

2013 - 2014  
FWCP ANNUAL REPORT  
COASTAL REGION



The FWCP in the Coastal region is a partnership of BC Hydro, the Province of B.C., Fisheries and Oceans Canada, First Nations, and public stakeholders.



FISH AND WILDLIFE  
COMPENSATION PROGRAM



2014

# MESSAGE FROM THE BOARD CHAIR



*In 2013-14 FWCP - Coastal funded 32 fish and wildlife projects.*

On behalf of the FWCP-Coastal Board, I welcome you to read our Annual Report for Fiscal Year 2014, which covers the period from April 1, 2013 to March 31, 2014. The FWCP-Coastal program is dedicated to advancing the objectives of the FWCP Partnership – conservation, sustainable use, and community engagement – in watersheds impacted by the initial construction of BC Hydro’s generation facilities in the Coastal and Southern Interior regions.

Each fall prior to the coming Fiscal Year, FWCP-Coastal receives applications from community-minded and interested organizations, First Nations, and agencies – often working in partnership – to deliver projects that are aimed at enhancing fish, wildlife and their supporting habitats in our watersheds. For Fiscal Year 2014, we received 38 applications with a total request of over \$1.9M of FWCP-Coastal funds.

After careful consideration, the FWCP-Coastal Board funded a total

of 32 projects: 18 related to fish and their habitats and 14 projects supporting wildlife and their habitats. Selected projects aligned with and supported our strategic Watershed and Action Plans, which were introduced in October 2011.

This year, our total available funding support was \$1.966M, of which almost \$1.6M was provided directly to external applicant organizations to support fish and wildlife projects in their communities. We are always pleased to see the amount of in-kind, volunteer and other funding sources that applicants use to leverage our funding dollars. The total value of the 32 projects that FWCP-Coastal supported this year is estimated at \$2.9M.

In addition, during F14, we initiated an “Evaluation Plus” review of 11 of our previous projects, to monitor the effectiveness of the investments we make. The results are summarized in this year’s annual report.

Reflecting the FWCP partnership, the FWCP-Coastal Board is made up of representatives from the public, First Nations, the Province of B.C., Fisheries and Oceans Canada and BC Hydro. We wish to thank all the dedicated applicants and proponents who work hard each year to successfully implement projects to help us achieve our vision of thriving fish and wildlife populations in healthy and sustainable ecosystems.

Yours truly,  
Brian Assu  
FWCP-Coastal Board Chair



*Front cover: FWCP supports efforts to recover the endangered Vancouver Island Marmot.*

# 1. ORGANIZATIONAL OVERVIEW

## INTRODUCTION

The Fish and 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. The program operates as a partnership between BC Hydro, the Province of B.C., Fisheries and Oceans Canada (DFO), First Nations, and local communities, organizations and groups.

The FWCP has invested more than \$126 million and delivered more than 1,600 projects that conserve

and enhance fish, wildlife and their supporting habitats affected by the creation of BC Hydro-owned and operated generation facilities in the Coastal, Columbia and Peace regions of British Columbia.

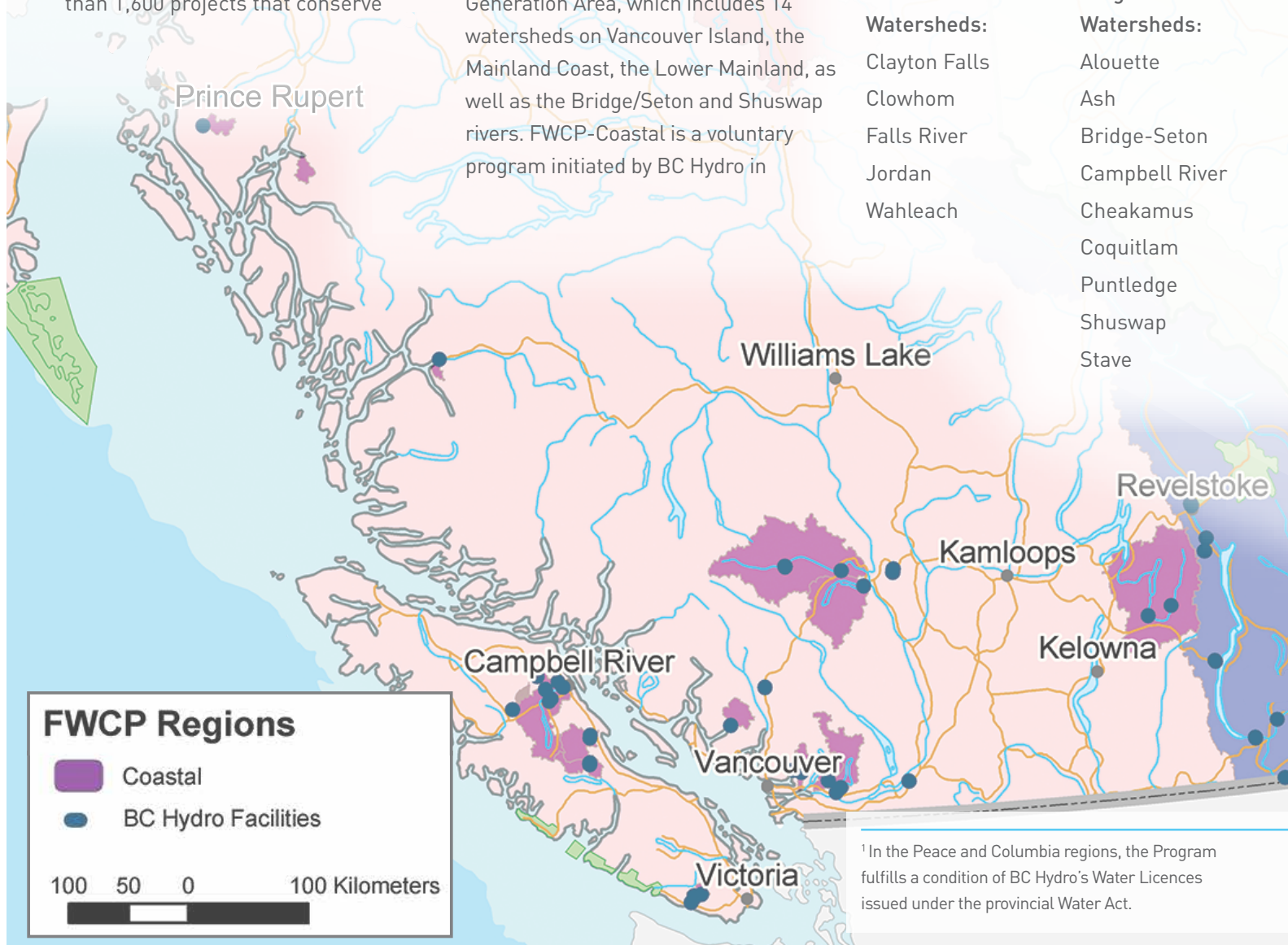
Formerly known as the Bridge-Coastal Restoration Program, FWCP-Coastal was established in 1999 to assist in the restoration of fish and wildlife populations and habitat in watersheds impacted by the construction of hydroelectric generation facilities in BC Hydro's Bridge River/Coastal Generation Area, which includes 14 watersheds on Vancouver Island, the Mainland Coast, the Lower Mainland, as well as the Bridge/Seton and Shuswap rivers. FWCP-Coastal is a voluntary program initiated by BC Hydro in

