



# **Ministry of Land, Water and Resource Stewardship**

## **Estimates Binder April 2022**

# ESTIMATES BINDER FOR MINISTER JOSIE OSBORNE APRIL 2022

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Budget 2022 Summary

**Recommend Response:**

- The ministry budget of \$92M annually is the result of transfers from existing ministries of \$82M and Budget 2022 net new funding of \$10M to increase capacity in the new ministry to achieve its mandate.
- Functions and budget transferring to the ministry include:
  - land use policy and planning
  - watershed, fisheries and coastal policy and planning
  - implementation of the Declaration on the Rights of Indigenous Peoples Act across the natural resource sector
  - integrated information, innovation, and technology
  - corporate services for the natural resource sector
  - cross-sector governance and solutions projects
- The budget largely represents the salary and benefits of the ~1200 staff (shifting at points in time) into the ministry.

**Key Facts:**

#### Ministry Budget by Core Business

	Ministry Transfers (000s)	Budget 22 Increase (000s)	2022/23 Estimates (000s)
Land Use Policy and Planning and Terrestrial Ecosystems	42,031	1,032	43,063
Information, Innovation and Technology	21,828	93	21,921
Executive and Support Services	7,818	5,207	13,025
Watershed, Aquatic Systems, Fisheries and Coastal Policy and Planning	5,998	833	6,831
Natural Resource Sector Secretariat	3,836	1,497	5,333
Reconciliation and Natural Resource Sector Policy	497	1,338	1,835
<b>Ministry Operations sub-total</b>	<b>82,008</b>	<b>10,000</b>	<b>92,008</b>

## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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Pursuant to Minister of State Cullen's mandate letter commitment, the Land and Natural Resource Operations Secretariat undertook an organizational effectiveness review and recommended that the three goals of supporting economic activity, environmental sustainability, and reconciliation with Indigenous peoples can be better achieved through restructuring and the creation of a new ministry.

The improved land, water and resource stewardship policy and regulatory frameworks will facilitate land-based decision-making leading to shared prosperity on the land-base and a strong sustainable economy.

Creation of a new ministry and resulting realignments will impact the Ministries of: Agriculture and Food; Energy, Mines and Low Carbon Innovation; Environment and Climate Change Strategy; Forests; Tourism, Arts, Culture and Sport; and Jobs, Economic Recovery and Innovation.

The new ministry will provide greater focus on sustainable economic growth, environmental sustainability and in partnership with the natural resource ministries, advance inclusive resource management with Indigenous peoples.

The increased capacity within the new ministry will be focused on modernizing and updating policy frameworks to match the evolving priorities such as environmental needs (e.g., impacts of climate change and conservation objectives) and reconciliation (e.g., the UN Declaration on the Rights of Indigenous Peoples).

**Date Prepared/Revised: April 28, 2022**

**Ministry Executive Sponsor:**

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**Alternate Contact for Issue:**

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Budget Transfer Summary of Sector Reorganization

**Recommend Response:**

- LWRS received budget and staff transfers from five ministries to reflect the reorganization of functions with the Natural Resource Sector.
- LWRS base budget consists of \$82M of existing budget transfers and \$10M provided in Budget 2022 to increase strategic policy capacity for land, water, and stewardship priorities.

**Key Facts:**

**Transfers by Ministry**

<b>Inter-Ministry Transfers to LWRS - \$82.008M:</b>
\$55.535M from (former) Forests, Lands, Natural Resource Operations and Rural Development
\$23.733M from Environment and Climate Change Strategy
\$1.304M from Indigenous Relations and Reconciliation
\$0.848M from (former) Agriculture, Food and Fisheries
\$0.588M from Energy, Mines and Low Carbon Innovation

**Transfers by Core Business**

	<b>Budget (\$000s)</b>	<b>FTEs</b>
<b>Information, Innovation and Technology</b>		
GeoBC	5,073	51
IITD Divisional Budget	7,070	256
Regional Geospatial Resources	3,006	35
Knowledge Management Branch (ENV)	3,543	48
Groundwater Hydrometrics	3,136	5
<b>Division Sub-Total</b>	<b>21,828</b>	<b>395</b>

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### Ministry of Land, Water and Resource Stewardship

<b>Watershed, Aquatic Systems, Fisheries and Coastal Policy and Planning</b>		
Assistant Deputy Minister's Office	485	4
Water Protection & Sustainability	4,042	35
Marine & Coastal Resources	695	7
Fish, Aquaculture & Wild Salmon Policy	776	9
<b>Division Sub-Total</b>	<b>5,998</b>	<b>55</b>
<b>Reconciliation and Natural Resource Sector Policy</b>		
First Nation Consultation System	497	5
<b>Division Sub-Total</b>	<b>497</b>	<b>5</b>
<b>Land Use Policy and Planning and Terrestrial Ecosystems</b>		
Ecosystems Branch	4,031	50
Assistant Deputy Minister's Office	510	3
Regional Land Use and Ecosystems Staffing	26,736	226
Environmental Stewardship Initiative	540	6
Resource Planning and Provincial Stewardship	3,309	35
Species at Risk Coordination	6,905	13
<b>Division Sub-Total</b>	<b>42,031</b>	<b>333</b>
<b>Natural Resource Sector Secretariat*</b>		
ENV Economics	258	2
FrontCounter BC	3,494	13
NRS Governance Secretariat	84	2
<b>Division Sub-Total</b>	<b>3,836</b>	<b>17</b>
<i>*Includes Sector Solution Teams</i>		
<b>Executive and Support Services</b>		
Minister's Office	290	3
Corporate Services	4,137	333
Ministry Overheads	3,391	0
<b>Division Sub-Total</b>	<b>7,818</b>	<b>336</b>
<b>Total transfers</b>	<b>82,008</b>	<b>1,141</b>
<b>New Funding</b>	<b>10,000</b>	<b>99</b>
<b>Ministry Estimates Budget</b>	<b>92,008</b>	<b>1,240</b>

**Date Prepared/Revised:** April 28, 2022

**Ministry Executive Sponsor:**

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# **Ministry of Land, Water and Resource Stewardship**

## **Vote 38: Ministry Operations**

**FINAL**  
**April 14 2022**

**MINISTRY OF LAND, WATER AND RESOURCE STEWARDSHIP**  
**2022/23 Budget Highlights**

**OPERATING BUDGET: (\$92.008 M - an increase of \$10.0M M or 12.2 % from 2021/22 Restated)**

The Ministry operating budget changes include:

In Plan Changes - \$0.0 M

- o As the ministry was created in fiscal 2022/23, there are no previous in plan change amounts.

Inter-Ministry Transfers - \$82.008M :

- o \$55.535M from Forests, Lands, Natural Resource Operations and Rural Development
- o \$23.733M from Environment and Climate Change Strategy
- o \$1.304M from Indigenous Relations and Reconciliation
- o \$0.848M from Agriculture, Food and Fisheries
- o \$0.588M from Energy, Mines and Low Carbon Innovation

Add to Plan Changes - \$10.000 M :

- o \$10.000M approved budget lift for Natural Resource Sector Restructuring

**CAPITAL BUDGET: \$0.245 M (an increase of \$0.245M or 100% from 2021/22 Restated)**

- o **Ministry Capital budgets are estimated on an annual basis based on requirements submitted and prioritized across government**

Total Plan Changes - \$0.2450 M:

- o \$0.245 M for one time lift to purchase office furniture and equipment for new staff

**FTEs and Staffing**

**FTEs** - Continue to be budgeted at a summary level for the Province.

**Staff** - A total of 1,189 staff have been transferred to the new ministry effective April 1, 2022.

**Ministry of Land, Water and Resource Stewardship  
2022/23 Budget Briefing**

**THREE YEAR BUDGET CHANGES FROM FEBRUARY 2021 PLAN**

OPERATING				
\$000s				
	2021/22 Estimates	2022/23 Estimates	2023/24 Plan	2024/25 Plan
<b>A April 2021 Plan</b>				
Vote 38 - Ministry Operations				
<b>Total April 2021 Plan</b>	-	-	-	-
<i>Year-to-year change in 2021/22 Service Plan</i>		-	-	-
<b>B Inter Ministry Transfers (See Inter-Ministry worksheet for details)</b>				
From Forests, Lands, Natural Resource Ops and Rural Development	55,535	55,535	55,535	55,535
From Environment and Climate Change Strategy	23,733	23,733	23,733	23,733
From Indigenous Relations and Reconciliation	1,304	1,304	1,304	1,304
From Agriculture, Food and Fisheries	848	848	848	848
From Energy, Mines and Low Carbon Innovation	588	588	588	588
<b>Total Inter Ministry Transfers</b>	82,008	82,008	82,008	82,008
<b>C Budget Lifts and Reductions</b>				
TBS Decision - Natural Resource Sector Restructuring		10,000	17,060	17,060
<b>Total Budget Lifts and Reductions</b>	-	10,000	17,060	17,060
<b>Total Transfers and Adjustments</b>	<b>82,008</b>	<b>92,008</b>	<b>99,068</b>	<b>99,068</b>
<i>Change from 2022/23 Service Plan</i>	82,008	92,008	99,068	99,068
	2021/22 Restated Estimates	2022/23 Estimates	2023/24 Plan	2024/25 Plan
<b>D February 2022 Plan</b>				
Vote XX - Ministry Operations	82,008	92,008	99,068	99,068
<b>Total February 2022 Plan</b>	<b>82,008</b>	<b>92,008</b>	<b>99,068</b>	<b>99,068</b>
<i>Year-to-Year Change in 2022/23 Service Plan</i>		10,000	7,060	-
		12.2%	7.7%	-

Footnote(s):

Ministry of Land, Water and Resource Stewardship  
2022/23 Budget Briefing  
THREE YEAR BUDGET CHANGES FROM FEBRUARY 2021 PLAN

CAPITAL				
\$000s				
	2021/22 Estimates	2022/23 Estimates	2023/24 Plan	2024/25 Plan
<b>A April 2021 Plan</b>				
Vote 38 - Ministry Operations	-	-	-	-
<b>Total April 2021 Plan</b>	-	-	-	-
<i>Year-to-year change in 2021/22 Service Plan</i>		-	-	-
<b>B Intra-Ministry Transfers</b>				
	-			
	-			
<b>Total-Intra Ministry Transfers</b>	-	-	-	-
<b>Budget Lifts and Reductions</b>				
One time budget lift to purchase office furniture & equipment for new staff		245		
<b>Total Budget Lifts and Reductions</b>	-	245	-	-
<b>Total Transfers and Adjustments</b>	-	245	-	-
<i>Change from 2022/23 Service Plan</i>	-	245	-	-
	-	-	-	-
	2021/22 Restated Estimates	2022/23 Estimates	2023/24 Plan	2024/25 Plan
<b>C February 2022 Plan</b>				
Vote XX - Ministry Operations	-	245	-	-
<b>Total April 2021 Plan</b>	-	245	-	-
<i>Year-to-Year Change in 2021/22 Service Plan</i>		245	(245)	-
		-	(100.0%)	-

Footnote(s):

	FTES	2021/22	2022/23	2023/24	2024/25
Ministry Operations		0	0	0	0
FLNRO Transfers In					
T003266	51	5,073,000	5,073,000	5,073,000	5,073,000
T003267	38	3,819,000	3,819,000	3,819,000	3,819,000
T003269	296	40,920,000	40,920,000	40,920,000	40,920,000
T003296	333	4,137,000	4,137,000	4,137,000	4,137,000
T003295	3	290,000	290,000	290,000	290,000
T003292	0	1,296,000	1,296,000	1,296,000	1,296,000
	721	55,535,000	55,535,000	55,535,000	55,535,000
MIRR Transfers In					
T003270	5	497,000	497,000	497,000	497,000
T003273	0	807,000	807,000	807,000	807,000
	5	1,304,000	1,304,000	1,304,000	1,304,000
ENV Transfers in					
T003272	39	4,527,000	4,527,000	4,527,000	4,527,000
T003274	50	4,031,000	4,031,000	4,031,000	4,031,000
T003275	53	6,679,000	6,679,000	6,679,000	6,679,000
T003287	256	7,070,000	7,070,000	7,070,000	7,070,000
T003288	0	1,168,000	1,168,000	1,168,000	1,168,000
T003290	2	258,000	258,000	258,000	258,000
	400	23,733,000	23,733,000	23,733,000	23,733,000
EMLI Transfers in					
T003279	6	540,000	540,000	540,000	540,000
T003280	48	48,000	48,000	48,000	48,000
	54	588,000	588,000	588,000	588,000
AFF Transfers in					
T003281	9	776,000	776,000	776,000	776,000
T003282	0	72,000	72,000	72,000	72,000
	9	848,000	848,000	848,000	848,000
	1,189	82,008,000	82,008,000	82,008,000	82,008,000
TBS Adjustments					
NRS Restructuring			10,000,000	17,060,000	17,060,000
		82,008,000	92,008,000	99,068,000	99,068,000
BCOA as of Jan 21, 2022		82,008,000	92,008,000	99,068,000	99,068,000
Variance		0	0	0	0

## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Minister's Office Budget & GCPE Resources

***Recommend Response:***

- For 2022/23, the Minister's office budget is \$614,000.
- As this office was created in 2022/23, there is no opportunity for historical comparison of budget and actuals against prior years.
- The Minister's office budget is comparable to other minister's offices in the Natural resource sector. (ENV and EMLI)
- There is a salary and benefits budget of \$0.540M that supports five staff members in the Minister's Office:
  - Senior Ministerial Assistant (Roari Richardson)
  - Ministerial Assistant (Tristan Jones)
  - Executive Assistant (Jack Garnier)
  - Administrative Coordinator (Trudy Maygard)
  - Administrative Assistant (Jane Constable)
- LWRS is supported by five Government Communications and Public Engagement (GCPE) staff:
  - Communications Director, Band 4 (Tania Venn)
  - Communications Manager, Band 3 (Nova Pierson)
  - Senior Public Affairs Officer, Band 2 (Thomas Winterhoff)
  - Public Affairs Officer, Band 1 (Chitra Arcot)
  - Public Affairs Officer, Band 1 (vacant)

## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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#### **Key Facts:**

#### **Minister's Office Budget by STOB**

STOB	Descriptions	2022/23 Budget
50EA	Salaries	384,000
52EA	Employee Benefits	116,000
54EA	Legislative Salaries - Indemnities	40,000
	Salaries and Benefits Sub-Total	540,000
57EA	Public Servant Travel	42,000
63EA	Information Systems - Operating	7,000
65EA	Office & Business Expenses	7,000
82EA	Legislative Assembly	9,000
85EA	Other Expenses	9,000
	Operating Expenses Sub-Total	74,000
	Grand Total	614,000

**Date Prepared/Revised:** April 28, 2022

**Ministry Executive Sponsor:**

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**Alternate Contact for Issue:**

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Salmon Aquaculture Policy and Decisions

**Recommend Response:**

- The June 2018 policy makes it clear that, effective June 30, 2022, no new tenures will be approved unless:
  - Meet all existing and future federal aquaculture license conditions that assures protection of the health of wild salmon;
  - Demonstrate support from relevant First Nation(s) in whose territory they propose to operate via industry/First Nations agreements; and,
  - Meet all provincial *Land Act* policies related to the siting of finfish aquaculture sites.
- This approach provides clarity to industry and outlines our expectations moving forward for a sustainable industry that protects wild salmon, embraces reconciliation, and provides good jobs for local communities.
- The Province is dedicated to meaningful engagement with First Nations as demonstrated by this new policy, the work done in the Broughton, and Declaration on the Right of Indigenous Peoples Act (DRIPA), new legislation passed in 2019 to implement the principles of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).
- Many operators already have agreements with several partnering First Nations. Those types of partnerships will grow and lead to more predictability over the long term as First Nations and industry work together.

