fort Shepard Sensitive Species Education Material	$800
Trail Wildlife Association	Invasive Crayfish Monitoring in Lower Columbia River Corridor	$1,000
		Total $6,500

Migrating western toads at Summit Lake Provincial Park now have a second underpass so they can safely move between the lake and upland habitat without crossing the highway. We celebrated this new underpass with Duane Wells (right), Ministry of Transportation and Infrastructure, former Columbia Region manager Crystal Klym (centre), and Mr. Toad at our Toadfest event in 2022. Photo: L. Betts

6.0 Columbia Region projects and results

Table 6.1 provides a listing of 2022–2023 Columbia Region fish and wildlife projects approved for funding. The funding identified may vary from the approved budget as of April 1, 2022, due to project budget increases or decreases as they progressed throughout the fiscal year. Final reports for all projects are posted to the appropriate provincial databases once available. Visit fwcp.ca/results for an updated list of all available final reports.

Table 6.1: F23 Approved projects and results

Project ID Proponent FWCP $ amount Sub-region	2022-2023 Grant-based fish projects	Project outcomes
COL-F23-F-3696 Friends of Kootenay Lake Stewardship Society $18,070 West Kootenay	**Restoring habitat for shore-spawning kokanee in Kootenay Lake** *Shore Spawning Kokanee Restoration & Research Project Year 3:* This multi-year project to increase kokanee fry survival focuses on collecting data and restoring habitat for declining shore-spawning kokanee in the West Arm of Kootenay Lake. In addition, potential sites for future restoration will be identified using on-the-ground monitoring and drone images.	**More than 100 m² of kokanee spawning habitat enhanced** To enhance spawning habitat in the West Arm of Kootenay Lake for shore-spawning kokanee, the project provided ideally sized gravel near-shore at a lower elevation to reduce the risk of the redds dewatering. Other goals achieved included comparing egg-to-fry survival in the new spawning gravel compared to a control area and using novel tools like drone imagery and groundwater measurements to locate other kokanee shore-spawning sites.
COL-F23-F-3699 Salmo Watershed Streamkeepers Society $15,015 West Kootenay	**Monitoring West Kootenay bull trout populations** *Salmo River Bull Trout Escapement 2022:* This project will continue bull trout redd counts in known spawning areas of the Salmo River, adding to long-term trend monitoring for this Blue-listed species. These data may inform future habitat restoration and/or conservation efforts. This project aligns with a trans-boundary Watershed Planning Team request to continue monitoring this population. Conservation biology guidelines for bull trout require 50–100 individuals per population to minimize inbreeding effects. Since 2010, the spawning population has been below 100.	**Bull trout survey estimated highest number of adults since 2017** In 2022, 82 bull trout redds were counted in the Salmo River Watershed. Surveys were completed in Clearwater, Sheep, lower Qua, and Curtis creeks, and in the upper Salmo River mainstem and the South Salmo River. The observed number of redds provided an estimated escapement of 174 adults—the highest since 2017, and 137% of the average for the time series.
COL-F23-F-3706 British Columbia Wildlife Federation $8,725 Basin-wide	**Training community habitat stewards** *Fish Habitat Stewardship Workshops—Columbia:* These workshops teach volunteers appropriate enhancement techniques for different habitat types, project planning skills, and habitat stewardship. Volunteers will gain the skills needed to become riparian stewards in their own backyards. They will be equipped to help restore valuable fish and wildlife habitat based on ecologically informed decisions.	**Nearly 2000 m² of riparian habitat enhanced and eight stewards trained** The project enhanced about 1,900 m² of riparian habitat through the planting of 200-400 cottonwood and willow stakes. These new shrubs will improve the geomorphology and water quality of the Blaeberry River, north of Golden, and subsequently, the Columbia River. Participants took part in a two-day habitat stewardship workshop and were guided through issues and actionable solutions surrounding fish habitat in urban and non-urban ecosystems. Shuswap Band members led a traditional plant guided walk.

Project ID Proponent FWCP $ amount Sub-region	2022-2023 Grant-based fish projects	Project outcomes
COL-F23-F-3731 Living Lakes Canada $50,000 West Kootenay	**Bringing Indigenous values to the evaluation of foreshore planning** *Lake Foreshore Monitoring with Indigenous Values:* This project will evaluate and apply revised Foreshore Integrated Management Planning (FIMP) standards and methodologies to one to two lakes in the Columbia Basin to assess the rate of change of shoreline health. These FIMP assessments will provide a benchmark by which to compare habitat changes over time, contribute to improving FIMP methods around the climate connection, and interweave Indigenous Knowledge.	**Foreshore planning carried out on Trout Lake** For the first time, Foreshore Integrated Management Planning is now in place for Trout Lake. The project evaluated the rate of change of shoreline health and used the research to inform the planning. Indigenous knowledge and values contributed to the planning, and results were incorporated in foreshore development guidance reports.