partnership with its regulators DFO and the Province of B.C., in response to First Nations and stakeholder interests in addressing opportunities for restoration in these watersheds.

This Annual Report provides an overview of the activities of the FWCP-Coastal for Fiscal Year 2014 (i.e. April 1, 2013 to March 31, 2014), including a report on financial performance, project funding summary, alignment of the year's work with strategic objectives, and some highlights from the year.

**Smaller Watersheds:**  
 Clayton Falls  
 Clowhom  
 Falls River  
 Jordan  
 Wahleach

**Larger Watersheds:**  
 Alouette  
 Ash  
 Bridge-Seton  
 Campbell River  
 Cheakamus  
 Coquitlam  
 Puntledge  
 Shuswap  
 Stave



<sup>1</sup> In the Peace and Columbia regions, the Program fulfills a condition of BC Hydro's Water Licences issued under the provincial Water Act.

# GOVERNANCE

The FWCP is governed through a framework that recognizes the regulatory accountabilities of the agency partners (BC Hydro, the Province of B.C., DFO) and enables active participation and input from First Nation and public partners. 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 annual expenditures and investments by the Program.

The FWCP-Coastal Board is made up of nine (9) members representing First Nations, the public, Province of B.C., DFO and BC Hydro. The current Board members are:

## FIRST NATION REPRESENTATIVES

- Brian Assu, (Chair), Cape Mudge Indian Band
- Fran Genaille, Peters First Nation
- Larry Casper, Seton Lake Indian Band

## PUBLIC REPRESENTATIVES

- Helen Davis
- Ken Farquharson
- Vivian Birch-Jones

## AGENCY REPRESENTATIVES

- Alice Cheung, Fisheries and Oceans Canada (DFO)
- Harry Brownlow, BC Hydro
- Julia Berardinucci, B.C. Ministry of Forests, Lands and Natural Resource Operations (FLNRO)



The Board reports to the Policy Committee, representing the federal and provincial government regulators (DFO and the Province) and BC Hydro. The Policy Committee provides oversight to a range of fish and wildlife-related issues relevant to BC Hydro including but not limited to the FWCP. The current Policy Committee members are:

- Edie Thome, Director of Environmental Risk Management, BC Hydro
- Mark Zacharias, Assistant Deputy Minister, B.C. Ministry of Environment (MOE)
- Bonnie Antcliffe, Regional Director Pacific Region, Fisheries and Oceans Canada (DFO)

The Board is supported by four Technical Committees, one for wildlife projects, and three for fish projects (Lower Mainland, Southern Interior and Vancouver Island). The primary roles of the Technical Committees are to: support the

development of strategic plans; provide advice on the effective implementation of action plans; and provide fair and objective technical review, evaluation and ranking of fish and wildlife project proposals for the Annual Operating Plan.

In each region, program management and operations are implemented by a full-time Program Manager who manages all aspects of program delivery including contribution agreements and contracts, supported by a Program Administrator who supports the FWCP in all three regions (Coastal, Columbia, Peace).

## 2. FWCP'S STRATEGIC FRAMEWORK

The FWCP uses a strategic framework to guide overall planning for compensation investments and support our vision of *“Thriving fish and wildlife populations in watersheds that are functioning and sustainable.”* Our vision aims to create an effective program to support the maintenance of healthy fish and wildlife populations in basins significantly altered by hydroelectric development – recognizing that like-for-like replacement is not always possible.