**If asked about the December 2020 federal government decision to cease licensing of open-net pen salmon farming in the Discovery Islands by 2022:**

- B.C. respects the federal government's position and their authority on the decision of licensing in the Discovery Islands.

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However, we remain committed to working in close collaboration with our federal counterparts to mitigate the impact of this decision on the affected companies and communities.

- I'm aware of the court's April 2022 decision. We'll continue to work with the federal government to protect, restore and enhance wild salmon populations, including through B.C.'s Wild Salmon Strategy
- But as Premier Horgan indicated in his March 10 letter to Prime Minister Trudeau, we are urging the federal government to commit to a transition plan that supports families, companies and coastal communities, and we are committed to working with them on this.
- Like B.C., the federal government is committed to partnering with Indigenous communities to ensure the aquaculture sector is sustainably managed and we will continue to encourage DFO to incorporate the principles of UNDRIP in related decisions.

#### **If asked about the federal government's 2025 Transition Plan from open-net pen salmon farming in B.C:**

- The federal government is currently deciding whether to renew 79 remaining salmon farming licences in the province when they expire in June 2022.
- On March 10, 2022, our Premier sent a letter to Prime Minister Trudeau making clear that any plan developed by 2025 to transition from current open-net pen technology must be built on meaningful and principled engagement involving industry, First Nations, local governments, and the Province.
- Our government has brought together ministers from key portfolios to call upon the federal government to commit to a transition plan that supports families, companies, and coastal

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### Ministry of Land, Water and Resource Stewardship

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communities, and we are committed to working with them on this.

- Any federal transition plan needs to align with our commitments under the Declaration Act and considers the economic needs of impacted First Nations and communities on the B.C. coast.
- At the same time, we will continue to collaborate with our federal colleagues on the important work of protecting and rebuilding B.C.'s critical wild salmon stocks.

#### **Key Facts:**

- Representatives of LWRS are members of the Strategic Oversight Committee to collaborate on the transition away from open net aquaculture. Additionally, LWRS advocates for the industry and represents the province in discussions with DFO.
- The Ministry of Forests issues crown land tenures and develops policies to ensure Indigenous Reconciliation is incorporated into decision making towards aquaculture licensing.
- Ministry of Agriculture and Food is lead on farmed salmon as it relates to a food commodity.
- On June 20, 2018, the Province announced new conditions for the disposition of Crown land for salmon aquaculture that replaced the “pause” announced in the 2015 bulletin. These new conditions come into effect for new and replacement tenures as of June 2022 and require that operators:
  - Meet all existing and future federal aquaculture license conditions that assures protection of the health of wild salmon;
  - Demonstrate support from relevant First Nation(s) in whose territory they propose to operate via industry/First Nations agreements; and,
  - Meet all provincial *Land Act* policies related to the siting of finfish aquaculture sites.
- As of February 1, 2022, B.C. has again notified operators whose tenures expire before June 30, 2022, of their requirements to provide proof of meeting these conditions to continue operations. 29 sites will be immediately subject to the policy on June 30, while other sites across B.C. have expiry dates ranging from 2023 to 2045.
- After consultation with First Nations in December 2020, and in response to Justice Cohen's response, then Minister Bernadette Jordan announced that DFO would phase out salmon farming operations in the Discovery Islands by June 2022, with

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### Ministry of Land, Water and Resource Stewardship

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the stipulations that no new fish be introduced into the facilities during this time, and that all farms be fish free by June 30, 2022.

- This will affect approximately 26 percent of B.C. farmed salmon capacity, representing 20 percent of provincial aquaculture revenue (\$132 million in 2019).
- Currently, four operators in the area have filed a judicial review to the Federal Court of Canada in Vancouver asking the courts to find the decisions made by DFO as unreasonable. A ruling is pending and anticipated for spring 2022.
- Farm operations are contingent on DFO licensing, which is typically granted in one-to-six-year terms. All 79 remaining farm licenses expire June 30, 2022. Industry and affected communities are concerned that DFO may decide on renewal options that shuts the industry or creates uncertainty of future operations.
- On April 22, 2022, Madam Justice Heneghan decided on the issue of Procedural Fairness within the Judicial Review. She found that the Discovery Islands decision was in fact a licensing decision and was therefore subject to procedural fairness. She also found that while there was a heavy burden of the applicants to show that the decision was unreasonable, this threshold was met. As a result, the application for Judicial Review was granted, the decision of the Minister set aside, and the injunction granted on April 5, 2021, will remain in effect. The judgement also now gives the applicants the opportunity to make submissions to the court on costs related to the breach of procedural fairness.
- DFO will likely not reissue licenses in this area to remain consistent with their policy direction to remove these farms. Furthermore, it is possible that the current federal Minister may decline transfer licenses under a more defensible rationale. Therefore, it is unlikely that any of the affected farms will restock at these locations. It is currently unclear if this judgement can or will be used by the operators to further litigation efforts to re-establish finfish aquaculture in the Discovery Islands area post-June 2022.

**Date Prepared/Revised: March 30, 2022**

**Ministry Executive Sponsor:**

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Watershed Security Strategy and Fund

**Recommend Response:**

- Protecting clean water is a priority for the government of B.C.
- We have recently completed the first period of engagement on a Watershed Security Strategy Discussion Paper.
- We will be publishing a report on what we have heard from engagement to date in summer 2022. This report will inform development of the Strategy and Fund.
- We are jointly developing a BC-First Nations water table to discuss ongoing provincial-level water policy.
- Through this Water Table and ongoing relationships with First Nations leadership, treaty nations, Métis nations, and existing government-to-government tables, we will strive towards co-development of the Watershed Security Strategy.
- We expect to release a draft Strategy for further public engagement in fall 2022.
- The proposed Watershed Security Fund will support implementation of the Strategy and build on our experience with the Healthy Watersheds Initiative (\$27M) and watershed security funding (\$30M).
- Coordination with work on the Coastal Marine and Salmon strategies and work in drinking water will be key.

**Key Facts:**

- LWRS leads the development of the Watershed Security Strategy and Fund through the Water Protection and Sustainability Branch. As part of this work, the ministry coordinates with other ministries who have interests in and play a role in water and watershed management in B.C.
- Advice/Recommendations

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### Ministry of Land, Water and Resource Stewardship

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- Drought, flood, climate change, urban development, industrial demand for water, and community sustainability are key watershed issues driving development of the Strategy.
- Between Jan 25 and March 18, 2022, government engaged British Columbians on a Discussion Paper that outlined the opportunities for a possible Strategy. More than 1,600 submissions from the public, stakeholders, and other levels of governments (including First Nations) were submitted for consideration.
- A broad range of funding mechanisms will be evaluated including water rental revenues, taxation, cost sharing with Canada, endowments, among others.
- Developing the Strategy and Fund is of significant interest to many First Nations because of their relationships with water. It is an opportunity to advance reconciliation through new partnerships with First Nations that support and build on shared interests and goals for water.
- Building on past engagement with First Nations on water-related issues, multiple pathways to participate in the development of the Strategy have been developed, with the goal of building enduring, collaborative relationships around provincial-level water policy and legislation, consistent with our commitment to the United Nations Declaration on the Rights of Indigenous Peoples and to implementing the Declaration Act.
- Aligning approaches to water management with the *Declaration on the Rights of Indigenous Peoples Act* is critical to our work.
- Government continues to collaborate internally and engage with local and federal governments, environmental non-government organizations, industry and business groups, the agricultural sector, and other external stakeholders as the Strategy and Fund options develop.
- There is a broad range of related work underway across government to align and coordinate with related mandates, including, but not limited to:
  - Drinking water strategy,
  - Wild salmon and coastal strategies,
  - Climate action;
  - Together for Wildlife;
  - Forest and Range Practices Act renewal and the Old Growth strategy;
  - Biodiversity and conservation; and,
  - Economic recovery initiatives.
- Staff anticipate presenting Strategy and Fund proposals to government for consideration in spring-summer 2022.

**Date Prepared/Revised: 30 March 2022**

**Ministry Executive Sponsor:**

Name: James Mack

Phone: 778 698-3290

**Alternate Contact for Issue:**

Name: Jennifer Viganò

Phone: 250 645-9259

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**Prepared for 2022/23 Estimates Debate**

## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Development of a Coastal Marine Strategy

**Recommend Response:**

- Without a strategic vision, it's challenging for the Province to plot its own course to ensure our shared natural assets are sustained and protected for future generations.
- A Coastal Marine Strategy (CMS) can help articulate how and what future actions government can take to be better stewards for our coastal marine environments, mitigate and adapt to climate change impacts, advance reconciliation with First Nations, develop a sustainable blue economy and foster community resilience in the face of increasing pressures.
- A public CMS will be a first of its kind for B.C.
  - It is anticipated that the strategy will articulate a vision, principles, goals and critical actions that matter most to the people of B.C.
- We are currently in the process of working with coastal First Nations to draft and initial 'intentions' paper this spring and will then engage Canada, local government, B.C. stakeholders and the broader public later this spring and summer.

**Key Facts:**

- British Columbia's (B.C.) coastal marine zone is home to the majority (~72%) of British Columbians, encompasses the traditional territories of approximately 84 B.C. Indigenous Nations, and around 300 communities dot the coast.
- Marine based economic sectors contribute ~\$21.5B annually to the economy and employs approximately 131,000 jobs in British Columbia.
- B.C.'s coastal and marine areas are also extremely biologically diverse - home to many iconic wildlife such as Pacific salmon, killer whales and many other birds, mammals, fishes and invertebrates.
- However, B.C. is one of few maritime jurisdictions in North America that does not have an articulated coastal marine strategy and/or law.

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### Ministry of Land, Water and Resource Stewardship

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- Given the close connection B.C. residents have with the ocean and the importance it has in terms of B.C.'s cultural identity, the Province has committed to develop a CMS for B.C.
- This commitment is included in four ministerial and parliamentary secretary mandate letters across government: Minister of Lands, Water and Resource Stewardship Josie Osborne and Parliamentary Secretary Fin Donnelly; Minister of Environment and Climate Change Strategy George Heyman and Parliamentary Secretary Kelly Greene.
  - Minister Josie Osborne has been asked to lead the development of the CMS with her colleagues.
- Goal 3 of the LWRS service plan "*Stewardship of Marine and Coastal Values for Environmental Protection, Economic Development, and Reconciliation*" outlines the key objectives and strategies for the ministry.
- To date, staff have held over a dozen engagement sessions with over 30 First Nations across the coast (including eight treaty nations), six First Nations organizations and have held information sessions with 40 stakeholder groups and 11 of the 17 coastal Regional Districts.
- LWRS staff are in the process of engaging with other Ministries to clarify where interests overlap. For example, LWRS will be working with:
  - The Ministry of Forests on potential strategies related to provincial decision-making on authorizations in coastal marine areas;
  - The Ministry of Agriculture and Food on opportunities to grow the sustainable seafood sector and related 'blue economy';
  - The Ministry of Environment and Climate Change Strategy on climate change mitigation and adaptation in the coastal zone, as well as long-term protections for the coastal marine environment; and others.
- Given this is still in the development stage, fiscal resources remain focused on First Nations engagement (\$380,400 to date) and internal capacity building – six FTEs.
- Implementation budgets requirements remain uncertain. It is anticipated that full cost accounting will be required to implement over time and to successfully position the strategy to be implemented over time. Based on other progressive jurisdictions, this could be in the tens of millions per year.
  - However, this can be combined with Federal and other sources of funding where synergies exist.