Project ID Proponent FWCP $ amount Sub-region	2022-2023 Annual and ongoing fish projects[1]	Project outcomes
COL-F23-F-3612-DCA Province of B.C. $1,045,993 West Kootenay	**Adding nutrients to Arrow Lakes Reservoir** *F23 Arrow Lakes Reservoir Nutrient Restoration Program*: This ongoing restoration program addresses nutrient losses in Arrow Lakes Reservoir resulting from the construction of Hugh Keenleyside, Mica, and Revelstoke dams. In this bottom-up approach, the addition of nutrients—nitrogen and phosphorus in the form of liquid agricultural-grade fertilizer—supports phytoplankton populations that are suitable for the production of zooplankton, including daphnia, which is a main food source for kokanee. This project also includes the coordination and technical and operational oversight of monitoring several trophic levels, as well as data analysis and reporting.	**Nutrients added to Arrow Lakes Reservoir** This project continued the addition of liquid agricultural-grade nutrients to Upper Arrow Lakes Reservoir during the 2023 growing season to improve the food web impacted by reservoir creation. Approximately 40 metrics tonnes of phosphorus and 190 metric tonnes of nitrogen were added between April and September. Field work monitored the effects of nutrient additions on the food web.
COL-F23-F-3613-DCA Province of B.C. $1,213,123 West Kootenay	**Adding nutrients to the North Arm of Kootenay Lake** *F23 Kootenay Lake Nutrient Restoration Program North Arm:* This ongoing restoration program addresses nutrient losses in Kootenay Lake resulting from the construction of Duncan and Libby dams. In this bottom-up approach, the addition of nutrients—nitrogen and phosphorus in the form of liquid agricultural-grade fertilizer—from April to September supports phytoplankton populations that are suitable for the production of daphnia, a main food source for kokanee. This project also includes the coordination and technical and operational oversight of monitoring several trophic levels, as well as data analysis and reporting.	**Nutrients added to Kootenay Lake** Nutrient additions continued in the North Arm of Kootenay Lake during the 2023 growing season to improve the food web impacted by reservoir creation. Additions have followed the same tug and barge method since 2018. Approximately 41 metric tonnes of phosphorus and 197 metric tonnes of nitrogen were added in the form of liquid agricultural grade nutrients between May 2 and September 6, 2022. Field work monitored the effects of nutrient additions on the food web.

1. The FWCP's annual and ongoing projects are defined as long-term operational projects (e.g., nutrient restoration programs, northern leopard frog recovery, and ecosystem enhancement) that require continuity for implementation and also address a significant habitat restoration requirement. Many of these projects are delivered in partnership with the Province of B.C. through a letter of agreement.

Project ID Proponent FWCP $ amount Sub-region	2022-2023 Annual and ongoing fish projects[1]	Project outcomes
COL-F23-F-3614-DCA Province of B.C. $215,529 West Kootenay	**Supporting Meadow Creek spawning channel at Kootenay Lake** *F23 Meadow Creek Spawning Channel:* This project supports ongoing operations, maintenance, and monitoring at the Meadow Creek spawning channel. The channel provides spawning habitat for a large number of Kootenay Lake kokanee, which are the primary prey species for both bull trout and Gerrard rainbow trout. BC Hydro built the spawning channel in 1967 to compensate for natural kokanee habitat lost due to the construction of Duncan Dam.	**Nearly 1.2 million fry left Meadow Creek spawning channel** Kokanee fry outmigration from naturally spawned eggs was estimated at 1.18 million, resulting in an egg-to-fry survival rate of 53%. Eyed egg plants occurred in the upper section of the spawning channel in the fall of 2021 as part of Kootenay Lake kokanee recovery efforts, which produced an additional 825,092 fry, resulting in a survival rate of 74%. Approximately 115,000 hatchery fry were also released at the MCSC and Meadow Creek lower confluence in the spring of 2022. A total escapement of 12,693 kokanee spawners returned to Meadow Creek in the fall of 2022.
COL-F23-F-3615-DCA Province of B.C. $183,555 West Kootenay	**Supporting Hill Creek spawning channel on Arrow Lakes Reservoir** *F23 Hill Creek Spawning Channel:* This project supports ongoing operations, maintenance, and monitoring at the Hill Creek spawning channel. Monitoring includes kokanee fry emigration, rainbow trout redd counts and fry emergence, overwintering egg survival, water quality at the spawning channel, and adult kokanee size, fecundity, and escapement. The spawning channel was built by BC Hydro to compensate for spawning habitat lost due to the construction of Revelstoke Dam, and it now provides additional spawning habitat for kokanee and rainbow trout from Arrow Lakes Reservoir.	**Spring kokanee fry production low but fall egg target exceeded at Hill Creek spawning channel** Kokanee fry outmigration was estimated to be approximately 480,000 (with egg-to-fry survival of 68.6%) in the spring of 2022—13% of the 3.5 million target. Low outmigration was likely due to fewer spawners entering the channel in 2021. The adult count in fall 2022, however, showed an increase in spawner returns (more than 70,000 to the creek), with an estimated 8.25 million eggs deposited, which is just above the egg target of 8.2 million. Maintenance of the channel included cleaning of the settling pools and gravel in the spawning channel, removal of blowdown trees and deciduous trees, and inspection of the Mackenzie Creek intake. A total of 54 rainbow trout redds were counted.