### FWCP STRATEGIC FRAMEWORK

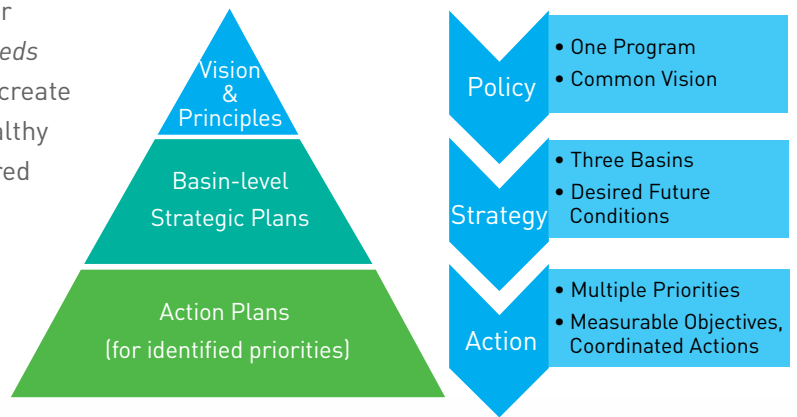


Figure 2.1: Relationship between the FWCP Strategic Framework, Watershed and Action Plans.

## VISION

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

## MISSION

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



## 2.1 STRATEGIC OBJECTIVES

The strategic objectives for the Fish and Wildlife Compensation Program reflect a synthesis of the core objectives and mandates of the 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.

*Photos: Ecosystem restoration is an important type of work for the FWCP such as this planting project near Coquitlam River*

### Sustainable Use

- Maintain or improve opportunities for sustainable use, including harvesting and other uses. This objective focuses on the program's 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, MOE's shared stewardship goal and the approach of DFO's Stewardship and Community Involvement Program. This recognizes the importance of engaging aboriginal communities, local stakeholders, and other interest groups to contribute toward making good decisions and delivering effective projects.



## 2.2 STRATEGIC PLANS

Strategic **Watershed Plans** were developed in 2010-11 for each FWCP-Coastal watershed with input from partner agency staff and the communities where the Program operates. The Watershed Plans set out the strategic direction for the FWCP-Coastal and also describe the specific watershed settings and general impacts that the creation of the generation facilities (construction of the dams, the development of hydro-power, and alterations in the hydraulic regimes of the systems) had on ecosystems, fish and wildlife habitat.

For each of the nine larger watersheds, three **Action Plans** have also been developed to accompany the Watershed Plans for topic areas: Salmonids, Riparian / Wetlands and Species of Interest, which were identified through the planning process as key priorities in the region. For the five smaller watersheds, the Watershed Plans each contain priority action tables for fish and wildlife species.

Each year, as the FWCP-Coastal Board reviews and approves the **Annual Operating Plan**, alignment with the strategic priorities identified in the Watershed Plans and Action Plans is a key consideration.

The Plans are posted at the FWCP website at [www.fwcp.ca](http://www.fwcp.ca), and each year, applicants are asked to review the relevant Plan and identify how their proposed project aligns with and supports its objectives.

**FWCP reports are available on the Ministry of Environment's online data management systems. To search for a report of interest, please visit [www.env.gov.bc.ca/clir](http://www.env.gov.bc.ca/clir).**

# 3. REPORT ON PERFORMANCE

## 3.1 FINANCIAL REPORT

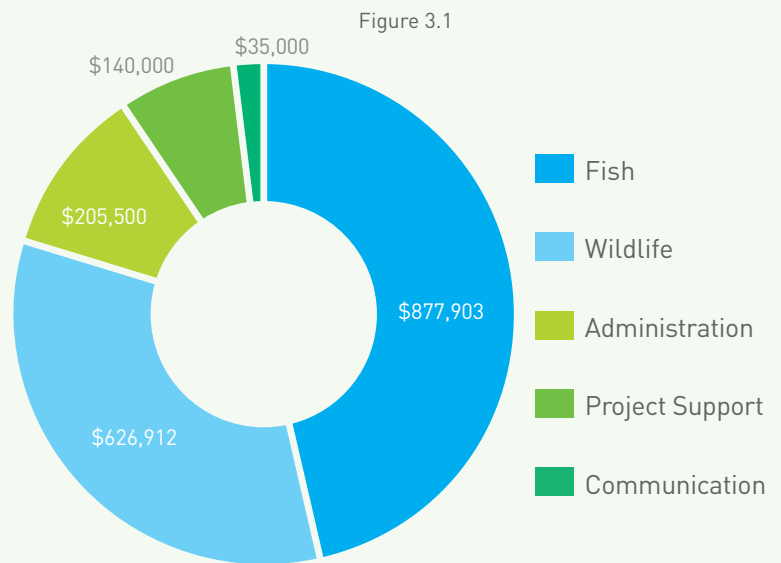
The FWCP is funded by BC Hydro through a notional fund which is indexed to the consumer price index. The FWCP fiscal year runs from April through to March of the following year. For F14, the annual funding budget from the notional fund for FWCP-Coastal was \$1.966M.

Each year, current annual funding budget from the notional fund is allocated either in full or in part by the Board toward fish and wildlife projects, administrative costs (e.g. salaries, safety, Board and technical review committee expenses) and project support and communication costs (e.g. program evaluation, communications support and advertising). These allocations form the Annual Operating Plan. Any unallocated funds are carried forward (“unspent surplus budget”), and are available for new spending in future fiscal years.