**Date Prepared/Revised:** April 6, 2022

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Wild Salmon Strategy & Action Plan

**Recommend Response:**

- We have a renewed mandate to develop new strategies to protect and revitalize B.C.'s wild salmon populations, which are critically important to B.C.'s environment, history, economy and way of life.
- We are working closely with partners to develop a suite of strategies that address existing recommendations that will be directly beneficial to salmon in B.C.
- We are committed to helping restore abundant wild Pacific salmon stocks while supporting sustainable fisheries and communities around B.C.
- We are working across government to ensure that all of Governments work aligns with the goal of restoring wild salmon, and that this objective will be built into other strategies that B.C. is undertaking.
- Currently, options for the strategy are being developed that build off the vast amount of work and recommendations from First Nations, stewardship groups and others. Further consultation will take place in coming months.
- We are also aware of the significant commitment from the federal government through their \$647M Pacific Salmon Strategy Initiative, and will work closely to ensure there is a coordinated strategy to recover wild salmon in partnership with First Nations in B.C.
- Since 2019, B.C. and the federal governments have been working together to protect wild salmon through the B.C. Salmon Restoration and Innovation Fund.
- This government has pledged to invest an additional \$42.85M in the B.C. Salmon Restoration and Innovation Fund, doubling the largest provincial financial commitment to protect wild salmon in the past 20 years.

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- Most importantly, we will work to ensure strong and healthy wild salmon stocks are available for future generations of British Columbians.

#### **Key Facts:**

- LWRS is leading the development of the Wild Salmon Strategy. This strategy will protect salmon in conjunction with the Coastal Marine Strategy and a Watershed Security Strategy and Fund which are also being developed by LWRS.
- Other natural resource ministries are providing a support role, particularly Ministry of Forests with regards to permitting of industries and activities that impact salmon and their habitats.
- The Ministry of Land, Water and Resource Stewardship (LWRS) has a mandate commitment to continue implementing the B.C.'s Wild Salmon Strategy and work with the federal government to double the BC Salmon Restoration and Innovation Fund (BCSRIF).
- Options for a Wild Salmon Strategy and Action Plan (WSSAP) are under discussion with the First Nations Fisheries Council, Pacific Salmon Foundation and DFO.
- Options focus on areas of provincial jurisdiction (land and water management) with the main policy focus being a 'salmon lens' and the main program focus being the BC Salmon Restoration and Innovation Fund.
- The salmon lens is a policy concept that would ensure there is clear direction to all provincial natural resource decision makers (permitting, tenures, etc.) that salmon recovery should be prioritized when considering effects of decisions.
- The Province is also developing a Coastal Marine Strategy and a Watershed Security Strategy and Fund, each of these will address and support issues that affect wild salmon.
- In June 2021, DFO announced the Pacific Salmon Strategic Initiative. The strategy's objective is to stem the steep decline of Pacific salmon populations and protect and rebuild stocks where possible by implementing a series of immediate and long-term solutions. B.C. and DFO meet regularly to ensure alignment of provincial and federal strategies.

**Date Prepared/Revised: March 30, 2022**

**Ministry Executive Sponsor:**

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Canada-BC Nature Agreement

**Recommend Response:**

- Canada and BC are collaborating toward the development of a Nature Agreement to advance joint objectives for the protection of biodiversity and species at risk and to invest in new and expanded conservation areas.
- The agreement may include joint commitments on:
  - the recovery and protection of species at risk;
  - ecosystem and habitat stewardship and restoration;
  - Indigenous-led conservation initiatives and partnerships; and
  - ecosystem knowledge and information.
- The agreement is expected to be signed this summer.

**Additional Response points (if needed):**

- LWRS is leading the development of the agreement in close collaboration with BC's other natural resource ministries including the ministry of Forests, Environment and Climate Change Strategy, Indigenous Relations and Reconciliation and Energy, Mines and Low Carbon Initiatives.
- While the agreement is between Canada and BC, there is a high level of sensitivity by both governments to the collaborative governance approach being developed by British Columbia with First Nations. There is a desire to align agreement commitments with, and in support of, that approach to ensure that First Nations are partners in shaping the path forward for land stewardship.

**Key Facts:**

- LWRS is responsible for leading the negotiation of the BC-Canada Nature Agreement. As implementation of the agreement will be supported by all ministries in the natural resource sector, LWRS is leading this work and collaborating with all other ministries in the sector.
- In July 2021 Cabinet provided approval for BC to begin negotiation for the Nature Agreement based on 5 provincial interests
  - Respect for provincial jurisdiction in decision making and collaborative and shared decision-making agreement with First Nations

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- Commitment from Canada to modernize the approach to the implementation of the federal Species at Risk Act
- Shared understanding and support for BC economic interests, the economic impact and benefits of new conservation measures and co-funding to mitigate impacts,
- Collaborative but BC led engagement of Indigenous Nations
- Improving Canada's understanding of BC new and more integrated approach to conservation and stewardship.
- Reaching a Nature Agreement with BC is identified as a deliverable in the mandate letters for Ministers Steven Guilbeault of Environment and Climate Change Canada (ECCC) and Minister Jonathan Wilkinson of Natural Resources Canada (NRCAN). ECCC is the lead ministry.
- The Government of Canada's 2022 budget allocated \$50M for a BC Old Growth Nature Fund to be established in collaboration with the province, non-governmental organizations, and Indigenous and local communities on the condition of matched provincial funding.
- Canada has indicated willingness to draw on several conservation related funds including the Enhanced Nature Legacy (\$2.3B across Canada); the Nature Smart Climate Solutions fund (\$1.4B); the \$50M BC Old Growth Nature Fund, and others to support the development of a Nature Agreement with British Columbia.
- As part of the Nature Agreement, Canada may expect a provincial position on federal conservation targets to conserve 25% of lands by 2025 and 30% by 2030. BC currently has no formal mandate to expand parks and protected areas to 25% or 30%, however BC has been a leader among provinces and territories with one of the highest percentages of its land base in protected and conserved areas. Additional conservation areas in development with First Nations partners will advance BC towards the 25% target

**Date Prepared/Revised: April 28, 2022**

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Caribou Recovery Program Predator Reduction

**Recommend Response:**

- The decision to remove animals of one species to benefit a species at risk is difficult.
- We understand how some people may find the idea of deliberately removing wolves unsettling, even though this approach is supported by science.
- Our monitoring and analysis of ongoing predator reduction confirms that this will make the difference between caribou herd recovery and the complete loss of caribou in particular areas.
- It is a tool used in coordination with other recovery tools including habitat protection and restoration.
- Data from collared wolves is extremely valuable in determining pack territories, overlap with caribou herds, and pack size. This ensures that decisions to remove wolves are well informed by evidence confirming that their removal will benefit caribou recovery. In addition, when a decision to remove a pack is made collared wolves make the removal more efficient and effective.

**Key Facts:**

- LWRS is responsible for leading all species at risk recovery in BC including leading the Provincial Caribou Recovery Program. This work includes leading public facing engagement and consultation with affected stakeholder groups.
- Ministry of Forests is responsible for the regulatory components (permits and authorizations) required to support recovery strategies.
- In the case of predator management to support species at risk recovery, the overall strategy and implementation planning is led by LWRS through the Provincial Caribou Recovery Program. Implementation and permitting for predator management is done by Ministry of Forests.
- In situations where there is a compliance and enforcement component the Conservation Officer Service, Ministry of Environment and Climate Change Strategy is responsible.
- Over the last few decades, woodland caribou have declined significantly in many parts of BC, and across Canada. Scientific evidence indicates that habitat change (loss/fragmentation) is a main factor driving these declines.

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- These habitat changes support a greater number of moose, elk, and deer in caribou ranges than historically occurred. This, in turn, leads to a greater number of wolves, which leads to more caribou being depredated by wolves.
- Caribou herds cannot tolerate high rates of predation.
- Predator reduction can and has had immediate, positive impacts on caribou populations, particularly when used with multiple management tools as is done in British Columbia. For example, the Klinse-za herd in the Peace Region has grown from 42 animals to 101 since wolf reduction measures began in 2015 in conjunction with maternity penning.
- Given the length of the program the previous government will be familiar with these difficult decisions.
- Wolves are abundant and widely distributed across BC. Wolf population dynamics make them resilient to high rates of reduction/mortality, therefore this targeted management action does not create other conservation risks.
- Helicopter-based shooting of wolves is the most humane and effective to sufficiently reduce population density across broad, remote landscapes.
- BC's ensures careful consideration to ethics, animal welfare, and humaneness through veterinarian oversight of animal care standards and protocols. Collaring wolves helps to confirm removing the wolves will benefit caribou, that the removal is targeted, efficient and effective, and for that reason, are sometimes called Judas wolves.
- Authorizations are now in place for a predator reduction program for 14 caribou herds throughout BC, following a consultation and public engagement process completed in 2021.
- The 2021 consultation and engagement process indicate that British Columbians have a range of opinions about this caribou recovery management action. EngageBC survey results showed:
  - 98% of the 15,196 respondents feel that caribou recovery is important to them
  - 42% of the respondents from British Columbia were in support of predator reduction
  - **People in areas where caribou occur indicated greater support for application of this management tool (53% to 82%), compared to other areas of the province (22% to 47%)**

2022 predator management:

Program Area	Wolves Removed 2022	Cougars Removed 2022	Total cost 2022	Comments
<b>Southern Mountain - Southern Group</b>				
Central Selkirks	11	2	\$100,000	Cougar removal ongoing
Columbia North	3	5	\$130,000	Cougar removal ongoing

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Program Area	Wolves Removed 2022	Cougars Removed 2022	Total cost 2022	Comments
Hart Ranges	30	-	\$177,000	Complete
North Cariboo	7	-	\$50,000	Complete
<b>Southern Mountain – Northern Group</b>				
Graham	10	-	\$179,600	Complete
Itcha-Ilgachuz	66	2	\$180,000	Cougar removal ongoing
Tweedsmuir	36	-	\$267,600	Complete
<b>Southern Mountain – Central Group</b>				
South Peace	26	-	\$320,000	Complete
<b>Northern Mountain</b>				
Pink Mountain	50	-	\$225,300	Complete
<b>Boreal</b>				
Chinchaga	41	-	\$120,000	Complete
<b>TOTALS</b>	<b>280</b>	<b>9</b>	<b>\$1,749,500</b>	

Annual breakdown of wolf removal	
Year	Number
2015	68
2016	210
2017	119
2018	152
2019	180
2020	482
2021	237
2022	280

**Date Prepared/Revised: April 29, 2022**

**Ministry Executive Sponsor:**

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## 2022/23 Estimates Debate

Ministry of Forests, Lands, Natural Resource Operations and Rural Development  
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**ISSUE:** Cumulative Effects Framework

**Recommended Response:**

- My mandate letter includes direction to *“Increase the Province’s capacity to manage for cumulative effects through integration of science-based land, aquatic, resource, geographic and Indigenous knowledge to evidence informed policy and decisions can be made by statutory decision makers”*
- Cumulative effects (CE) assessments under the BC Cumulative Effects Framework (CEF) are a foundational component of Government’s stewardship of natural resources. They assess the cumulative effects of natural and human-caused disturbances on key provincial values to inform planning and decision-making throughout BC and across natural resource agencies. CE outputs provide a common understanding of value condition and trend.
- The Province of British Columbia is committed to considering cumulative effects in natural resource decision-making. Improving cumulative effects assessment and management will be a vital part of sustainable and integrated resource management. Transparently reporting on cumulative effects assessment information and management considerations will enable coordinated, consistent management of cumulative effects across the natural resource sector
- Cumulative effects assessments are a key interest and priority for Indigenous Stewardship Forums, to collaboratively build trusted data and assessments that will inform operational and strategic decision making. The Cumulative Effects Framework provides foundational information for those collaborations.
- CEF products are used to inform: (1) modernized land use planning and forest landscape planning; (2) implementation of the provincial Old Growth Strategic Review

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### Ministry of Forests, Lands, Natural Resource Operations and Rural Development

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recommendations; (3) environmental assessments for major projects; (4) natural resource authorizations, such as roads and forestry activities; (5) watershed security planning and fish habitat management; (6) consultation with Indigenous Nations and impact assessment to Aboriginal rights and title; and (7) other strategic, tactical and operational natural resource management decisions.

- To date, current condition reports on various values have been published for seven of the eight Natural Resource Regions and several reports are nearing approval.

#### **Next steps for CEF implementation include:**

- Publishing CE assessment results for all five provincial CE values (Grizzly Bear, Forest Biodiversity, Old Growth, Aquatic Ecosystems and Moose).
- Building web-based reporting tools to communicate assessment results to users.
- Continuing engagement with First Nations through Collaborative Indigenous Stewardship Forums to share information and seek collaboration on protocols and reports.
- Completing workshops with decision-makers to support consideration and implementation of the CEF in natural resource decisions.
- Engaging on effective delivery of CE assessment results to support modernized land use planning and forest landscape planning.
- Proposing changes or additions to legislation and regulations to enable consideration of cumulative effects in statutory decision making.

#### **Key Facts:**

- LWRS is the lead agency for the Cumulative Effects Framework, including the development of policy, guidance, assessments, and reporting.

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### Ministry of Forests, Lands, Natural Resource Operations and Rural Development

- The Cumulative Effects Framework Interim Policy is an NRS wide policy; all natural resource ministries have a role to play in the application of the Framework to the decisions they make on the land base.
- **Audit:** In 2015, the Office of the Auditor General completed an audit on “Managing Cumulative Effects of Natural Resource Development in BC”, concluding that FLNRORD was not adequately addressing CE in decision-making and that the CEF was a much-needed step forward, but that there needed to be further clarity as to how government would use the framework in decision-making. Annual progress updates on CEF implementation are provided to the Public Accounts Committee.
- **Yahey vs. BC:** In the 2021 BC supreme court decision, Justice Burke found that “The Province has not implemented a fully functioning regime where cumulative effects in the Blueberry Claim Area and impacts on the exercise of treaty rights can be assessed and managed”.
- **Ministry of Land, Water and Resource Stewardship** was created in 2022, in part to strengthen integration across the sector to mitigate, plan, respond and adapt management practices, including a focus on effectively managing cumulative effects.
- **CEF Implementation** – outputs to date include:
  - Assessments have been completed for the five provincial values. Reporting out on these assessments is ongoing, including online.
  - Regions are completing assessments on additional CE values specific to their areas and management issues, in some cases through related initiatives such as Collaborative Indigenous Stewardship Forums.
  - Overall, 21 CE reports have been published, covering 10 different values in 7 regions
  - Case studies are posted on the CEF website to demonstrate how CE has informed decision making across the natural resource agencies.
  - Policy, procedures, decision support tools and governance structures are in place.
  - Ongoing guidance is being provided to business areas on implementation of the policy.