Project ID Proponent FWCP $ amount Sub-region	2022-2023 Grant-based wildlife projects	Project outcomes
COL-F23-W-3672 The Nature Trust of British Columbia $34,100 Basin-wide	**Stewarding conservation lands in the Columbia Region** *NTBC-Land Stewardship Activities F23 Program:* This project will focus conservation field-crew work on operations and stewardship projects, especially those involving First Nations, that maintain and enhance biodiversity and wildlife values on conservation properties.	**Field crews worked on 31 conservation properties** In 2022 and 2023, conservation field crews carried out land restoration work, treating five hectares of invasive plants, prioritizing 60 hectares for prescription development, and enhancing two wetland sites. Crews also performed wildlife stewardship tasks, installing and monitoring 10 wildlife cameras and eight photo plot sites, repairing 11 wildlife exclosures, installing two access gates, and inspecting and repairing more than 33 kilometres of fence line.
COL-F23-W-3673 Kootenay Native Plant Society $46,558 West Kootenay	**Filling information gaps about pollinators in the West Kootenay** *Floral Relations of Native Bees in Camas Meadows Year 3:* This multi-year project will document native bee identity, abundance, status, and diversity, as well as pollinator and plant relationships and habitat use in wet camas meadows in the West Kootenay. Camas is a vital food plant for First Nations, and Indigenous cultivation likely supported high pollinator diversity in the past. The eco-cultural restoration of these meadows requires good baseline data to inform conservation efforts and measure the recovery of bio-cultural diversity.	**Thirty priority plant species identified for pollinators** In 2022, the project documented 1,610 interactions between bees and plants—518 were unique combinations, involving 156 bee (and similar) species and 71 plant species. The research formed recommendations for the organization's planting program. A list of 30 priority plant species was created for incorporation into restoration guidelines.
COL-F23-W-3674 KinSeed Ecologies $34,493 East Kootenay	**Creating pollinator habitat** *Bummers Flats Pollinator Meadow Restoration Year 2:* This multi-year project aims to create a biologically diverse and functioning herbaceous plant community to attract a wide range of native pollinators and discourage invasive species. Approximately one hectare of a levee that was formerly sprayed with herbicides has been planted with native seeds and rhizomes. The plots will be monitored and adaptively managed over the next four years to inform future pollination restoration projects in Bummers Flats and in other regional conservation lands.	**More than 600 native plants established for pollinators** Six species of plants, including 300 rabbitbrush, were planted to attract a wide range of pollinators. More than three million seeds were collected, and over one hectare of dike was treated.
COL-F23-W-3680 Wildsight Golden $27,607 East Kootenay	**Improving habitat for at-risk swallows** *Upper Columbia Swallow Habitat Enhancement Project Year 2:* This multi-year project aims to conserve and enhance habitat for at-risk bank and barn swallows in the North Columbia and the East Kootenay. Artificial nesting structures and nest cups will be installed to replace nests that have been removed (or will be removed soon) and to entice barn swallows to existing nesting sites by making them more attractive for breeding. Breeding habitat will be expanded for at-risk bank swallows.	**Seven habitat enhancement projects completed in 2022** Work to enhance habitat for at-risk bank and barn swallows in the Columbia Valley includes removing vegetation from swallow flight paths, replacing the roof of an old barn that provides swallow habitat, and installing nest cups on buildings and artificial nesting structures. Monitoring showed the nest cups give swallows a head-start in nest building and one particular nest cup was home to four barn swallow chicks in 2022. Four Motus Wildlife Tracking stations were installed in the Invermere area, and 50 bank swallows were tagged, which will provide data on post-breeding habitat, migration route, and wintering grounds. Research has identified the Columbia Valley as critical habitat for bank swallows.