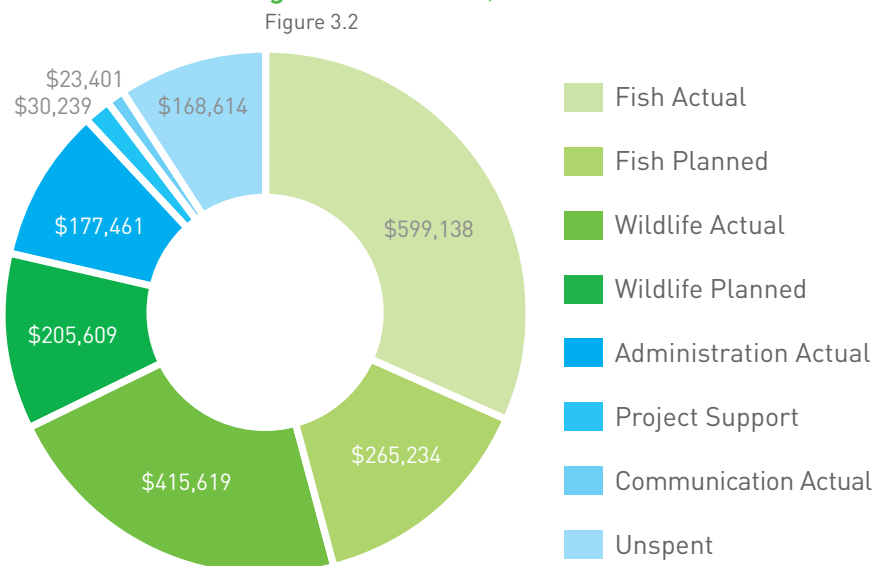
### Approved Budget

For F14, the Board approved a budget of \$2.004 million, primarily toward projects related to fish and wildlife projects. The Board was able to approve slightly more than the F14 funding budget coming from the notional fund by drawing on funds from the unspent surplus budget. Figure 3.1 illustrates the approved F14 budget at the start of the fiscal year. A complete project list for F14 is found starting on page 8. Administrative costs made up approximately 16% of the total budget and included all office-related expenditures (support staff, Board and Technical Committee costs and office supplies that directly support the Program). Project support costs in F14 included funding for an assessment of previous years’ project effectiveness (Evaluation Plus).

F14 Approved Budget at April 1, 2013



F14 Actual Budget at March 31, 2014



### Year-end Accounting

Program expenditures up to fiscal year-end March 31, 2014 are illustrated in Figure 3.2 and listed in Table 3.1. It should be noted that Figure 3.2 represents a “snapshot” in time of actual and planned payments made related to F14 projects. For the FWCP, each year, allocated project funding is not fully paid by year end due to the seasonal nature of field-based projects and the fact that many project proponents are unable to submit their final project reports for approval by March 31 fiscal year end. The F14 allocated funds not yet paid by March 31, 2014 are labelled “Planned” in Figure 3.2 and Table 3.1.

In addition, it is not uncommon for projects to come in under budget (“Unspent” in Figure 3.2). Any funds not spent during the fiscal year will be carried forward as unspent surplus budget and made available for new project spending in future fiscal years. Over time, as additional projects remaining in the “Planned” category come in under budget, the Unspent amount for F14 may increase.

During F14, one approved wildlife project was deferred for implementation in F15 due to poor field conditions from late snow melt in the spring of 2013. Those funds (\$111k) will be carried forward in entirety and spent next year. In addition, one approved fish project did not proceed; those funds (\$12k) were added back to the Unspent fund budget for reallocation in a future year.

Table 3.1: F14 Actual Budget at March 31, 2014

Fund Category	FY14 Approved Budget	Paid up to 31-Mar-13	Planned Payments <sup>1</sup>	Unspent Funds <sup>2</sup>
Administration	\$301,909.00	\$147,868	\$71,871	\$0
Wildlife	\$2,360,377.00	\$1,309,739	\$1,029,630	\$0
Communications	\$140,360.00	\$69,169	\$55,720	\$0
Fish	\$2,390,162.00	\$1,736,244	\$631,987	\$0
<b>TOTAL</b>	<b>\$5,192,808.00</b>	<b>\$3,263,020</b>	<b>\$1,789,208</b>	<b>\$0</b>

Note 1: Planned payments represents expected invoices for approved, ongoing projects that have not yet submitted final reports by March 31st