**Date Prepared:** April 26, 2022,

**Ministry Executive Sponsor:**

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Old Growth – LWRS Role in Old Growth

**Recommend Response:**

- The old growth strategic review remains a top priority for government and the recent restructuring will enhance efforts to deliver a new approach to old forests through a strong partnership between this ministry and the Ministry of Forests.
- This priority for government is reflected in the mandate letters for both me and Minister Conroy. The overall lead for the old growth initiative remains with Minister Conroy.
- The 14 recommendations from the Merkel and Gorley report range widely, from strategic shifts in broad natural resource use policy, to operational improvements on the land base.
- LWRS will lead those recommendations that reflect broader elements of change and do so in a manner that integrates policy shifts across the natural resource sector.
- Recommendations that LWRS will lead include those involving the prioritization of ecosystem health, more inclusive governance, adoption of a 3-zone approach, and building a new framework for land use objectives that reflect today's natural resource challenges.

**Key Facts:**

- Ministry of Forests is the overall lead for the Old Growth Strategic Review. This includes developing a modern Old Growth Strategy for British Columbia that reflects the approach for addressing all 14 recommendations.
- Minister Osborne's mandate letter includes direction to: "Work with the Minister of Forests to support the implementation of the recommendations of the Old Growth Strategic Review in collaboration with First Nations, labour, industry, and environmental groups."
- The new LWRS ministry is accountable for integrated land and natural resource management. Several of the old growth recommendations will impact more than just old growth forest management.
- LWRS and Ministry of Forests will jointly lead on Recommendation 1: Engage the full involvement of Indigenous leaders and organizations to review this report and any subsequent policy or strategy development and implementation.
- LWRS leads on six recommendations: (with support from Ministry of Forests):

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- Recommendation 2: Declare conservation of ecosystem health and biodiversity of British Columbia's forests as an overarching priority and enact legislation that legally establishes this priority for all sectors.
- Recommendation 3: Adopt a three-zone forest management framework to guide forest planning and decision-making.
- Recommendation 4: Adopt a more inclusive and stable governance model that gives local communities and stakeholders a greater role in forest management decisions that affect them.
- Recommendation 9: Establish a standardized system and guidance that integrates provincial goals and priorities to local objectives and targets.
- Recommendation 10: Update the targets for retention and management of old and ancient forest.
- Recommendation 13: Once developed, implement the new policies and strategies for the management of old forests through mandatory provincial and local transition plans that define, schedule, and monitor the process.
- Ministry of Forests leads on six recommendations (with support from LWRS):
  - Recommendation 5: Provide the public with timely and objective information about forest conditions and trends.
  - Recommendation 6: Until a new strategy is implemented, defer development in old forests where ecosystems are at very high and near-term risk of irreversible biodiversity loss.
  - Recommendation 7: Bring management of old forests into compliance with existing provincial targets and guidelines for maintaining biological diversity.
  - Recommendation 8: Establish and fund a more robust monitoring and evaluation system for updating management of old forests.
  - Recommendation 11: Improve the mapping and classification of old forests to recognize multiple values.
  - Recommendation 12: Create a silviculture innovation program aimed at developing harvesting alternatives to clearcutting that maintain old forest values.
- The Ministry of Jobs, Economic Recovery and Innovation will lead on Recommendation 14, to support forest sector workers and communities as they adapt to changes resulting from a new forest management system. Ministry of Forests and LWRS will support.

**Date Prepared/Revised: April 28, 2022**

**Ministry Executive Sponsor:**

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## OLD GROWTH IMPLEMENTATION

## Recommendation Status Report

Current Reporting Period May 2, 2022

ADM | David Muter

Director | Margaret Gibbs

Executive Director | Brian Bawtinheimer &amp; Julie MacDougall

Project Manager | Steve Kachanoski

Recommendation	Executive Lead	Recommendation Project Lead (PSSP Contact)	Terms of Reference	Work Plan	Discussion Paper	Comments [RED updated since last version]
Rec #1. Indigenous Involvement	Brian Bawtinheimer, LWRS and Julie MacDougall, OCF.	Margaret Gibbs (Laura O'Brian)	S	N/A	N/A	<ul style="list-style-type: none"> <li>188 First Nations have now responded to government's request for engagement on the implementation of deferrals.</li> <li>Engagement efforts are being supported by capacity funding that was transferred to eligible First Nations in March 2022, with a total of \$2.6million being divided and sent to 88 First Nations as of March 29.</li> <li>RFPs being prepared to support strategic level Indigenous Engagement</li> </ul>
Rec #2. Prioritize Ecosystem Health	Jen Psyllakis, LWRS	TBD (Andrea Coulter)	S	NS	DR	<ul style="list-style-type: none"> <li>Discussion paper under development, and is based on the discussion from OCF, ENV, etc., Discussed at OGSLT in February.</li> <li>Terms of Reference on hold pending outcome of cross ministry discussions related to scope/direction.</li> </ul>
Rec #3. Adopt a Three-zone Management Framework	Rachael Pollard, OCF and Brian Bawtinheimer LWRS	Tricia Morris, LWRS and Julie Castonguay, OCF (Mikayla Roberts)	NS	NS	DR	<ul style="list-style-type: none"> <li>Recommended approach would be some combination of FLP/LUP.</li> <li>Terms of Reference on hold pending outcome of discussions related to scope/direction.</li> <li>Discussion paper being developed and has been reviewed at OGSLT in January.</li> </ul>
Rec #4. Strengthened Governance	Rachael Pollard, OCF	TBD (James Long)	S	NS	DR	<ul style="list-style-type: none"> <li>Initial conversations on approach have taken place. The recommendation provides advice that this should nest under the umbrella of G2G relationships (i.e., recommendation 1), so likely this should be advanced before too much work is done on #4. Further, the advice is to redefine planning area boundaries and establish local forest boards/planning tables that are resourced.</li> <li>Draft discussion paper under development and has been reviewed at OGSLT in January.</li> <li>ToR under development.</li> </ul>
Rec #5/7/8. Better Public Information / Compliance with Existing Requirements and Guidelines / Monitoring and Evaluation	Lisa Helmer, LWRS and Rachael Pollard, OCF	Felice Griffith, RPAB (Andrea Coulter)	✓	DR	NS	<ul style="list-style-type: none"> <li>A framework for public reporting is being drafted. Framework will outline options for public reporting on old growth, including consideration of current reporting mechanism (CEF, FREP, FAIB, etc).</li> <li>Short term focus on identifying options to respond to OGSR advice around public reporting, which is a component of the implementation advice for all three recommendations.</li> <li>Longer term focus on Recommendation 8 around establishing a monitoring and evaluation system for updating management of old forests.</li> <li>The CEF program continues to work on OG current condition reports for public release. Vancouver Island, Thompson Okanagan, Robson Valley are nearing completion. A June/July release is anticipated.</li> <li>Short term focus is also on identifying options/guidance for bringing areas into compliance where reporting shows targets are not being met.</li> </ul>
Rec #6. Ecosystems at Very High Risk	Hilary Wheeler, MOF	Hilary Wheeler (James Long)	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>188 First Nations have now responded to government's request for engagement on the implementation of deferrals, with 75 First Nations agreeing to defer harvest of at-risk old growth in their territories.</li> <li>A process for field verification of areas of old growth has been developed and is currently being reviewed by staff and industry.</li> <li>Technical questions and answers are being updated and posted for internal staff to review on an ongoing basis.</li> </ul>
Rec #9/10. Objectives and Targets Framework / Update Targets and Guidance	Brian Bawtinheimer, LWRS	Tricia Morris, LWRS and Julie Castonguay, OCF (Mikayla Roberts)	DR	S	NS	<ul style="list-style-type: none"> <li>The ToR for #9 and #10 has been drafted and is awaiting final approval by Executive Leads.</li> <li>The Team has completed series of discussion (deep dive) on the current old growth management framework and tools (OGMA's, Biodiversity Emphasis options etc.) which will inform our work on both Recommendation #9 and #10</li> <li>The Team is currently unpacking OGSR #9 Implementation Advice</li> <li>Next the Team will develop a policy options/discussion paper for Recommendation #9</li> <li>Then the Team will begin work on Recommendation #10 - the work completed on #9 will inform #10</li> </ul>
Rec #11. Improved Inventory	Albert Nussbaum, OCF	Tim Salkeld, OCF (Tim O'Rourke)	✓	S	NS	<ul style="list-style-type: none"> <li>Discussion and background material being drafted related to:                             <ul style="list-style-type: none"> <li>How old growth is mapped elsewhere (e.g., Europe, California &amp; the Pacific NW).</li> <li>appropriate ecological scales of inventory and priority attributes.</li> <li>improving stand age estimation for old growth in strategic inventories.</li> <li>how ground verification will be conducted.</li> <li>how natural disturbance types will be defined, and</li> <li>should Old Growth Management Areas (OGMAs) be renamed?</li> </ul> </li> <li>Team has engaged researchers and industry on new approaches to identifying old growth using LiDAR, Terrestrial Ecosystem Mapping (TEM) and Predictive Ecosystem Mapping (PEM) which are promising tools for providing more accurate inventory data and old forest classification</li> </ul> <p>A discussion paper is being drafted taking into account the in scope issues and research noted above</p>

Recommendation	Executive Lead	Recommendation Project Lead (PSSP Contact)	Terms of Reference	Work Plan	Discussion Paper	Comments [RED updated since last version]
Rec #12. Innovative Practices	Rachael Pollard, OCF	Shannon Pearce, OCF (Mikayla Roberts)	S	NS	NS	<ul style="list-style-type: none"> <li>Initial conversations on approach have taken place</li> <li>Conversation and brainstorming have occurred around current silvicultural systems and that will inform the teams work moving forward</li> <li>Strong linkages have been identified with Rec #3</li> <li>Terms of Reference on hold pending outcome of discussions related to mandate/scope.</li> </ul>
Rec #13. Transition to New Management Approaches	Brian Bawtinheimer, PSSP	TBD (James Long)	S	N/A	N/A	<ul style="list-style-type: none"> <li>TOR started</li> </ul>
Rec #14. Transition for Communities	Lori Henderson, JERI	Matthew Scott, Moncrieff and Kathy Lachman, ROTE (James Long)	✓	S	S	<ul style="list-style-type: none"> <li>High level work plan has been developed. Detailed work-planning is underway. Scope is closely linked to outcomes of Rec 6 (deferrals) in the near term.</li> </ul>

**Terms of Reference Legend**

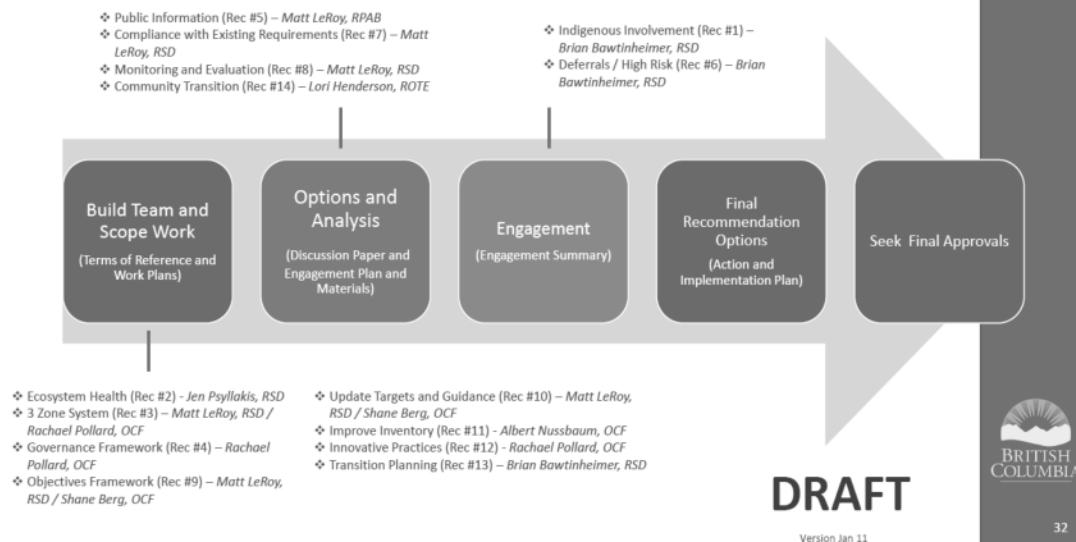
✓ ~ Approved    FD ~ Final Draft    DR ~ Draft for Review    S ~ Started    NS ~ Not Started    N/A ~ Not applicable (no ToR anticipated)

## Old Growth Strategic Review – The Path Forward

### Prioritizing the Panel's Recommendations



## Towards a New Old Growth Strategy



## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Together for Wildlife and Minister's Wildlife Advisory Council

**Recommend Response:**

- The Together for Wildlife (T4W) Strategy sets BC on a path to achieve our vision: *Wildlife and their habitats thrive, are resilient, and support and enrich the lives of all British Columbians*.
- Our government is committed to implementing the 5 goals and 24 actions in the T4W Strategy, as reinforced in my mandate letter, and mandate letters for Minister Conroy, Minister Heyman and Parliamentary Secretary Greene.
- Since August 2020, the Minister's Wildlife Advisory Council (MWAC) has provided independent advice and support on strategic issues and priorities, including oversight of T4W implementation.
- In 2021/22 and 2022/23, over \$9 million per year has been allocated to implement T4W. This funding supports priority wildlife and habitat stewardship projects across the province, including monitoring, inventory, and research; wildlife objective-setting; on-the-ground stewardship; review of effectiveness of legal land designations; policy development, data sharing and communications.