Project ID Proponent FWCP $ amount Sub-region	2022-2023 Grant-based wildlife projects	Project outcomes
COL-F23-W-3682 Yaq̓it ʔa·knuqƛi ‘it (Tobacco Plains Indian Band) $49,581 East Kootenay	**Yaq̓it ʔa·knuqƛi ‘it community plans for sustainable ungulate populations** *Yaq̓it ʔa·knuqƛi ‘it Ungulate Habitat Management Plan:* Invasive plants and forest encroachment have greatly reduced ecosystem health on reserve lands increasing demand from ungulates—elk, mule deer, white-tailed deer—on limited resources and further degrading these systems. Yaq̓it ʔa·knuqƛi ‘it will develop an ungulate habitat management plan that describes current habitat conditions and identifies strategies to restore habitats on reserve to sustainably support ungulate populations year-round.	**Habitat management plan for ungulates developed** Yaq̓it ʔa.knuqƛi’ it carried out a browse use survey, forage assessment, and ecological health assessment. The research showed where there are habitat limitations on Yaq̓it ʔa.knuqƛi’it land. The results were incorporated into the Ungulate Habitat Management Plan. Recommendations will be incorporated into an Ecosystem Management Plan (EMP), which is currently in development for Yaq̓it ʔa.knuqƛi’it. This will outline habitat enhancement needs over the next five years.
COL-F23-W-3684 East Kootenay Invasive Species Council $20,060 East Kootenay	**Addressing invasive plants in the Elk Valley** *Elk Valley Invasive Plant Management Year 3:* This multi-year project will provide a multi-stakeholder framework to minimize and contain invasive plant species and maintain biodiversity and ecological function in the upper Elk Valley with an emphasis on areas of high habitat value (such as bighorn sheep habitat and conservation properties). Multi-stakeholder groups will work collaboratively to coordinate and implement a management plan designed to prevent, educate, inventory, contain, reduce, and monitor invasive plant species in the identified priority areas. This project will benefit bighorn sheep, elk, moose, white-tailed deer, mule deer, and grizzly bears.	**Multi-year project led to drop in invasive species prevalence** Because of treatment of top-priority invasive species in the previous years of this project, fewer sites needed treatment in the third year. In 2022, almost 60 hectares were treated at 199 sites, compared to 415 sites in 2021. An inventory of invasive plants and data collection—vegetation plots and landscape-level photo plots—was carried out. Engagement with stakeholders included a weed pull, attended by 22 people, and information shared at two farmers’ markets, reaching 112 people.
COL-F23-W-3685 East Kootenay Invasive Species Council $4,942 East Kootenay	**Confirming feasibility of large-scale invasive management plan** *Galton Range or Bull River Invasive Species Management:* This Seed Grant project will explore the feasibility of a large-scale, multi-year project to conduct habitat-based invasive plant management within either the Galton Mountain Range or the Bull River area in the East Kootenay. Both areas contain important wildlife habitat, and a large-scale project will significantly contribute to maintaining biodiversity and ecological function. This feasibility assessment will also promote community stewardship by connecting land managers, user groups, and others.	**Seed Grant project led to identification of project location** Using partner engagement, literature reviews, and on-the-ground site assessment, the project team gathered valuable information about project location, relevance, and partner support. The information will allow the proponent to outline work for a future Large Grant application.
COL-F23-W-3686 ʔaq’am First Nation $5,000 East Kootenay	**Planning to restore wetlands on ʔaq̓am lands** *ʔakaq̓ƛaʔhaƛ (Wetland) Restoration Design:* This is the first year of a multi-year project to restore wetlands that are critical for protecting water resources, habitat connectivity, and wet microclimates for all living things in a changing climate on ʔaq̓am lands. Work will include baseline studies of ecosystem health, species at risk, and archaeological values; a cultural and ecological knowledge assessment conducted by and with ʔaq̓amnik̓ community members; and concurrent restoration design/planning. The result will be a shelf-ready plan for restoring for the benefit of both wildlife and the cultural practices of the community.	**Indigenous knowledge and data collected for wetland restoration design** This Seed Grant was used to gather information about species at risk and archaeological sites on ʔaq̓am lands. ʔaq̓amnik̓ knowledge about ʔakaq̓ƛaʔhaƛ (wetlands) and the history of the potential project sites will be incorporated into a wetland restoration design.