Note 2: Unspent funds are carried forward and available for next fiscal year

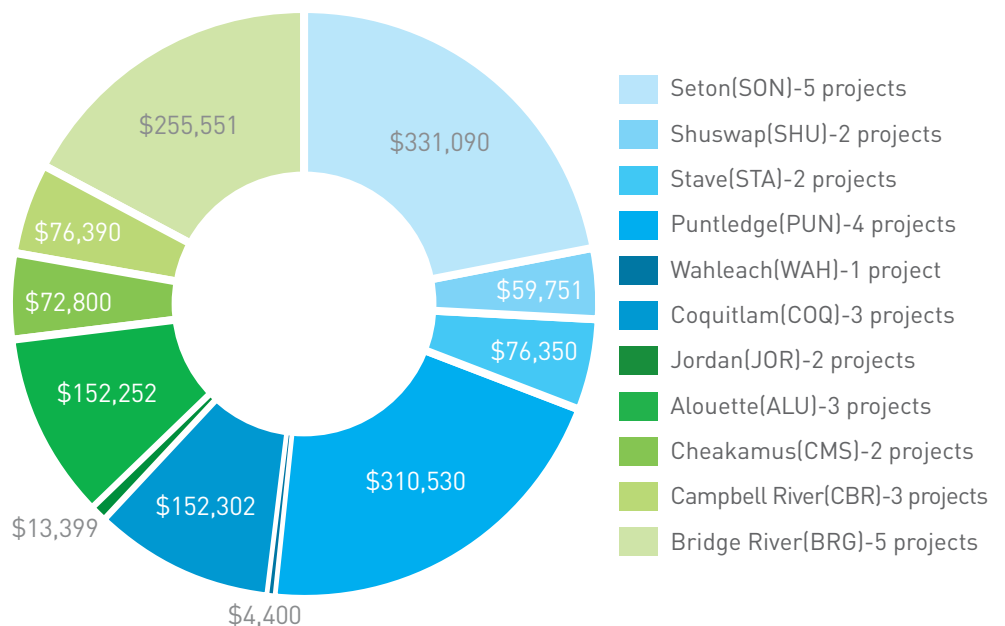
### Approved Budget Allocation by Type

The approved F14 budget for FWCP-Coastal included \$705k on Wildlife-related projects and \$913k on Fish-related projects (total \$1,618M). These projects were distributed across the watersheds in which the Program operates as shown in Figure 3.3. During F14, no projects were funded in the Ash, Clayton Falls, Falls River, Wahleach and Stave Watersheds. The Board is interested in evaluating potential gaps in funding by setting priorities for funding during future application intakes.

Most proponents apply for funding from FWCP for a portion of overall project costs, with in-kind services and/or equipment and other sources of funding providing leverage of the FWCP investments. In F14, approximately \$1.313M in in-kind or other funding brings the total value of projects receiving FWCP-Coastal funding to \$2.906M.

### Distribution of F14 FWCP-Coastal Funds across regional Watersheds

Figure 3.3





## 3.2 STRATEGIC PLAN ACCOUNTABILITY

As noted in Section 2.2, alignment with the strategic priorities identified in the Watershed Plans and Action Plans is a key consideration for the Technical Review Committees and Board during the project evaluation and selection process.

Tables 3.1 and 3.2 provide a listing of the projects selected for funding during F14, including alignment with the Watershed and Action Plans.

## 3.3 EVALUATION PLUS – PROJECT EFFECTIVENESS

Given the fundamental linkage between the FWCP Watershed and Action Plans and the projects that are selected and delivered, it is important to have specific measures of project performance to understand how the funded works and studies are addressing key program objectives. During F14, FWCP-Coastal retained LGL Limited (LGL) to conduct an “Evaluation Plus” review of a sample of eleven fish and wildlife projects that had been delivered during F12 (2011

project year) and F13 (2012 project year). Evaluation Plus is an initiative to provide “biological auditing” of FWCP’s investments in habitat restoration on an annual basis.

Eight of the projects reviewed were habitat- or species-based enhancement projects, and three were classified as research and information. In general, LGL concluded that it is apparent that proponents are generally meeting their deliverable obligations and delivering high quality

products and that most of the FWCP projects evaluated from 2011 and 2012 are providing the biological benefits as proposed.

A summary of key findings is presented in Table 3.2. Each year, results from Evaluation Plus will be shared with the project proponents to foster ongoing communications, and provide project-specific information to the FWCP- Coastal Board and Technical Committees.

*Photos: Open and shaded tanks improve salmon productivity at Qualicum Hatchery*



### 3.4 F14 List of Projects and Grant Recipients - Fisheries

Fish Projects F14: (April 2013 - March 2014)	Lead Applicant	Region	FWCP Investment	Total Project Value	Project Type*	Action Plan	Priority
13.ALU.02 Synthesis of Alouette Lake Sockeye re-anadromization Environmental and Technical Feasibility Studies	Alouette River Management Society	LM	\$ 20,977.60	\$ 31,541.60	RI	ALU Salmonid	1
13.ALU.03 Genetic Parental Assessment to Measure Smolt Production from Anadromous Adult Sockeye Transplanted into Alouette Reservoir	DFO	LM	\$ 69,089.00	\$ 116,689.00	RI	ALU Salmonid	1 indirect
13.ALU.04 <sup>1</sup> Lower Mainland Coastal Cutthroat Adult Trout Salmon	British Columbia Conservation Foundation	LM	\$ 12,000.00	\$ 48,750.00	HB	ALU Salmonid	n/a
13.CBR.01 Big Tree Side Channel Performance Monitoring-5 year post construction	British Columbia Conservation Foundation	VIG	\$ 18,475.60	\$ 23,475.60	EM	CBR Salmonid	1
13.CBR.02 Development of a Bulk Gravel Loading Strategy for Elk Falls Canyon	British Columbia Conservation Foundation	VIG	\$ 9,782.03	\$ 9,782.03	HB, RI	CBR Salmonid	1
13.CBR.04 Assessment of the Distribution of 2013 Brood Coho Adult Migration Below and Above the Salmon River Diversion Dam	Campbell River Salmon Foundation	VIG	\$ 30,866.00	\$ 49,098.50	RI	CBR Salmonid	1
13.CBR.05 Investigating the Early Marine Biology of Juvenile Hatchery and Wild Salmon in and near the Campbell River Estuary	Campbell River Salmon Foundation	VIG	\$ 4,725.00	\$ 4,725.00	RI	CBR Salmonid	2
13.CBR.06 Campbell River Spawning Gravel Construction Site 7-III, 2013	Campbell River Salmon Foundation	VIG	\$ 123,040.00	\$ 159,140.00	HB	CBR Salmonid	1
13.CMS.01 Cheakamus River IR 11 Floodplain Restoration 2012/2013 (yr 1 of 2)	Squamish River Watershed Society	LM	\$ 77,371.50	\$ 119,971.50	HB	CMS Salmonid	1
13.COQ.01 Archery and Oxbow Project Restoration	North Fraser Salmon Assistance Society	LM	\$ 90,573.60	\$ 126,139.60	HB	COQ Salmonid	1
13.JOR.01 Feasibility Study for Sidechannel Development on the East Side of Reach 1 of the Jordan River	D. Burt and Associates	VIG	\$ 4,944.00	\$ 5,844.00	HB, RI	JOR Small Watershed	priority topic
13.JOR.02 Assessment of Gravel Quantity/Quality/Stability and Stranding Fish Risks in Reach 1 of the Jordan River	D. Burt and Associates	VIG	\$ 4,986.40	\$ 5,886.40	RI	JOR Small Watershed	priority topic
13.PUN.02 Courtenay Airport Lagoon Dike Breach Planning (yr 2 of 4)	Comox Valley Project Watershed Society	VIG	\$ 33,464.00	\$ 66,280.00	HB	PUN Salmonid	2
13.PUN.03 Evaluation of Natural and Hatchery Summer Chinook and Coho Production in the Upper Puntledge Watershed (yr 3 of 5)	Comox Valley Project Watershed Society	VIG	\$ 99,500.50	\$ 112,810.50	EM	PUN Salmonid	2
13.PUN.04 Assessment of Homing Behavior of 3 Year Old Puntledge Summer Chinook Adult Returns from Lake and River Imprinted Juveniles (yr 3 of 4)	Comox Valley Project Watershed Society	VIG	\$ 58,734.50	\$ 98,774.50	EM	PUN Salmonid	1
13.PUN.05 Assessment of Comox Lake Carrying Capacity and Coho-cutthroat Interactions in the Cruickshank and Upper Puntledge River Systems	Courtenay and District Fish and Game Protective Association	VIG	\$ 70,125.00	\$ 129,751.60	RI	PUN Salmonid	1
13.SHU.01 Wiley Dam Feasibility Study	Whitevalley Community Resource Centre	SI	\$ 48,460.00	\$ 74,510.00	RI	SHU Salmonid	1
13.SON.01 Gates Creek Salmon Project	Lillooet Tribal Council	SI	\$ 135,949.00	\$ 169,949.00	RI	BRG-SON Salmonid	1
<b>TOTAL</b>			\$ 913,063.73	\$ 1,353,118.83			