**Additional Response points (if needed):**

- Wildlife and habitat are of vital importance to British Columbians, and their health and resilience reflects a sustainable future for our lands.
- We are all dependent on the land for our wealth and our cultural richness and need to consider the diverse values and perspectives of all British Columbians to improve outcomes for wildlife and habitat.
- The MWAC consists of British Columbians from across the province who have a broad understanding of the important role that wildlife plays for Indigenous communities, for local economies and for the environment.

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#### **Key Facts:**

- LWRS is the overall lead for the T4W Strategy.
- Ministry of Forests (FOR) supports many components of the strategy. For example, FOR has responsibility for the Wildlife Act and hence will work in close collaboration with LWRS to complete Action 12 in T4W (improvements to Wildlife Act). FOR is also responsible for wildlife population monitoring and inventory, a primary component of Action 4 (expanding data and information).
- The T4W Strategy is the result of comprehensive discussions with over 120 Indigenous communities and 60 stakeholder groups, as well as more than 1400 comments received from members of the public.
- We also worked closely with Indigenous Peoples to develop and now implement the Strategy through the First Nations-BC Wildlife and Habitat Conservation Forum (the FN Forum). The FN Forum was established in 2018 as an innovative way to obtain perspectives from First Nations across BC on wildlife stewardship issues and is comprised of participants from over 40 BC First Nations.
- Implementation highlights to date include:
  - Establishment of the MWAC. The Council has held Wildlife Dialogue sessions with First Nations and stakeholders across the province and advised the Minister on priority wildlife and habitat issues.
  - Continued collaboration with the FN Forum to implement reconciliation (Goal 5) actions in the Strategy.
  - Implementation of projects across the province to improve wildlife and habitat stewardship, including wildlife monitoring and inventory, citizen science, habitat restoration, highway mortality mitigation, access management, wildlife management planning, disease mitigation, and reducing wildlife-human conflicts.
  - Creation of a T4W website; modernization of wildlife and habitat websites.
  - Improvements to data systems for wildlife and habitat information, to ensure data are available to all British Columbians.
  - Assessments of the effectiveness of designations established under provincial legislation to support wildlife and habitat conservation, to inform staff, decision makers, First Nations, and stakeholders about current disturbances and the condition of these designations and surrounding landscapes.
  - Support for Conservation Land management planning and on-the-ground stewardship across BC and strengthened partnerships with land trust organizations.

**Date Prepared/Revised:** April 28, 2022

**Ministry Executive Sponsor:**

Name: David Muter

Phone: (250) 217-5385

**Alternate Contact for Issue:**

Name: Jennifer Psyllakis

Phone: (250) 812-7797

## 2022/23 Estimates Debate

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**Issue:** Wildlife Act Review

**Recommend Response:**

- As part of the Together for Wildlife Strategy, the Province has committed to review and make recommendations to update the Wildlife Act.
- A review of the Wildlife Act is also consistent with the commitments in Declaration on the Rights of Indigenous Peoples Act (Declaration Act) to align provincial laws with the United Nations Declaration on the Rights of Indigenous Peoples in consultation and cooperation with Indigenous Peoples.
- The Together for Wildlife Strategy identifies priority areas to be included in the review: reconciliation with Indigenous peoples, determination of objectives, improved wildlife stewardship, effective and accessible service delivery, and dedicated funding.
- In addition to these priority areas, there are also a number of administrative updates needed to support the proper functioning of the Act.
- Engagement on the *Wildlife Act* review is expected to begin in 2022, and review and update of the Act is expected to take several years.
- The Wildlife Act review would expand upon the early reconciliation sheltering and Indigenous Knowledge amendments made in Bill 14 Wildlife Amendment Act, 2022.

**Additional Response points (if needed):**

- Development of the scope and process of the Wildlife Act review is underway; however, there are some key categories to be addressed through the review: (1) reconciliation, (2) objective setting, (3) hunting, trapping and commercial activities, (4) fish and wildlife habitat, conservation lands and

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### Ministry of Forests & Ministry of Land, Water and Resource Stewardship

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stewardship, (5) compliance and enforcement, and (6) funding and administration.

- Many aspects of the review will be done in partnership with Indigenous peoples, to meet the commitments in the Declaration Act and continue to build the relationships that will support wildlife stewardship moving forward.

#### **Key Facts:**

- The review of the Wildlife Act is a commitment include in Together for Wildlife. LWRS is the lead for the Together for Wildlife Strategy which includes Action 12 to under undertake a review of the Wildlife Act.
- As the legislative authority for the Wildlife Act resides with Ministry of Forests, LWRS will be leading this work in close collaboration with the Ministry of Forests.
- The Wildlife Act has not been significantly updated since 1981 and remains largely focussed on extractive activities (e.g., hunting, trapping).
- Recent court decisions such as *R. v. Desautel (2021)* and *Yahey v. British Columbia (2021)* have further highlighted obligations of Government in managing wildlife stewardship and use.
- We have heard from Indigenous leadership that wildlife stewardship is a key priority in reconciliation, and an important venue for developing co-management and shared decision-making processes that will advance the alignment of provincial legislation with United Nations Declaration on the Rights of Indigenous Peoples.

**Date Prepared/Revised:** April 28, 2022

**Ministry Executive Sponsor:**

**Name:** ADM, David Muter

**Phone:** 250 217-5385

**Alternate Contact for Issue:**

**Name:** Dennis Paradine, Manager, Policy and Leg.

**Phone:** 778 974-5493

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### Ministry of Land, Water and Resource Stewardship

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**Issue:** Mandate to protect and enhance Biodiversity

**Recommend Response:**

- LWRS has a mandate to: *“Continue to work with partners to protect species at risk and work collaboratively with other ministries to protect and enhance BC’s biodiversity”*.
- There are several biodiversity and species at risk related items in the mandate letters shared with other agencies, including the Ministry of Environment and Climate Change Strategy and the Ministry of Forests.
- LWRS staff will continue to work collaboratively with other ministries to advance biodiversity activities through ongoing discussions and work that could include broader provincial approaches, policy tools and legislation to achieve positive outcomes for biodiversity and species recovery.
- Collaboration and engagement with Indigenous Peoples will be a priority as we look to implement the Declaration Act.
- BC and Canada have been working on the development of a bilateral Nature Agreement. This Agreement will play an important role in strengthening conservation province-wide through piloting projects using new approaches to planning for species at risk recovery, protecting and restoring habitat, strengthening ecosystems resilience to climate change, and improving our ability to sequester carbon.

**Key Facts:**

- Ministry of Environment and Climate Change Strategy is tasked with supporting LWRS to protect species at risk and work collaboratively with other ministries to protect and enhance BC’s biodiversity.
- While the Ministry of Agriculture and Food does not have a biodiversity-specific mandate, it is directed to support Regenerative Agriculture Network and “natural systems” to enhance food production. This work is interrelated to climate change and biodiversity enhancement. Regenerative agriculture uses nature-based solutions to increase production, and mimics natural systems to take advantage of ecosystem services by increasing biodiversity.
- Biodiversity is critical to the health and well-being of British Columbians and is critically important to Indigenous Peoples’ food, social and ceremonial needs. It remains a key interest for Indigenous Nations.

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- BC continues to work with Indigenous Nations and partners on developing new approaches that will:
  - Support reconciliation with Indigenous Peoples,
  - Achieve better alignment with federal Species at Risk Act,
  - Address upcoming challenges for adapting to climate change,
  - Encourage voluntary conservation with private-land owners by incentivising stewardship programs,
  - Enabling local governments to develop creative, and economical solutions.
- A variety of species and habitat management initiatives and policy projects are underway which will each provide benefits towards biodiversity and species at risk management.
- *Economic recovery*: Watershed, wetland, species, and ecosystem restoration initiatives were funded in 2021 through a one-time \$37 million contribution from the Pandemic Response and Economic Recovery Vote. Projects are underway in collaboration with Indigenous Nations and are supporting healthier, more resilient ecosystems to climate change impacts such as floods, droughts, and wildfires.
- *Conservation Priorities and Species Listing Project*: LWRS is developing procedures for listing SAR under existing legislation and for prioritizing species into different management streams for a range of conservation actions. Next steps include external engagement on the draft products.
- *Environmental Mitigation Policy (EMP) & Biodiversity Offsets Project*: The EMP outlines an approach to mitigation and biodiversity offsetting that strives to balance economic development and conservation outcomes. Based on project findings, the Ministry is updating the provincial procedures to increase clarity for policy users and is developing new tools to facilitate easy implementation of the policy to projects and activities.
- *Old Growth Strategic Review (OGSR)*: The B.C. government is taking a new, holistic approach as a first step for the benefit of all British Columbians to protect old-growth forests. The BC government has committed to implement all 14 recommendations of the independent panel's old growth strategic review report: *A New Future for Old Forests*. Many of the recommendations, including deferrals, ecosystem health prioritization, and the development of a new framework for biodiversity targets, will benefit species at risk and biodiversity. Ministry of Forests (MOF) is leading the implementation of OGSR with support from LWRS and is tasked with supporting LWRS in integrated land and resource management and to invest in strategies to better protect wildlife and habitat corridors including implementation of Together for Wildlife (T4W).
- The LWRS provides an opportunity to co-ordinate and enhance the work of Provincial programs and initiatives that currently contribute towards improved biodiversity outcomes and Indigenous reconciliation including, but not limited to: CleanBC; Together for Wildlife; Modernized Land Use Planning; Cumulative Effects Management Framework; Forest and Range Practices Act renewal

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### Ministry of Land, Water and Resource Stewardship

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including Forest Landscape Plans; Climate Change Adaptation Strategy and the Old Growth Strategic Review.

**Date Prepared/Revised: April 26, 2022**

**Ministry Executive Sponsor:**

Name: David Muter

Phone: 250-217-5385

**Alternate Contact for Issue:**

Name: Celine Davis

Phone: 778-698-4060

## 2022/23 Estimates Debate

Ministry of Forests, Lands, Natural Resource Operations and Rural Development  
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**Issue:** Modernized Land Use Planning – Budget and Priorities

**Recommend Response:**

- My mandate letter includes direction to “*continue the modernization of land use planning for ecosystems, rivers, lakes, forests, land and waters by involving First Nations local communities and industry, confirming social choice on the land base through inclusive processes.*”
- Land use planning sets the strategic direction to guide sustainable resource stewardship and management of provincial public land and waters that meets economic, environmental, social, and cultural objectives.
- Modernized land use planning (MLUP) is a partnership-based model between Indigenous governments and the Government of British Columbia that also includes meaningful and targeted engagement with stakeholders, including local governments, industry, non-government organizations and the public.
- The Ministry of Land, Water and Resource Stewardship will continue to strengthen BC’s commitment to land-use policy and planning to bring more certainty to investors, communities, and First Nations by confirming social choice on the land base.
- The \$7.78 million annual budget will continue to support land use planning program development and implementation, including advancing approximately 9 medium to smaller sized priority planning projects.
- Additional funding may be allocated to address emerging planning pressures resulting from BC’s strengthened commitment to land use policy and planning.
- Developing strong relationships with First Nations using a partnership-based approach to the land use planning process takes time and helps to establish trust in the

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### Ministry of Forests, Lands, Natural Resource Operations and Rural Development

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process, benefitting all parties as planning implementation continues.

- Projects are being initiated in high priority areas, at the appropriate scale, varying between comprehensive to issue specific plans that seek to address defined community needs and assist implementation of the Declaration on the Rights of Indigenous Peoples Act.
- The Province is actively working to ensure coordination and alignment between other provincial planning initiatives, including Forest Landscape Planning and Water Sustainability Planning. This is particularly important where planning boundaries of different initiatives overlap and may impact the work and outcomes of one another.

#### **Key Facts:**

- LWRS is the lead for all land use planning initiatives in BC.
- Land use planning sets the social choice and management regime for land use in a given region. Other ministries in the natural resource sector (FOR, EMLI, MIRR, ENV) participate in land use planning projects and will support the implementation of land use plans.
- Drivers for land use planning include reconciliation, a strong sustainable economy, addressing cumulative effects, landscape level disturbance, water sustainability, climate impacts, and species at risk.
- The Indigenous Funding Envelope provided First Nations capacity funding for involvement in modernized land use planning in the amount of \$700,000 in 2021/22 and will require a similar amount for 2022/23.
- Modernized land use planning program funding supports eight staff in branch and 24 staff distributed across the eight regions. In addition, program funding also supports staff in each of the Ministry of Indigenous Relations and Reconciliation and the Ministry of Energy Mines and Low Carbon Innovation.
- Alignment with other ministry priorities including supporting implementation of the Old Growth Strategic Review Recommendations, the Together for Wildlife action plan, and collaboration with other levels of planning will help advance a more coordinated approach to planning in the province.
- Branch staff are involved in provincial-level engagement, policy, communications, tool development, and program administration. Regional staff are involved in active land use planning, foundational work to support future projects, including cumulative effects assessments, laying the groundwork for Indigenous partnerships on projects, and engagement regionally with stakeholders.

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- The Province continues to engage First Nations provincially to collaboratively refine program principles and products that guide the program. A public engagement platform to support modernized land use plans was launched in January 2020.
- Starting in fiscal year 2019/20, funding was provided to initiate 11 MLUP projects:
  - Of the 11 projects reviewed by the ELUC in June 2019, 9 have now reached government to government agreement and are advancing into the project planning stage of the LUP process. These include:
    - Fort St. John LRMP Update Project and Extensions (3 projects within)
    - shíshálh Nation Land Use Planning Project
    - Nicola Watershed Land Use Planning Project
    - Southeast Wildlife Corridor Land Use Planning Project
    - Tahltan – BC Land Use Planning Project
    - Gwa'ni Project (Nimpkish Land Use Plan)
    - Wetzin'kwa Water Sustainability Project
  - The other projects remain in various states of government-to-government discussions and are not yet at a stage of releasing information to the public.