Project ID Proponent FWCP $ amount Sub-region	2022-2023 Grant-based wildlife projects	Project outcomes
COL-F23-W-3688 Wildlife Conservation Society Canada $73,952 Basin-wide	**Filling data gaps about bat abundance and diversity** *Establishing and Monitoring Bat Abundance and Diversity Year 1:* This multi-year project will use the North American Bat Monitoring protocol to establish baseline diversity and relative abundance of bats and guide implementation of mitigation efforts for threats such as white-nose syndrome. This project includes construction and assessment of artificial roosts and the results will help inform conservation planning in future years.	**Two bat condos and 55 bat roosts constructed** Project crews installed 55 new bat roost structures and two new bat condos—one in Kuskanook and the other in Parson—to provide habitat for two large colonies that had recently been evicted in the North Columbia. Six new roosts were identified by radio-tracking three northern myotis bats. Sampling and monitoring gave data on population health and diseases. Sixty-five bridges have been examined for the presence of bats.
COL-F23-W-3694 Central Kootenay Invasive Species Society $28,952 West Kootenay	**Improving riparian function by removing invasives** *Kootenay Riparian Invasive Plant Removal Year 2:* This multi-year project will support the development and implementation of a multi-year plan for removing invasive yellow flag iris and purple loosestrife along the West Arm of Kootenay Lake and the Kootenay River downstream of the Brilliant Dam. This will improve riparian ecosystem function, protect high-value conservation areas, and increase awareness and long-term stewardship among local residents.	**Almost 4,000 kg of invasive plants removed** Surveys found 18 hectares of purple loosestrife and 14 hectares of yellow flag iris along the West Arm of Kootenay Lake and the Kootenay River downstream of Brilliant Dam. No new infested sites were detected. More than 40 sites were treated with a total of 3,900 kg of invasive plant material removed. The sites were then assessed to see how the riparian ecosystem has benefitted and to make recommendations for future restoration work.
COL-F23-W-3698 Elk River Watershed Alliance (operating as Elk River Alliance) $62,565 East Kootenay	**Conserving and restoring East Kootenay cottonwood forests** *Elk Valley Cottonwood Conservation and Restoration Strategy:* This project will inventory the extent and condition of existing and historical cottonwood forests and prioritize conservation and restoration sites. It will develop restoration prescriptions in consultation with First Nations, local user groups, subject matter experts, NGOs, and government representatives.	**Three restoration sites identified for cottonwood forest in the Elk Valley** This project mapped existing cottonwood forests and estimated their dominance prior to settler arrival, finding that about 51% of cottonwood forest has been cleared. More than 100 potential restoration sites were assessed and three were chosen for future projects. Restoration work on 40 hectares of streamside land will start in 2023 to conserve and enhance cottonwood forests. Other sites were identified for possible land securement efforts. Approximately 150 Elk Valley residents, biologists, ecologists and First Nations were engaged, surveyed, or interviewed.
COL-F23-W-3702 Moody Tree $49,865 Basin-wide	**Supporting endangered East Kootenay whitebark pine** *Whitebark Pine Planting in East Kootenay Wildfire Areas Year 5*: This multi-year project will support whitebark pine recovery by planting an estimated 15,000 seedlings at a density of 500-800/hectare, improving growing conditions for naturally regenerating trees, and working with industry to improve management approaches. Whitebark pine is a keystone species of high-elevation ecosystems. It provides important food for wildlife. Due to introduced white pine blister rust, mountain pine beetle, changes to fire regimes, and climate change, numbers of whitebark pine have dramatically decreased, leading to its designation as Endangered under the Species at Risk Act.	**More than 15,000 seedlings planted at three locations** This project to support whitebark pine in high-elevation ecosystems planted 15,120 seedlings and enhanced growing conditions in two locations. Data gathered from cone collections near Kimberley, Golden, and Valemount will inform future recovery of this Endangered tree that provides valuable food for wildlife such as the Clark's nutcracker and grizzly bear. Community members in Valemount, McBride, and Simpcw First Nation were engaged to learn more about whitebark and rust identification, as well as recovery and restoration techniques.

Project ID Proponent FWCP $ amount Sub-region	2022-2023 Grant-based wildlife projects	Project outcomes
COL-F23-W-3717 British Columbia Wildlife Federation $100,000 Basin-wide	**Restoring wetland habitat in our Columbia Region** *Advancing Wetland Stewardship & Restoration in the Kootenays:* This project will restore a minimum of 15 hectares of wetland and floodplain habitat on Yaqan Nukiy lands near Creston and Hyppo Landing Wetland near Canal Flats. This work will aid species at risk, support First Nations, and increase landscape connectivity. Design plans will be created for future wetland restoration in Winlaw. Effectiveness monitoring and maintenance will occur at past restoration sites. Wetland keeper workshops will be offered to build the capacity of stewardship groups, volunteers, educators, First Nations, landowners, and others to protect, enhance, and restore wetlands.	**Report due 2024**
COL-F23-W-3718 Columbia Shuswap Invasive Species Society $5,000 North Columbia	**Investigating riparian invasives in the North Columbia** *North Columbia Invasive Species Riparian Restoration:* This Seed Grant project will investigate riparian conservation areas of concern in the North Columbia, where invasive plants are present or more information is needed. Sites include the Revelstoke Reach greenbelt and airport ponds—which are home to migratory birds, western painted turtles, and other wildlife—as well as high-value conservation areas with invasive plants in the Golden-area Columbia Wetlands. Outcomes of this project will inform a future grant application to support the restoration of these sites.	**More than 20 invasive plant species detected in the North Columbia** Twenty-one invasive plant species were found during surveys of riparian conservation areas in the North Columbia. Surveyors took plants at Revelstoke Reach Greenbelt, the North Confluence, and Birchlands. The research will be included in a restoration plan for high-value conservation areas in the North Columbia.
COL-F23-W-3723 Golden District Rod and Gun Club $28,860 North Columbia	**Improving Rocky Mountain ungulate habitat** *Kicking Horse Canyon Habitat Enhancement Project:* The goals of this project are to maintain previously treated ungulate winter range for Rocky Mountain elk and support habitat connectivity on a landscape-scale near the Yoho National Park boundary. Planned enhancement works include the spacing of immature forest, brushing forest ingrowth, and removing mature trees.	**112 ha of Rocky Mountain elk winter habitat enhanced** In the Upper Kicking Horse Valley, 112 ha of elk winter range was enhanced and 15 ha were treated with brushing, thinning, debris piling, and burning. Data to monitor the project's effectiveness has been collected from 111 pellet plots. Processes used during this project will be used in future enhancement projects.
COL-F23-W-3727 Sanders Environmental Services $25,000 Basin-wide	**Reducing grizzly bear conflicts** *Grizzly Bear Coexistence Solutions Year 3:* This multi-year project will promote coexistence between grizzly bears and rural residents through education, collaboration, and the use of practical tools, such as correctly installed electric fencing. This will help prevent bear conflicts and associated grizzly bear mortalities in the low-elevation linkage habitats that often overlap with agricultural lands. As conflicts are reduced, there will be improved grizzly bear conservation status in the region, including enhanced connectivity between core grizzly bear populations.	**Workshops promoted coexistence between grizzlies and human residents** In 2022, eight grizzly bear safety workshops were held, and seven electric fencing workshops were held. Combined partnership funds allowed for 48 new electric fences to be installed. Expanded use of social media has resulted in the project's Facebook page having 1,372 followers.
COL-F23-W-3728 Nature Conservancy of Canada $55,000 East Kootenay	**Restoring wetlands and hydrology in the East Kootenay** *Marion Creek Wetland Restoration Project:* This project will restore up to six wetlands, totaling four hectares, plus six hectares of upland habitat. Marion Creek is located on the Nature Conservancy of Canada's Thunder Hill Ranch conservation property in the Upper Columbia Valley, northwest of Canal Flats. Restoring key reaches of Marion Creek altered through ditching, channeling, and draining will help restore the natural hydrology of the creek and support climate resiliency. It will improve habitat for wildlife, including several species at risk, such as westslope cutthroat trout and western painted turtle.	**Report due 2024**