**\*Project Types:**

RI = Research and Information Acquisition  
 HB = Habitat Based Action  
 SB = Species Based Action

EM = Evaluation & Monitoring  
 LA = Land Acquisition

**Note 1:** 13.ALU.04 did not proceed; funds will be reallocated in future years.

### 3.4 F14 List of Projects and Grant Recipients - Wildlife

Wildlife Projects: F14 (April 2013 - March 2014)	Lead Applicant	Region	FWCP Investment	Total Project Value	Project Type*	Action Plan	Priority
13.W.ALU.01	Identify, Conserve and Restore Populations of Priority Species at Risk and Their Associated Habitats within the Alouette River Watershed (yr 2 of 5)	LM	\$ 67,320.00	\$ 181,120.00	RI, HB	ALU Species of Interest and Riparian	High, 1
13.W.BRG.01 <sup>2</sup>	Grizzly Bear Habitat Selection within the South Chilcoot GBPU (yr 1 of 2)	SI	\$ 111,275.00	\$ 187,965.00	RI	BRG-SON Species of Interest	High no link to action table
13.W.BRG.02	Mule Deer Buck Migrations and Habitat Use in the Bridge River, British Columbia, (yr 3 of 4)	SI	\$ 29,680.00	\$ 104,230.00	RI	BRG-SON Species of Interest	High
13.W.BRG.04	Fisher Artificial Reproductive Den Box Study (yr 1 of 2)	SI	\$ 35,280.00	\$ 81,910.00	SB, RI	BRG-SON Species of Interest	High
13.W.CBR.01	V1 Marmot Buttle Lake Supplementation Project (one more year after this one)	V/G	\$ 72,600.00	\$ 218,350.00	SB	CBR Species of Interest	High
13.W.CBR.02	Identifying Priorities for Riparian and Wetland Habitat Protection	V/G	\$ 39,270.00	\$ 47,770.00	RI	CBR Riparian and Wetlands	1 and 2
13.W.CBR.03	Campbell River Bat Project - Bat House Monitoring	V/G	\$ 2,868.50	\$ 3,330.50	EM	CBR Watershed	n/a
13.W.COM.01	Surveys of Species at Risk and Their Associated Habitats in the Clowhom Watershed (yr 1 of 4)	LM	\$ 75,000.00	\$ 204,000.00	RI	COM Small Watershed	priority topic
13.W.COQ.01	Coquiltam River Riparian Planting	LM	\$ 13,527.64	\$ 14,004.64	HB	COQ Riparian and Wetlands	Category 1 habitat
13.W.COQ.02	Species at Risk Conservation and Stewardship in the Coquiltam Watershed	LM	\$ 46,150.00	\$ 130,150.00	RI	COQ Species of Interest	1
13.W.PUN.01	Habitat Restoration and Enhancement of Puntledge Fish Hatchery	V/G	\$ 4,457.00	\$ 4,937.00	RI	PUN Riparian and Wetlands	2
13.W.SHU.01	Assessment and Habitat Management for Bobolinks in the Shuswap River Drainage	SI	\$ 30,485.00	\$ 37,805.00	SB	SHU Species of Interest	High
13.W.SON.01	Seton River Corridor Conservation and Restoration Project-Phase 2 (yr 2 of 6)	SI	\$ 143,070.00	\$ 317,960.00	HB, SB	SON Salmomid; Riparian and Wetlands; Species at Risk	1, 2
13.W.SON.02	Whitebark Pine Restoration in Wildfire Areas	SI	\$ 9,130.00	\$ 19,630.00	SB	BRG-SON Species of Interest	High
<b>TOTAL</b>			\$ 680,113.14	\$ 1,553,162.14			