**Date Prepared/Revised: April 26, 2021**

**Ministry Executive Sponsor:**

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Phone: 250-217-5385

**Alternate Contact for Issue:**

Name: Tricia Morris

Phone: 778-678 9348

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### Ministry of Land, Water and Resource Stewardship

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**Issue:** Management of the Conservation Lands Audit

**Recommend Response:**

- The Office of the Auditor General audit on the Management of the Conservation Lands Program was released in May 2021.
- All 11 recommendations of the audit were accepted by government. These recommendations align with commitments already made to improved wildlife stewardship and habitat conservation under the Together for Wildlife Strategy (T4W).
- The ministry has committed to an Action Plan presented to the Select Standing Committee on Public Accounts in June 2021.
- The Action Plan directs development of a strategic plan for the program. Contract support has been secured to complete this planning process by March 2023.
- The Strategic Plan will provide direction for the Conservation Lands program, strengthen the Conservation Lands Partner Program (Nature Trust of BC, Ducks Unlimited Canada, Habitat Conservation Trust Foundation (HCTF), and Nature Conservancy of Canada) and help build new partnerships including with Indigenous Nations.
- The Minister's Wildlife Advisory Council and First Nations-BC Wildlife and Habitat Conservation Forum will be engaged to provide input to the strategic plan.
- Regional and provincial program staff have formed a working group to develop a strategy to reduce unauthorized uses on conservation lands.
- Provincial staff have updated the current status of all overlaps between administered conservation lands and Range Act tenures and are working to resolve outstanding overlaps.

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#### **Key Facts:**

- The Conservation Lands Program is a collaboration between LWRS and Ministry of Forests. Ministry of Forests administers land under the program under the Wildlife Act (primarily Sections 3-5,7,8) Strategic leadership of the program (including staff resources) are within LWRS.
- Some of the findings from the Auditor General's audit include:
  - The ministry had not ranked important habitats by priority for conservation.
  - Provincial direction for the program was lacking.
  - The ministry has provided limited support to staff to collaborate with Indigenous peoples when securing and managing conservation lands.
  - The majority of Wildlife Management Area plans were not current or approved.
  - The regions had not ensured activities on administered conservation lands were compatible with management objectives, with many unauthorised activities noted.
- A progress update on the Action Plan will be delivered to the Select Standing Committee on Public Accounts in 2023.
- In 2022/23, the ministry anticipates a \$10M annual budget uplift for wildlife and habitat stewardship committed to support implementation of the T4W Strategy, including Action 11 (Conservation Lands).
- In October 2021, a Conservation Lands Analyst was hired to support the audit response and T4W implementation. T4W funding also supported a \$300K uplift through the HCTF Lands Operations and Management Funding Program in 2021/22, supporting improved management of conservation lands.
- Program staff have secured a grant through the Nature Smart Climate Solutions Fund (Environment and Climate Change Canada) for spending of \$1.4M over 3 years to secure new lands for wildlife stewardship. For 2021/22, a contribution was made to support the purchase of 100 hectares of Coastal Douglas-fir habitat on Lasqueti Island by the BC Parks Foundation. In year 2, we plan to work with the Nature Conservancy of Canada to acquire land to be included in a proposed Wildlife Management Area.

**Date Prepared/Revised: April 27, 2022**

**Ministry Executive Sponsor:**

Name: David Muter

Phone: (250) 217-5385

**Alternate Contact for Issue:**

Name: Steve Gordon

Phone: (250) 739-8386

## Status Update on the Response to the Office of the Auditor General Audit - Management of the Conservation Lands Program (Released May 2021)

Prepared by: Christina Waddle, Wildlife and Habitat Branch with input from other branch and regional program staff.

Last updated: 27 April, 2022

Rec. # Accepted Yes / No	OAG Recommendation	Government's Response	Actions Planned & Target Date(s) <sup>1</sup>	Assessment of Progress to date and Actions Taken
1. Yes	We recommend that provincial and regional staff work with conservation partners to establish a shared list of provincial and regional priority habitats for the program.	Work is already underway to inform priority habitats for the program, with consideration to climate change. We will identify a process, developed collaboratively with the Conservation Lands Partner Program (CLPP) members and Indigenous peoples, to identify a shared list of priority habitats at both provincial and regional scales for acquisition (administered and non-administered lands), as well as a review schedule to ensure that conservation values and management plans are current and relevant to protect the priority habitats identified.	<p>The Ministry will identify a process, developed collaboratively with the Conservation Lands Partner Program members and Indigenous peoples, to identify a shared list of priority habitats at both provincial and regional scales for acquisition (administered and non-administered lands).</p> <p><b>Target Date:</b> 31/01/2023</p>	<p>We will have discussions on this item as part of the Conservation Lands Program Strategic Plan process (Recommendation #2) and have a path forward to deliver on this recommendation.</p> <p>Various land use planning initiatives identify areas in need of conservation tools (Marine Protected Area Planning, modernized Land Use Planning). Areas identified in these plans are a priority for conservation lands tools, where the tool is the right fit to meet the objectives in the plan.</p> <p>Program staff have been participating in a Climate Informed Conservation Planning for BC project in partnership with the Ministry of Environment and Climate Change Strategy and the University of Alberta. This work will inform various planning processes underway including modernized Land Use Planning.</p> <p>Priority habitats within individual conservation lands are identified as part of the securement process, and will be identified in management direction statements moving forward.</p> <p><b>Target date status:</b> Minor delay, now estimate 31/03/2023</p>

<sup>1</sup> As reported to the Select Standing Committee on Public Accounts

Rec. # Accepted Yes / No	OAG Recommendation	Government's Response	Actions Planned & Target Date(s) <sup>1</sup>	Assessment of Progress to date and Actions Taken
			<p>Priorities habitats will be spatially identified through regional planning for conservation lands and considered in the Conservation Lands Program, as well as help to inform related initiatives/activities (e.g., modernized land use planning, Forest Landscape Planning, Collaborative Stewardship Forums, etc.).</p> <p><b>Target Date:</b> 31/01/2024 and ongoing</p>	<p>The Skeena region has requested funding to build an assessment and decision support tool to characterize, manage and prioritize existing and candidate non-administered Conservation Lands (Section 16 and Section 17 <i>Land Act</i> designations).</p> <p><b>Target Date status:</b> on track</p>
2. Yes	We recommend that provincial and regional staff work with conservation partners, including Indigenous peoples, to develop and implement a provincial strategic plan for the program, including goals, objectives, outcomes, performance measures and targets.	Much of the Conservation Lands Program history of success is built on strong partnerships with conservation organizations, both at the provincial and regional scale. Leveraging existing, and creating new, partnerships will be key in the development of our strategic plan. We will further engage the Minister's Wildlife Advisory Council and the First Nations-BC Wildlife and Habitat Conservation Forum established under the Together for Wildlife Strategy to provide input and comment on the strategic plan.	<p>The Ministry will complete a provincial Strategic Plan for the Conservation Lands Program, including goals, objectives, outcomes, and performance measures and targets.</p> <p><b>Target Date:</b> 31/01/2023</p>	<p>We have embarked on a Conservation Lands Program Strategic Plan process with the support of a contractor. The process will be undertaken in four phases, and is estimated to be completed in one year (Feb 2022 – Mar 2023). The development phase (Apr to Jun 2022) will include gathering information from key partners and internal government staff. The next phase (Building the Plan, Sep to Nov 2022) will include workshops to develop key goals and objectives, and performance measures. A draft plan for internal review will be available by Nov 2022.</p> <p><b>Target date status:</b> Minor delay, now estimate 31/03/2023</p>

Rec. # Accepted Yes / No	OAG Recommendation	Government's Response	Actions Planned & Target Date(s) <sup>1</sup>	Assessment of Progress to date and Actions Taken
3. Yes	We recommend that the ministry clarify the purpose of non-administered conservation lands and provide direction to the regions regarding how these lands should be secured and maintained.	Provincial and regional staff will work together to develop policy and procedure on the purpose of non-administered conservation lands which are designations under the Land Act made for conservation purposes. The use of Land Act designations as a first or 'holding' step towards Wildlife Management Area designation under the Wildlife Act will also be clarified. Policy will also identify expectations for the ongoing management and review of existing designations to ensure they continue to contribute to conservation objectives.	<p>The Ministry will develop policy and procedure on the purpose of non-administered conservation lands (designations under the <i>Land Act</i> made for fish and wildlife management purposes), which will include:</p> <ul style="list-style-type: none"> <li>- guidance on the selection of <i>Land Act</i> tools in the context of other habitat designations made under other legislation (e.g., <i>Forest and Range Practices Act</i>, <i>Oil and Gas Activities Act</i>, etc.);</li> <li>- the use of <i>Land Act</i> designations as a first or 'holding' step towards Wildlife Management Area designation under the <i>Wildlife Act</i></li> <li>- expectations for the ongoing management and review of existing designations to ensure they continue to contribute to conservation objectives according to defined criteria.</li> </ul> <p>This work will inform, and be informed by, the Crown Land Transformation Project scheduled to begin in the summer 2021, led by the Lands Branch, which will review all designations on the Crown land base (see also Recommendation 10).</p> <p><b>Target Date:</b> 31/05/2022</p>	<p>We have not yet developed any policy guidance to date; however, we have completed review of existing designations for all six regions participating in the <i>Land Act</i> Reserve/Withdrawal Cleanup project. This project has provided opportunities to educate current program staff on the use of the designations within the conservation lands program and beyond and information gathered as part of the project will be useful in the development of policies and procedures.</p> <p>The current Ministry re-organization may have implications for how we action this recommendation. This is still to be determined.</p> <p><b>Target Date Status:</b> delayed, now estimate 30/11/2023</p>

Rec. # Accepted Yes / No	OAG Recommendation	Government's Response	Actions Planned & Target Date(s) <sup>1</sup>	Assessment of Progress to date and Actions Taken
4 Yes	We recommend that the ministry include specific direction for staff to collaborate with Indigenous peoples in the provincial strategic plan for the program.	In 2017, all provincial program areas were directed to review policies, programs, and legislation to determine how to bring the principles of the United Nations Declaration on the Rights of Indigenous Peoples and the Calls to Action of the Truth and Reconciliation Commission into action. Even prior to that mandate, the Conservation Lands Program has had partnerships with various Indigenous communities in the province. To emphasize this direction and improve clarity on the expectations for Conservation Lands Program staff, the strategic plan will include direction to collaborate with Indigenous people in all aspects of the Conservation Lands Program.	To complement existing direction given to all provincial staff in 2017, the Ministry will include specific direction to collaborate with Indigenous peoples in all aspects of the Conservation Lands Program in the strategic program plan (see also Recommendation 2).  <b>Target Date:</b> 31/01/2023	The Conservation Lands Program Strategic Plan will include direction for staff to collaborate with Indigenous peoples in the securement and management of Conservation Lands.  As part of the strategic plan process, we plan to engage with the Minister's Wildlife Advisory Council and the First Nations-BC Wildlife and Habitat Conservation Forum to seek their advice on how the strategic plan direction can support increased partnership with Indigenous peoples in the securement and management of Conservation Lands. The Strategic Plan may also include objectives or strategies for how the program could support Indigenous-led conservation initiatives through interim or complementary tools.  Regional staff continue to pursue partnership with Indigenous peoples in the management of Conservation Lands. Several T4W proposals include requests to support building partnerships with Indigenous Nations including Collaborative Management Actions/Planning at Swan Lake WMA, Indigenous Guardian program proposals for two WMAs in the Thompson Okanagan and support for collaborative management planning in Kootenay Boundary.  <b>Target date status:</b> Minor delay, now estimate 31/03/2023

Rec. # Accepted Yes / No	OAG Recommendation	Government's Response	Actions Planned & Target Date(s) <sup>1</sup>	Assessment of Progress to date and Actions Taken
5 Yes	We recommend that the regions ensure that all wildlife management areas have current and approved management plans.	In 2020-21, funding was provided to develop management plans for two key Wildlife Management Areas: Columbia Wetlands and East Side Columbia Lake. Additional WMAs are slated for new planning in 2021-22. We will continue to progress work in priority order. The provincial strategic plan will identify a target by when all WMA plans will be completed or updated.	The Ministry will develop a management planning framework for Wildlife Management Areas, including prioritization and review criteria and annual targets.  <b>Target Date: 31/05/2022</b>	The management planning framework will include the development of a Management Direction Statement template which will be an efficient and practical document to complete for WMAs and other administered conservation lands, compared to more traditional management planning. This will ensure each site has established management direction including the identification of compatible use activities, key threats and management priorities.  <b>Target date status:</b> Minor delay, now estimate 31/03/2023
			Management plans will be completed in priority order at a regional scale.  <b>Target Date: 31/05/2029</b>	Once the new framework is confirmed including a finalized management direction statement template, a schedule for completing all WMA plans will be completed.  <b>Target Date status:</b> on track