Project ID Proponent FWCP $ amount Sub-region	2022-2023 Grant-based wildlife projects	Project outcomes
COL-F23-W-3733 Province of B.C. $50,000 East Kootenay	**Reducing wildlife highway mortalities in the East Kootenay** *Safe Passages for Wildlife in the Southern Canadian Rockies Year 3:* This multi-year project is aimed at improving connectivity and reducing collisions along Highway 3 near the Alberta border. This year's work will focus on improving connectivity at the Old Town and Michel Mouth bridges, installing fencing, improving the effectiveness monitoring program, and increasing engagement with the Ktunaxa Nation.	**Two kilometres of highway now safer for wildlife** To reduce collisions between wildlife and vehicles on Highway 3 and improve habitat connectivity, four bridges have been retrofitted to serve as underpasses for wildlife near the Alberta border. In addition, four kilometres of fencing have been installed covering two kilometres of highway. Thirty-six cameras were used to monitor the program's effectiveness, collecting nearly 800,000 images.
COL-F23-W-3740 Jared Hobbs Ecological Consulting $34,248 Basin-wide	**Improving understanding of species distribution and occurrence** *Survey of Priority Areas for Western Screech-owl:* This project will use night surveys to gather data on the presence and distribution of Western screech-owls in the Upper Columbia, Creston, and Slocan River valleys. Ktunaxa Nation input and knowledge will be used to inform survey sites within the study area. This baseline data will help inform future conservation planning, including proposals of Wildlife Habitat Areas to address species-specific habitat securement.	**Surveys detected six western screech-owls; 11 Wildlife Management Areas proposed** Over 17 nights in April, May, and September 2022, 209 stations were surveyed in the West and East Kootenay for western screech owls, using call-playback methods. A total of 52.5 hours of listening time detected six western screech-owls. A further six detections were garnered from eBird reporting and one from a public stakeholder. Eleven Wildlife Management Areas, covering more than 3,000 ha were mapped and proposed as a result. The project was in partnership with the Okanagan Nation Alliance.
Community Engagement Grants $7,500 Basin-wide	**Supporting community-based projects** *F23 Community Engagement Grant:* Our Columbia Region board approved funding for Community Engagement Grants. These grants of up to $1,000 support multiple projects led by stewardship groups, First Nations, and others to benefit fish and wildlife.	**Seven grants supported planting, monitoring, restoration and more** Community Engagement Grants awarded included: osprey and bald eagle nest monitoring around Kootenay Lake, fall planting of native species for pollinators near Castlegar, purchasing community weed-pull kits in the East Kootenay, wetland restoration near Kimberley, and the production of outreach and educational material for Fort Shepherd. $6,500 of funding was allocated.