**\* Project Types:**

- RI = Research and Information Acquisition
- HB = Habitat Based Action
- SB = Species Based Action

- EM = Evaluation & Monitoring
- LA = Land Acquisition

**Note 2:** 13.W.BRG.01 was deferred to next year. Funds will be used for the project starting in F15

### 3.5 F14 Evaluation Plus Project Review Summary

PROJECT #	PROJECT TITLE AND LEAD PROPONENT	SUMMARY FINDINGS
12.PUN.03	<p><b>Puntledge River Hatchery Summer Chinook Rearing Consolidation Project</b></p> <p>Comox Valley Project Watershed Society</p>	<p>This project decommissioned the Upper Puntledge Hatchery facility and installed 12 new rearing tanks and a new aeration tower and associated hatchery infrastructure to accommodate the rearing of 1.25 million summer Chinook fry.</p> <p>The project met specific objectives related to improving survival to spawn of adult summer Chinook and reducing risks to fish while at the hatchery; eliminating operating costs and liability for BC Hydro; and allowing DFO to implement new enhancement strategies in a more cost-effective manner. The fourth objective, to reduce hatchery operating costs, was partially met.</p> <p>The project addressed the Puntledge River Watershed Salmonid Action Plan objective of supporting hatchery activities focused on enhancing the earliest returning adults of the summer Chinook run.</p>
11.CBR.05	<p><b>Campbell River (Elk Falls Canyon) Spawning Gravel Placement</b></p> <p>British Columbia Conservation Foundation</p>	<p>This project placed 98.9 m<sup>3</sup> of gravel in the Elk Falls Pool tailout to increase spawning habitat area for summer and winter Steelhead, Chinook, Coho, and Chum.</p> <p>The project met three specific project objectives: to increase the quantity/quality of spawning gravel in the Elk Falls Canyon reach; increase the freshwater productivity of the system's remnant populations of summer and winter Steelhead stocks as well as Chinook, Coho, and Chum salmon; and increase abundance of gravel in Elk Falls Canyon to levels capable of supporting all salmonids species occurring in this reach.</p> <p>The project addressed the Campbell River Watershed Salmonid Action Plan objective of continuing gravel placements in Elk Falls Canyon. Since placement in 2011, the gravel has remained in place with no evidence of bedload transport downstream at discharges up to 100 m<sup>3</sup>/s. Continued monitoring of gravel in the Elk Falls Canyon area every five years and after major floods in the canyon is recommended in order to determine the rate and pattern of gravel movement.</p>
11.SHU.04	<p><b>Habitat Complexing (Pool Creation) in Bessette Creek - Phase 2</b></p> <p>Whitevalley Community Resource Centre Society</p>	<p>This project is a continuation of efforts initiated by Whitevalley Community Resource Centre and Secwepemc Fisheries Commission in 2010 to develop pool habitat and thermal refuge areas in severely aggraded areas. Works in 2011 involved the installation of 25 habitat structures and three infiltration galleries, and gravel bar stabilization along a 575 m stretch of Bessette Creek near Lumby.</p>

PROJECT #	PROJECT TITLE AND LEAD PROPONENT	SUMMARY FINDINGS
		<p>The project met or partially met objectives to restore habitat forming processes through small scale complexing and riparian planting; and collect and redirect some of the stream flow being lost to groundwater back into the main flow. June 2013 floods in Bessette Creek damaged constructed bank stabilization and flow deflector structures and caused the transport of high bedloads of gravel and cobble. The constructed instream works were, at best, adequately meeting physical and biological performance objectives.</p> <p>The project addressed the Middle Shuswap Watershed Salmonid Action Plan objective of implementing riparian improvements including bank stabilization, fencing, armouring, and re-vegetation. Remedial measures to repair boulder groyne structures are recommended but this work should be preceded by and contingent upon the findings from further assessment of the upper watershed to determine locations and vulnerabilities of potential sediment (i.e., sand and gravel) sources, an examination and prediction of probable channel characteristics and processes within the rehabilitation reach, and the likelihood of achieving functional success from installation of the instream structures.</p>
11.W.SON.01	<p><b>Powerhouse Foreshore Restoration Project - Phase 4</b></p> <p>Lillooet Naturalist Society</p>	<p>This project was the continuation of a restoration program along the Fraser River at a site adjacent to the Seton Powerhouse. In 2011, compacted ground was complexed, invasive vegetation was removed and areas were re-planted with native vegetation. Wildlife monitoring of the site occurred to document species diversity and abundance.</p> <p>The project met or partially met most of the 10 project objectives, which included both on-the-ground enhancement such as riparian planting and invasive weed removal, as well as a high level of community and partner involvement. One objective was deferred to a future project year.</p> <p>The project addressed sub-objective 3 of the Bridge-Seton Riparian and Wetland Action Plan by restoring degraded riparian habitat. The restoration areas will require ongoing monitoring and management for the next several years until the native vegetation becomes established and out-competes invasive species.</p>
12.W.COQ.01	<p><b>Coquitlam River Riparian Planting</b></p> <p>Watershed Watch Salmon Society and Kwikwetlem First Nation</p>	<p>This project involved the planting of trees and shrubs around riparian areas in Sheeps Paddock (Colony Farm Park) and around the Oxbow Pond in Coquitlam River Park in 2012. Some of the planting areas were mowed and rototilled prior to planting. Overall, the number of trees and shrubs planted were less than planned resulting in project objectives being partially met. Areas that were mowed and rototilled</p>