Rec. # Accepted Yes / No	OAG Recommendation	Government's Response	Actions Planned & Target Date(s) <sup>1</sup>	Assessment of Progress to date and Actions Taken
6 Yes	We recommend that provincial and regional staff work with the Compliance and Enforcement Branch and the Conservation Officer Service to develop a strategy to reduce unauthorized use in the most at-risk administered conservation lands.	Conservation Land Program staff have recently completed a suite of draft policies intended to help clarify activities and land uses that are compatible with administered conservation lands. We will work with the Compliance and Enforcement Branch and Conservation Officer Service to finalize policies and develop an enforcement strategy to inform resourcing needs, to reduce unauthorized use in the most at risk administered conservation lands, to be reviewed on an annual basis moving forward.	<p>The Ministry will consider various options to reduce unauthorized use, including refinement of recently drafted policy guidance, management planning, signage, access management, and consider new regulatory amendments. Regional staff will develop a list of the most at-risk conservation lands including the types of unauthorized activities occurring and the habitat values at risk.</p> <p>We will work with the Compliance and Enforcement Branch and Conservation Officer Service to develop an enforcement strategy including: reviewing gaps in regulations applied that limit compliance and enforcement opportunities; technological solutions to monitoring for unauthorized uses; determining resourcing needs for highest priority actions and issues; and, leveraging existing, or developing new, partnerships with Indigenous communities to improve monitoring capacity, possibly through Indigenous Guardian programs. These strategies will be captured in the annual operational planning process to identify the specific goals and priorities for Compliance and Enforcement actions.</p> <p><b>Target Date:</b> 31/12/2022</p>	<p>The Compliance and Enforcement Branch (CEB) 2022/23 Operational Priorities have prioritized conservation lands for any reports of unauthorized use and occupation of Crown Land. The Operational Priorities direct Nature Resource Officers to "target inspections and prioritize complaint response to focus on land occupation in areas identified as conservation lands."</p> <p>Provincial and regional program staff have started an informal working group for this recommendation. Members of this group have taken the following actions to date:</p> <ul style="list-style-type: none"> <li>Regional program staff in the Thompson Okanagan are working closely with Natural Resources Officers to undertake a pilot project to identify and action key management issues in the South Okanagan Wildlife Management Area.</li> <li>Regional program staff in the Thompson Okanagan are also looking to partner with Indigenous Guardian programs to support management and monitoring in the McTaggart-Cowan/nsək'niw't and South Okanagan WMAs.</li> <li>A T4W proposal has been submitted to support additional capacity in the Conservation Officer Service to undertake additional enforcement action in South Coast WMAs</li> </ul> <p>Next steps include continuing development of management policies; further discussions to identify the most 'at-risk' conservation lands; and identifying components of an overall enforcement strategy.</p> <p><b>Target date status:</b> Delayed, now estimate 31/12/2023</p>

Rec. # Accepted Yes / No	OAG Recommendation	Government's Response	Actions Planned & Target Date(s) <sup>1</sup>	Assessment of Progress to date and Actions Taken
7 Yes	We recommend that the ministry complete the Overlap of Conservation Lands and Range Act Tenures Project, including resolving all incompatible overlaps and developing direction regarding where and under what conditions <i>Range Act</i> tenures should be issued on administered conservation lands.	The Ministry is committed to resolving all incompatible overlaps of range tenures on conservation lands. Two-thirds of the overlaps identified at the outset of the Conservation Lands and Range Act Tenures Project have been resolved. Some of those that remain have had a decision made to resolve the overlap, and we are working to implement these decisions. Moving forward, we will complete a work plan for resolution of all remaining overlaps in collaboration with the Range Branch.	<p>The Ministry will develop a work plan to complete resolution of all remaining overlaps in collaboration with the Range Branch. Issues that cannot be resolved through the collaborative efforts at the staff and tenure level will be elevated for executive direction. This will include consultation with those involved with the <i>Range Act</i> Tenures Project, including The Nature Trust of BC, Ducks Unlimited Canada, and the Habitat Conservation Trust Foundation.</p> <p><b>Target Date:</b> 31/12/2022</p>	<p>The Resource Stewardship Division and Range Branch have committed to work together to continue the efforts that were initiated by the previous Tenure Overlap Committee. FLNRORD is working cross-ministry to continue to review and update the tracking of overlaps marked unresolved as of 2019, led by the Conservation Lands staff with the support of Executive Directors and Directors from Resource Stewardship Division, Range Branch and Regional Operations' Resource Management teams. An internal working group will be stood up as needed to help advise staff on resolving priority outstanding cases. The current Ministry re-organization is expected to create some delays in this process.</p> <p><b>Target date:</b> Delayed, now estimate 30/06/2023</p>
			<p>Conservation Lands provincial and regional staff with work with our colleagues in the Range Branch to ensure the locations of conservation lands are identified when applications for new range tenures are made and that permission of the regional manager under the <i>Wildlife Act</i> is required for those tenures to be issued, in addition to permission of the landowner in the case of leased properties. Guidelines will be developed to help assess compatibility of range use on conservation lands.</p> <p><b>Target Date:</b> 31/12/2023</p>	<p>Guidelines are still to be developed, however, conversations between Conservation Lands Program and Range Branch staff indicate a much higher level of awareness of conservation lands because of the range tenure overlap project. The development of guidelines and increased awareness about permissions required for issuing tenures will occur concurrently with the process of completing the range tenure overlap project.</p> <p><b>Target Date status:</b> on track</p>

Rec. # Accepted Yes / No	OAG Recommendation	Government's Response	Actions Planned & Target Date(s) <sup>1</sup>	Assessment of Progress to date and Actions Taken
8 Yes	We recommend that provincial and regional staff develop and implement a system to track infrastructure on conservation lands, including the dams managed by Ducks Unlimited Canada (DUC).	<p>The West Coast and South Coast Conservation Land Management Programs, where conservation lands are managed through a regional partnership, already have a system for tracking infrastructure through an application for mobile devices. Provincial staff will consider existing systems and create a plan for how inventory should be tracked, including whether a provincial centralized system is warranted, or provide support for regional systems.</p> <p>Ducks Unlimited Canada is an important partner in the management of critical wetland habitat across the province. In addition to the above, provincial staff will meet with Ducks Unlimited Canada to review the status of each dam or water control structure on conservation lands and work with regional staff and the Water Management Branch to determine whether site visits or other actions may be required.</p>	<p>The Ministry will work with Ducks Unlimited Canada to update information on the status of infrastructure on conservation lands and other Crown Land, as well as regional staff and the Water Management Branch to determine schedule of site visits and other actions as appropriate.</p> <p><b>Target Date:</b> 31/12/2021</p>	<p>Minimal work has been delivered to date. A T4W proposal has been submitted to initiate a project in partnership with DUC to action this recommendation.</p> <p><b>Target Date Status:</b> Delayed, now estimate 31/03/2023</p>
			<p>Review existing infrastructure tracking systems used in some regions and by Ducks Unlimited Canada (see above) and create a plan for tracking infrastructure inventory across the province.</p> <p>Dependent on review and tracking system, an infrastructure policy may be developed to guide what infrastructure is appropriate on conservation lands, appropriate inspection and maintenance frequency, and when replacement or removal is required.</p> <p><b>Target Date:</b> 31/12/2023</p>	<p>Minimal work has been delivered to date. We plan on spending the next year assessing data needs, which will include infrastructure, and decide on next steps.</p> <p><b>Target Date Status:</b> Delayed, now estimate 31/03/2024</p>

Rec. # Accepted Yes / No	OAG Recommendation	Government's Response	Actions Planned & Target Date(s) <sup>1</sup>	Assessment of Progress to date and Actions Taken
9 Yes	We recommend that provincial and regional staff work with Crown Lands Registry and GeoBC staff to coordinate updates to the program's three key inventory sources.	Short-term actions are already underway to improve information management. These actions will inform a Data and Information Management Procedure to ensure ongoing coordination of the three key inventory sources. This procedure will be developed in cooperation among provincial, regional, Crown Lands Registry and GeoBC staff. Considerations will include the workflow for new updates and review of existing information in the Crown Lands Registry (see recommendation 10).	Conservation Lands Program staff will work with Crown Lands Registry and GeoBC staff to confirm the accuracy and agreement between of the two information sources. Existing information on administered Lands in the Crown Lands Registry will be reviewed for accuracy and updated where necessary.  <b>Target Date:</b> 28/02/2022	This action links to Recommendation 10 with respect to non-administered lands (see below).  Minimal work has occurred to date on administered lands in the Crown Lands Registry. This was delayed until the Ministry re-organization so that the records may be updated in the new structure.  <b>Target Date Status:</b> Delayed, now estimate 31/03/2023
			The Ministry will undertake an assessment of the conservation lands database and the information contained and whether a new system is warranted. This will include consultation with regional staff to ensure access to information is readily available and will meet day-to-day management needs. Depending on the decisions made, this system may also support inventory tracking (see Recommendation 8).  <b>Target Date:</b> 31/05/2023	Minimal work has been delivered to date. Recent work on initiatives such as the <i>Land Act</i> Reserve/Withdrawal Cleanup project has helped to clarify some of the program's data issues and requirements, but further assessment is required. We plan on spending the next year assessing the programs data needs together with regional staff, and plan to request funding to undertake a contract to replace the Conservation Lands Database function in 2023-24.  <b>Target Date Status:</b> Delayed, now estimate 31/03/2024

Rec. # Accepted Yes / No	OAG Recommendation	Government's Response	Actions Planned & Target Date(s) <sup>1</sup>	Assessment of Progress to date and Actions Taken
			<p>Conservation Lands Program staff will work with Crown Lands Registry and GeoBC staff to complete a Data and Information Management Procedure building on the existing Information Management and Technical Help Manual Guidelines to ensure ongoing coordination of the three key inventory sources. These guidelines will be informed by work under Recommendation 3 and 10.</p> <p><b>Target date:</b> 31/05/2024</p>	<p>The Data and Information Management Procedure will be completed when data management tools have been confirmed.</p> <p><b>Target Date Status:</b> Delayed, now estimate 31/03/2025</p>
10 Yes	We recommend that provincial and regional staff work with Crown Lands Registry staff to correct the inaccurate tracking of non-administered conservation lands and develop a method to accurately track this information.	The Crown Lands Registry tracks many thousands of Land Act designations across the province and those tracked for conservation purposes are a small portion. Non-administered conservation lands are identified in the Crown Lands Registry by the purpose "Environment, Conservation and Recreation" and sub-purpose "Fish and Wildlife Management". Regional projects are currently underway or completed to ensure data are accurate. Conservation Lands Program staff will support the Lands Branch to coordinate these efforts at the provincial level and create a plan to review outstanding Land Act designations with the purpose "Environment, Conservation and Recreation" to ensure the correct sub-purpose is identified for non-administered conservation lands.	<p>Conservation Lands Program staff will support the Lands Branch's coordination of review of data accuracy and create a plan to review <i>Land Act</i> designations with the purpose "Environment, Conservation and Recreation" to ensure the correct sub-purpose is identified for non-administered conservation lands ("fish and wildlife management"). This may include requests for transfer of some <i>Land Act</i> designations from other interest holders to the conservation lands program, depending on the outcome of recommendation 3. This work will inform, and be informed by, the Crown Land Transformation Project scheduled to begin in the summer 2021, led by the Lands Branch, which will review all designations on the Crown land base (see also Recommendation 3).</p> <p><b>Target Date:</b> 31/05/2024</p>	<p>Provincial program staff, as part of the <i>Land Act</i> Reserve Withdrawal Clean-up project, and with input from regional program staff and information support from DUC, have reviewed all non-administered lands designations. This has resulted in ensuring that most non-administered lands (6 of 8 regions) within the program are accurate and up-to-date in the Crown Land Registry and complying with the recently updated Land Use Operational Policy: Reserves, Withdrawals, Notations and Prohibitions. This work will be followed up by ensuring the updated information mirrors records with GeoBC and the Conservation Lands Database.</p> <p>This review has raised questions as to why some <i>Land Act</i> designations for conservation purposes are considered part of the conservation lands program and others are not. Once the policy work is completed under recommendation 3, subsequent review of these lands will likely be beneficial.</p> <p><b>Target Date Status:</b> No change, estimate 31/05/2024</p>

Rec. # Accepted Yes / No	OAG Recommendation	Government's Response	Actions Planned & Target Date(s) <sup>1</sup>	Assessment of Progress to date and Actions Taken
11 Yes	We recommend that provincial and regional staff monitor for effectiveness using performance measures and targets from the provincial strategic plan and report publicly on the program's progress, at both the provincial and regional level.	The Ministry will include performance measures and targets in the provincial strategic plan. We will report publicly on the Conservation Lands on an annual basis as part of the implementation of the Together for Wildlife Strategy performance management framework. When the strategic plan is complete, we will ensure that public reporting aligns with specific performance measures and targets identified.	<p>The Ministry will include performance measures and targets in the provincial strategic plan. We will report publicly on the Conservation Lands on an annual basis as part of the implementation of the Together for Wildlife Strategy performance management framework. When the strategic plan is complete, we will ensure that public reporting aligns with specific performance measures and targets identified.</p> <p><b>Target Date:</b> 31/01/2024</p>	<p>We will target a report on the progress made one year after the release of our strategic plan, and annually thereafter.</p> <p><b>Target Date Status:</b> Minor delay, estimate 31/03/2024</p>

## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Collaborative Stewardship Framework and the Environmental Stewardship Initiative

**Recommend Response:**

- The Collaborative Stewardship Framework (CSF) and the Environmental Stewardship Initiative (ESI) are comprised of 9 Forums representing 65 First Nations. ESI and CSF create space for the Province to collaborate with Nations, and to build trust and transparency on priority land and resource management approaches (cumulative effects, inventory, monitoring etc.).
- ESI and CSF have been amalgamated under the new LWRS and are now called Collaborative Indigenous Stewardship Forums (CISF's).
- Industry and stakeholder representatives are engaged in the ISF's. Industry sees CISF's as venues for constructive work with First Nations, leading to trusted, informed, and durable decisions in the future.
- Stakeholder and community engagement, local and regional government involvement, along with federal support and engagement, are key priorities for the Forums.
- The Forum model is providing the venue for collaboration on cumulative effects protocols, assessment, and monitoring of values of shared interest, and the generation of trusted data reflecting Indigenous knowledge.
- Forum Nations have high expectations that the Province will use CISF products and outcomes to inform operational and strategic decisions. Examples of operational decisions include applications to the Province under the Land Act, Water Sustainability Act, Forest and Range Practices Act and the Wildlife Act. Examples of strategic decisions includes Timber Supply Review, wildlife management decisions, and modernized land use planning processes.