Project ID Proponent FWCP $ amount Sub-region	2022-2023 Annual and ongoing wildlife projects[2]	Project outcomes
COL-F23-W-3604-DCA Province of B.C. $257,524 Basin-wide	**Enhancing habitat for non-game species** *F23 Non-game Enhancement:* This annual and ongoing project focuses on non-game species. It includes a variety of activities that maintain and enhance critical habitat, such as the roosting, denning, and nesting features important for the reproduction and survival of species impacted by reservoir footprint habitat losses.	**Five floating platforms used by breeding loons at Whatshan Lake** During 2022, nine projects for eight non-game species were completed. These included: Townsend's big-eared bat maternity roost monitoring, and fencing to reduce badger mortality—both in the East Kootenay; loon platform monitoring at Whatshan Lake where all five floating platforms were being used by breeding pairs; documenting Lewis's woodpecker nests; maintaining and monitoring western painted turtle nests at Argenta and Elizabeth Lake; and western toad monitoring at Summit Lake.
COL-F23-W-3605-DCA Province of B.C. $261,401 Basin-wide	**Supporting northern leopard frog recovery** *F23 Northern Leopard Frog Recovery:* This annual and ongoing project involves conducting inventory, monitoring, and stewardship of the Endangered northern leopard frog population at the Creston Valley Wildlife Management Area. This population hosts the majority of the remaining northern leopard frogs in B.C. It serves as the source population for re-introductions to the Upper Kootenay and Brisco areas.	**Breeding success low for northern leopard frogs in 2022** Seven northern leopard egg masses were located and protected, with approximately 1,600 tadpoles translocated from Creston Valley to Cherry Meadows Conservation Area and the neighbouring Sparrowhawk Farm wetland complex in the East Kootenay. More than 200 invasive bullfrogs in the Creston Valley were detected and euthanized.
COL-F23-W-3606-DCA Province of B.C. $338,770 Basin-wide	**Stewardship of conservation lands** *F23 Land Management Operations:* This annual and ongoing project focuses on the coordination, oversight, and implementation of land stewardship activities associated with conservation lands.	**Signage installed and more than 10 hectares of habitat enhancement completed** First Nations Guardians conducted six patrol sessions, and 30 land stewardship signs were installed in the Pend d'Oreille Conservation Area. Invasive plant management took place—including treatment of nearly seven hectares along 19 kilometres of roadsides in the Lower Arrow. Slashing was completed over three hectares of habitat in the Marsden Conservation Area. Nine First Nations groups were engaged during the first phase of conservation land management planning.
COL-F23-W-3607-DCA Province of B.C. $71,396 Basin-wide	**Restoring and enhancing wetlands** *F23 Wetland and Riparian Enhancement:* The goal of this annual and ongoing project is to deliver wetland restoration work, continue to develop new projects, and monitor completed projects. Developing new projects includes identifying candidate restoration sites, compiling background information, conducting a pre-treatment inventory of sites, working with a wetland specialist to complete restoration plans, and developing the partnerships, permits, and budgets necessary to implement restoration projects. An effectiveness evaluation of FWCP-funded wetland conservation efforts—including creation, enhancement, and restoration—is currently underway. Results of this evaluation will inform future FWCP wetland conservation efforts.	**Monitoring, maintenance, and restoration planning completed at multiple sites** Post-treatment monitoring and maintenance was completed at two wetland restoration complexes in Meadow Creek. Post-treatment monitoring at constructed wetlands in the Creston Valley included amphibian visual encounter surveys and water level monitoring. Support for wetland restoration planning was provided for several partnered projects including the Frog Bear wetland and corridor in Creston, and beaver-influenced wetlands in the lower Duncan.

2.The FWCP's annual and ongoing projects are defined as long-term operational projects (e.g., nutrient restoration programs, northern leopard frog recovery, and ecosystem enhancement) that require continuity for implementation and also address a significant habitat restoration requirement. Many of these projects are delivered in partnership with the Province of B.C. through a letter of agreement.

Project ID Proponent FWCP $ amount Sub-region	2022-2023 Annual and ongoing wildlife projects[2]	Project outcomes
COL-F23-W-3608-DCA Province of B.C $187,951 West Kootenay	**Enhancing West Kootenay ecosystems** *F23 West Kootenay Ecosystem Enhancement:* This project focuses on the oversight, coordination, and implementation of restoration activities in West Kootenay upland and dryland ecosystems, including prescription development, slashing, piling, prescribed burn-planning, burning, post-burn monitoring, and reporting.	**Upland and dryland ecosystems enhanced** While a planned prescribed burn had to be postponed in 2022, crews carried out other work to maintain and enhance West Kootenay ecosystems. Pre-and post-treatment vegetation monitoring was completed at multiple sites around the Arrow Lakes Reservoir, together with invasive plant management. Effectiveness monitoring of 120 trees inoculated to become wildlife trees was conducted and annual ungulate night counts in Pend d'Oreille were completed for the 25th year.
COL-F23-W-3609-DCA Province of B.C $245,063 East Kootenay	**Enhancing East Kootenay ecosystems** *F23 East Kootenay Ecosystem Enhancement:* This annual and ongoing project will focus on the oversight, coordination, and implementation of restoration activities in East Kootenay upland and dryland ecosystems, including prescription development, slashing, piling, pile burning, masticating, burn-planning, prescribed burning, post-burn monitoring, and reporting.	**Planning and pre-treatment completed for six future prescribed burns** In 2022, crews pre-treated four sites to control invasive species prior to future prescribed burns. With Yaq̓it ʔa.knuq̓i 'it First Nation (Tobacco Plains Indian Band), prescription development and ecosystem restoration was planned for the McGuire-Red Canyon site. Another prescribed burn, which was planned for fall 2022, was postponed to 2023. Monitoring of three sites took place to see how effective past invasive plant treatments have been.
COL-F23-W-3610-DCA Province of B.C. $154,284 Basin-wide	**Supporting caribou recovery** *F23 Caribou Recovery:* This annual and ongoing project is a multi-agency effort led by the Province of B.C. to recover threatened caribou sub-populations. To date, the FWCP has supported caribou recovery by assisting with population monitoring, transplants, providing information on predator-prey dynamics, and identifying potential habitat-restoration activities.	**Thirteen caribou moved to maternity pen** A variety of work was carried out to recover threatened caribou populations in the Columbia region. As well as relocating 13 caribou cows to the maternity pen near Nakusp, crews also took a census and collared animals from the Central Selkirk and Columbia North herds. Track surveys of wolves—a leading predator to caribou—took place in the Central Selkirk mountains, covering three separate packs.
COL-F23-W-3611-DCA Province of B.C. $627,580 Basin-wide	**Land securement in our Columbia Region** *F23 Land Securement:* Annual funding is set aside by the FWCP's Columbia Region board to support priority land acquisition projects that strongly align with Columbia Region action plan priorities and support participation on land securement committees. Land securement is a priority action for all ecosystems in the FWCP's Columbia Region.	**No land purchase during F23**