PROJECT #	PROJECT TITLE AND LEAD PROPONENT	SUMMARY FINDINGS
		<p>are performing better than those that weren't. Further, three areas received additional mowing in 2013 to suppress the amount of reed canarygrass, which significantly improved the conditions. The project was assessed to be addressing sub-objective 3 of the Coquitlam/ Buntzen Watershed Riparian and Wetland Action Plan by restoring degraded riparian habitat. Reed canarygrass is the dominant invasive species on the site and ongoing management of it will be required if the restoration prescriptions are to be effective.</p>
12.W.CBR.01	<p><b>VI Marmot Buttle Lake Supplementation Project</b></p> <p>Marmot Recovery Foundation</p>	<p>This project provided funding for the Vancouver Island Marmot re-introduction program that has been ongoing since 2003. In 2012, the major components of this work involved the testing of a new release strategy with the expectation of improving overwinter survival of marmots. Most project objectives were assessed as partially met due to the lack of information presented in the 2012 report. However, communication with the recovery team and a review of the 2013 report provided relevant information for determining the success of the new release strategy. The Vancouver Island Marmot is identified as a species of interest in the Campbell River Watershed Species of Interest Action Plan and support of the re-introduction program by the FWCP is meeting the objective of maintaining or improving the status of this species.</p>
12.ALU.04	<p><b>Coniagas Spawning and Rearing Channel</b></p> <p>Alouette River Management Society</p>	<p>This project is a continuation of efforts of Alouette River Management Society and DFO to increase off-channel habitat along the south Alouette River for Coho and Rainbow Trout. Works in 2012 involved the creation of 1470 m<sup>2</sup> of off-channel rearing habitat and 1397 m<sup>2</sup> of riparian area. The Coniagas Channel project met five specific project objectives related to conserving, improving and enhancing fish, riparian and wetland habitats as well as working with private landowners.</p> <p>The project addressed the Alouette Watershed Salmonid Action Plan objective of improving habitat and rearing capacity for Chinook and Coho. Further monitoring is recommended to determine if water quality is limiting habitat use by salmonids.</p>
11.SFN.01	<p><b>Stave River Ruskin Channel Project (11.SFN.01)</b></p> <p>Fraser Valley Watersheds Coalition</p>	<p>This project repaired the spillway along the left bank of the Stave River Ruskin Channel at the recreation area to reduce the risk of Chum spawning gravels being eroded from the channel. Also, riprap was placed along the banks of the box culvert to minimize the risk of culvert blockage by cobbles and small boulders. The works in 2011</p>

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		<p>by DFO, the Fraser Valley Regional District, and the Fraser Valley Watersheds Coalition involved the creation of 1470 m<sup>2</sup> of off-channel rearing habitat. The project met three specific project objectives related to habitat.</p> <p>The project addressed the Stave Watershed Salmonid Action Plan objective of upgrading existing spawning areas for Chum, which will also benefit Pink, Chinook, and possibly Steelhead, Rainbow and Cutthroat. Further monitoring is recommended to determine if water quality is limiting habitat use by salmonids.</p>
11.PUN.04	<p><b>Puntledge River Chinook and Coho Smolt/fry Migration Assessment</b></p> <p>Comox Valley Project Watershed Society</p>	<p>This project was an assessment by Comox Valley Project Watershed Society to determine smolt/fry migration success at the BC Hydro Puntledge Diversion Dam. The project met five specific project objectives, related to migration timing, enumeration and patterns, and screen efficiency.</p> <p>The project addressed the Puntledge River Watershed Salmonid Action Plan objectives of improving the understanding of current limitations to upstream and downstream fish passage throughout the Puntledge system, primarily for Steelhead and Chinook, for both juveniles and adults, and assessing the efficacy of passage throughout the Puntledge system.</p>
12.W.ALU.01	<p><b>Identify, Conserve and Restore Populations of Priority Species at Risk and Their Associated Habitats within the Alouette River</b></p> <p>British Columbia Conservation Foundation</p>	<p>This project was the second year of a proposed five-year project to develop best management practice guidelines for species-at-risk in the Alouette Watershed. In 2012, further work on identifying species-at-risk and their habitat continued. The majority of project objectives were met, and overall, 18 new occurrences of species-at-risk were documented and restoration activities commenced at five sites within the watershed.</p> <p>The project is meeting objective 1 of the Alouette Watershed Species of Interest Action Plan by maintaining or improving the status of species-at-risk in the system. Ongoing monitoring and restoration activities at additional sites is required to ensure habitat remains available and is utilized by species of interest, particularly Pacific Water Shrew, Western Painted Turtle and Great Blue Heron.</p>

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12.W.BRG.02	<p data-bbox="302 233 602 380"><b>Grizzly Bear Recovery Habitat Action within the Bridge River Restoration Area</b></p> <p data-bbox="302 415 610 527">Ministry of Forests, Lands &amp; Natural Resource Operations</p>	<p data-bbox="670 233 1497 659">This project modeled important habitat types for Grizzly Bear in the Stein-Nahatlatch and South Chilcotin Grizzly Bear Population Units. Spring foraging habitat, whitebark pine foraging habitat and summer/fall berry foraging habitats were mapped and ground-truthed. Some of the project objectives were met, but others were only partially met or not determined as they were not specifically addressed in the project report. This project took some important steps in identifying grizzly bear foraging habitats that will require management actions in order to promote grizzly bear productivity. Further actions to restrict human access to the identified foraging areas would then meet sub-objective 2 of the Bridge-Seton Species of Interest Action Plan.</p>