2.The FWCP's annual and ongoing projects are defined as long-term operational projects (e.g., nutrient restoration programs, northern leopard frog recovery, and ecosystem enhancement) that require continuity for implementation and also address a significant habitat restoration requirement. Many of these projects are delivered in partnership with the Province of B.C. through a letter of agreement.

Project ID Proponent FWCP $ amount Sub-region	2022-2023 Directed fish and wildlife projects	Project outcomes
Ktunaxa Nation, Okanagan Nation Alliance & Secwepemc Nation $225,000 Basin-wide	**Strengthening engagement of First Nations in fish projects** *First Nations-led Directed Fish Projects:* First Nations are identifying directed fish projects to lead and deliver in F23. Work will include the prioritization of projects, development of work scope, and project implementation. All projects delivered will align with the FWCP's Columbia Region action plans.	**Baseline data collected in the Lower Columbia tributaries and Pend d'Oreille River** This funding supported two projects. Lower Columbia River Tributary Temperature Monitoring (COL-F23-F-3775-DCA), led by the ONA: The project increased awareness of temperature-related habitat available through Arrow Lakes Reservoir and Lower Columbia River. It initiated the formation of a temperature dataset to monitor tributaries in the area, starting with 10 tributaries. Pend d'Oreille River Tributary Fish Habitat Assessment Ph.1 (COL-F23-F-3776-DCA), led by the ONA: This project aims to collect and collate baseline information regarding fish habitats and fish communities for five Pend d'Oreille River tributaries (excluding the Salmo River). The work will help identify potential rehabilitation opportunities. Results are pending.
COL-F23-F-3764 Okanagan Nation Alliance $20,000 West Kootenay	**Ensuring sustainability of the Murphy Creek spawning channel** *Murphy Creek Spawning Channel Monitoring and Maintenance F23:* The spawning channel supports the rainbow trout population in Murphy Creek, which feeds the resident Columbia River population. The maintenance of this spawning channel ensures quality spawning habitat is available for rainbow trout, and the monitoring of spawners will provide data to evaluate run size and population dynamics. The Trail Wildlife Association has partnered with the Okanagan Nation Alliance to ensure that the ongoing maintenance and monitoring of the spawning channel can be completed despite declining volunteer participation.	**Forty-six tagged rainbow trout recorded in Murphy Creek spawning channel** Twenty-four spawner surveys occurred and 42 tagged rainbow trout were recorded in the channel. In addition, gravel was added and raked, and vegetation was removed to enhance the spawning habitat.
COL-F23-W-3739-DCA Kootenay Conservation Program $45,000 Basin-wide	**Informing land securement decisions** *Kootenay Conservation Program Land Acquisition & Base Support:* The Kootenay Conservation Program will support the Columbia Region board when it considers land securement options for lands with high conservation values.	**Conservation forum delivered and support provided to acquire 70+ ha of land** KCP co-hosted the Conservation Action Forum for South Selkirks-Lower Columbia with the Okanagan Nation Alliance and Trail Wildlife Association. It completed three property evaluations and five property appraisals, and supported the purchase of two private land conservation properties covering 71.3 ha. On-the-ground conservation activities took place for 34 species at risk, in addition to field tours, stewardship meetings, and webinars.
Ktunaxa Nation, Okanagan Nation Alliance & Secwepemc Nation $225,000 Basin-wide	**Strengthening engagement of First Nations in wildlife projects** *First Nations-led Directed Wildlife Projects:* First Nations are identifying directed wildlife projects to lead and deliver in F23. Work will include the prioritization of projects, development of work scope, and project implementation. All projects delivered will align with the FWCP's Columbia Region action plans.	**Recommendations shared to protect snake hibernaculum, and invasive bullfrogs controlled** This funding supported two projects: **Reptiles at Risk – North American Racer** (COL-F23-W-3772-DCA), led by the ONA: In September 2022, three racers were captured and two were tracked, leading field teams to two separate hibernaculum. ONA made recommendations to land managers at Fort Shepherd to protect and enhance important reptile habitat. **Invasive American Bullfrog Management, South Salmo/Nelway** (COL-F23-W-3771-DCA), led by the ONA: A total of 286 American bullfrogs were captured in the Nelway area in 2022. Bullfrogs were detected in two of the eight potential sites identified. Awareness building and results were presented to more than 100 people.