**Additional Response points (if needed):**

## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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- Work is underway to renew the mandates for the CISFs in early fiscal year 2022/23

#### **Key Facts:**

- LWRS is the lead agency for the delivery and implementation of CISF.
- LWRS leads the strategic prioritization of collaborative work with participating Indigenous Nations at the regional Forum tables and translates the co-management and shared stewardship objectives into tangible on-the-ground actions targeting environmental sustainability and land management informed by Indigenous perspectives and ways-of-knowing.
- The Ministry of Forests supports LWRS in the delivery of the CISF model and approach to regional collaborative stewardship, including landscape-level forestry and stewardship planning, fish and wildlife monitoring, assessment and management, and water management.
- Ministry of Indigenous Relations and Reconciliation supports the establishment of the regional aggregated Nation model, and the establishment of new regional Forums.
- Ministry of Environment and Climate Change Strategy supports deliverables related to watershed co-governance, species at risk recovery, flood and drought response and climate change action.
- ESI began in 2015/16 with a \$30M commitment over six years with 32 northern Indigenous Nations in 4 regional Forums.
- ESI was created to address concerns related to cumulative environmental effects from Liquified Natural Gas (LNG) development, and has now evolved to consider the impacts from across the natural resource sector
- Building upon the initial success of ESI, CSF began in 2018/19 with a \$15M commitment over three years, with an additional 5 Forums involving 33 Nations.
- Both programs are very similar with regards to outcomes, funding, governance, and process.
- Funding for CSF and ESI in 2021/22 was approximately \$9M in total. Due to the impacts of COVID, some CSF/ESI Indigenous members were re-assigned to community health priorities.
- Key 2021/22 outcomes of CSF and ESI:
  - Completion of 14 Cumulative Effects Assessment Reports and protocols;
  - Agreements in place to feed forum-generated information to Land Use/Water Planning tables (e.g., Omineca, Fort St. John LRMP, Nicola Watershed, Upper Bulkley Morice (Wet'zinkwa) Land Use Planning;
  - Creation of Cross-Forum (ESI and CSF) Data management/Data Sharing Framework;
  - Over 73 Indigenous positions funded during the mandate, working as Fish and Wildlife Technicians, Land Management Guardians, Cumulative Effects Specialists, and Project Managers.
  - Over 350 Indigenous community members trained, to fill those positions;

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### Ministry of Land, Water and Resource Stewardship

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- Regions containing forums: Cariboo (Southern Dakelh Nation Alliance), Kootenay Boundary (Ktunaxa Nation), Thompson Okanagan (Nicola Bands), Skeena (3Nations - Kaska Dena Council (Daylu Dena Council and Dease River First Nation), Taku River Tlingit First Nation, Tahltan Nation), and South Coast (S'olh Temexw Stewardship Alliance, Sto:lo), Skeena (East), Skeena (North Coast), Omineca (Carrier Sekani Nations), and the North East.

**Date Prepared/Revised:** April 28, 2022

**Ministry Executive Sponsor:**

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Tahltan Wildlife Accord

**Recommend Response:**

- Our commitment to partner with Tahltan on wildlife management is part of a larger reconciliation effort with Tahltan to strengthen the economy, improve wildlife stewardship and resolve long standing conflicts between Tahltan and resident hunters.

**Key Facts:**

- If funding is approved, implementation of Tahltan Wildlife Accord will be a shared responsibility between LWRS, Ministry of Forests (FOR) and Ministry of Indigenous Relations and Reconciliation (MIRR).
- FOR is the lead responsible for implementing joint wildlife monitoring and assessment commitments and supporting the LWRS lead on co-management.
- MIRR supports implementation of governance structures linked to a broader proposed Comprehensive Reconciliation Agreement.
- Tahltan territory is situated in the most valuable mineral region in BC.
- The Wildlife Accord is political commitment to develop a world-class wildlife stewardship regime to parallel commitments in support of mining sector.
- Accord negotiated in September 2020 amidst long standing conflict between Tahltan and resident hunters that escalated in 2020.
- Accord approved by ELUC in February 2021 subject to Treasury Board approval of implementation funding.
- Accord includes commitments to:
  - Design joint wildlife governance structures and processes using opportunities under the Declaration Act,
  - Co-management to enhance protection, stewardship and sustainability of moose and caribou,
  - Joint monitoring of caribou and moose, and
  - Joint predator monitoring and management plan.
- Final endorsement of the Accord requires fiscal and negotiation mandate being brought forward under the broader mandate request for a Tahltan Comprehensive Reconciliation Agreement this spring.
- Total Accord implementation funding request is \$5.2M over 5 years including \$0.46M for FOR capacity.
- The Accord will compliment efforts already underway through the 3 Nations-BC Collaborative Stewardship Forum for improving wildlife management.
- A joint workplan for implementing the Accord has been developed with Tahltan which compliments the ongoing collaborative stewardship work with 3 Nations.

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### Ministry of Land, Water and Resource Stewardship

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**Date Prepared/Revised:** April 28, 2022

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Indigenous Protected and Conserved Areas

**Recommend Response:**

- Indigenous Protected and Conserved Areas (IPCAs) are largely conservation-focused areas, but may include some industrial use, and identified by First Nations.
- IPCAs generally (1) are Indigenous led; (2) represent a long-term commitment to conservation, and (3) provide opportunities to reconnect with the land and heal both the land and Indigenous Peoples.
- IPCAs generally are Indigenous led, represent a long-term commitment to conservation, and provide opportunities to reconnect with the land and heal both the land and Indigenous Peoples.
- BC views IPCA proposals as a positive indicator that a Nation has developed their land use vision for their territory.
- IPCAs are a valuable point for government-to-government land use planning and management initiatives including supporting reconciliation agreements, or new protections from species at risk recovery or old growth.
- BC does not have a mandate to enter into new land use decisions as a result of IPCA proposals.
- As IPCAs can reflect a First Nation's land use vision, they can help identify land use conflicts and help set priorities where government-to-government land use planning can occur.

**Key Facts:**

- Engagement on IPCAs will be led by LWRS due to the relationship with modernized land use planning and to confirming social choice on the land base as well as a co-managed land and resource regime. Other Ministries in the natural resource sector will support this work (ENV, EMLI, MIRR, FOR).
- In 2017, Canada organized a pan-Canadian process to explore a new approach to protected areas that would help achieve protection targets of 17% across Canada and within supporting provinces and territories. There was recognition overall ability to reach 17% (then about 10%) would be unlikely without significant Indigenous support.

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### Ministry of Land, Water and Resource Stewardship

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- Canada brought together Indigenous experts along with federal, provincial, and territorial (FPT) government experts as a committee to explore a new approach to protected areas built, in part, from the international Indigenous Community Conserved Areas model. The committee (Indigenous Circle of Experts, or ICE) wrote the report *We Rise Together* a collection of 26 recommendations and advice to all governments on considering IPCAs.
- BC was the only jurisdiction at the time that reported achieving the 17% target. BC had a long history of establishing protected areas through specific mandated programs (e.g., Protected Areas Strategy, land use planning).
- Despite BC having achieved the 17% target, IPCAs continue to be an emerging issue in BC due to various factors including:
  - Direct federal funding to BC First Nations to pursue IPCAs in their territories,
  - Pressure from Canada for BC to adopt the new 25% and 30% protection targets,
  - Nations who are seeking renewed land use plans with the province, and
  - Nations who wish to exert and express more formally rights and title.
- As described in the ICE report, IPCAs generally:
  - Are Indigenous led,
  - Represent a long-term commitment to conservation, and
  - Provide opportunities to reconnect with the land and heal both the land and Indigenous Peoples.
- The concept of an IPCA is desirable to many First Nations. This, together with federal encouragement including resources, has resulted in several IPCA proposals from Nations across the province. Although IPCAs may vary in approach, most will result in two critical land management results:
  - change the current land designation configurations resulting in a different social land use outcome, and
  - overall reduce economic activities on the land base affecting jobs, revenues, and the economy.
- Addressing IPCA proposals is best managed through publicly involved land use planning projects, and those projects should occur where there are land use conflicts or where new land use objectives are needed. Currently, the land use planning program is a modest program that has fully allocated resources.

**Date Prepared/Revised:** April 28, 2022

**Ministry Executive Sponsor:**

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Caribou Recovery Program

**Recommend Response:**

- Caribou recovery is a priority of the Government of British Columbia, and a wide range of recovery actions have been implemented in caribou ranges.
- To support the recovery of caribou BC has invested approximately \$10M per year over the last 6 years.
- Provincial investments in caribou recovery will continue at this level to ensure continued resources to support BC's commitment to caribou recovery.
- The Caribou Recovery Program approaches recovery through consultation and engagement with Indigenous Nations, local governments, industry, and stakeholders.
- Government has adopted both short-term and long-term recovery actions.

**Key Facts:**

- LWRS is responsible for leading all species at risk recovery in BC including leading the Provincial Caribou Recovery Program. This work includes leading public facing engagement and consultation with affected stakeholder groups.
- Ministry of Forests is responsible for the regulatory components (permits and authorizations) required to support recovery strategies.
- In situations where there is a compliance and enforcement component the Conservation Officer Service, Ministry of Environment and Climate Change Strategy is responsible.
- On February 21, 2020, the Province signed the *Intergovernmental Partnership Agreement for the Conservation of the Central Group of Southern Mountain Caribou* (the "Partnership Agreement") in Northeastern BC and the **Canada** *British Columbia Conservation Agreement for Southern Mountain Caribou* (the "Section 11 Agreement") for all Southern Mountain Caribou.
- Despite earlier investments by the Province all 6 of the Boreal herds and 23 of the Southern Mountain herds are in decline. 13 of the 54 herds in BC have 25 animals or fewer.
- The main short-term threat to most caribou populations is a high rate of predation by wolves, and to a lesser extent other predators (bears, coyote, wolverine, and cougars).
- Increased predation is caused by changes in landscape condition – broad scale reduction in older forests and expansion in younger forests. These

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young, open forests provide ideal foods for other deer, elk, and moose. These ungulate species are the primary prey of wolves and cougar. This results in higher density of predators which then impact caribou populations negatively.

- Recent implementation of intensive management actions (i.e., maternal penning and predator control) in partnership with Saulteau and West Moberly First Nations have resulted in a reversal of the population decline in the central group which was previously declining at over 15% per year. Since the initiation of the intensive recovery efforts the population has grown from 162 caribou in 2014 to 289 in 2021. Caribou recovery requires a coordinated approach (depending on the specific conditions faced by a herd) involving a unique combination of the following actions:
  - habitat protection and restoration;
  - predator management;
  - maternal penning/conservation breeding; and
  - cooperative recovery planning with all Indigenous Nations, invested groups (communities, industry, adjacent jurisdictions), and other stakeholder groups.

#### **Section 11 Agreement and Partnership Agreement**

- The Section 11 Agreement and the Partnership Agreement are being implemented in BC according to the timelines and milestones set out in the agreements.
- As a direct result of Caribou Recovery Program's efforts through these Agreements, Canada has confirmed they do not see a need to implement further emergency habitat protections through the federal *Species at Risk Act*.
- These Agreements have ensured BC does not face the risk of a federal emergency habitat protection order that would have resulted in an immediate loss of over 10 million m<sup>3</sup> Annual Allowable Cut.
- The Partnership Agreement does include commitments to habitat protections that have an impact on the local economy. Canada is also providing funding to help mitigate these impacts.
- To support implementation of the Partnership Agreement the Province has secured federal funding amounting to \$56M to support the take back of tenured rights, as well as to address impacts to communities and workers.
- The BC Caribou Program has allotted \$300,000 for snowmobile clubs to support planning and implementation of enhancement areas for snowmobiling outside of the newly established snowmobile closures to support caribou recovery (485,000 hectares of Crown land) in the South Peace. These restrictions are a deliverable of the Partnership Agreement and necessary for effective protection.
- We will be working with industry and local governments to ensure these supports are provided in the most effective way possible.

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#### ***Predator Reduction***

please refer Caribou Recovery Program- Predator Reduction Estimates Note

**Date Prepared/Revised: April 28, 2022**

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**Issue:** Caribou Recovery Program South Peace Snowmobile Restrictions

**Recommend Response:**

- To help support the recovery of caribou populations, government placed (December 16, 2021) restrictions on the use of snowmobiles in selected areas of the South Peace region that contain crucial caribou habitat.
- Although winter motorized recreation is not the primary threat to caribou recovery, operating vehicles such as snowmobiles in alpine and sub-alpine caribou habitat can disturb and displace the animals, put unnecessary stress on them and make them more vulnerable to predators such as wolves and cougars.
- In the South Peace, about 485,000 hectares of Crown land are managed/closed for snowmobiling.
- This adds to the existing 1,903,915 ha managed/closed for snowmobiling to support caribou recovery in BC.
- BC is aware that some closures have inadvertently restricted access to areas that remain open for snowmobiling and will be updating the closures to correct this error.
- Riders can continue to enjoy their sport elsewhere in the region where their activities will have fewer impacts on caribou habitat and caribou recovery efforts.
- These closures will complement ongoing caribou recovery activities in the area, including: (1) habitat protection; (2) habitat restoration; (3) predator reduction; (4) maternal penning; and (5) supplemental feeding.
- The BC Caribou Program has allotted \$300,000 for clubs to access to support planning and implementation of enhancement areas for snowmobiling outside of the closures.

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#### **Key Facts:**

- LWRS is responsible for leading all species at risk recovery in BC including leading the Provincial Caribou Recovery Program. This work includes leading public facing engagement and consultation with affected stakeholder groups.
- Ministry of Forests is responsible for the regulatory components (permits and authorizations) required to support recovery strategies.
- In situations where there is a compliance and enforcement component the Conservation Officer Service, Ministry of Environment and Climate Change Strategy is responsible
- Science shows that snowmobile activity and engine noise are disruptive to caribou present in established caribou habitat. The animals may be forced to relocate to other areas not as suitable for feeding or for avoiding predators.
- Allowing unrestricted snowmobile activity in high elevation caribou habitat is inconsistent with government objectives to recovery caribou populations in BC.
- The approach taken in the South Peace is to mitigate the impacts of winter motorized recreation on caribou recovery, while at the same time retain or enhance winter motorized recreation opportunities in areas outside of the closures.
- As part of the southern mountain caribou Partnership Agreement signed in February 2020, the Government of British Columbia committed to a public engagement process to gather input about any plan to restrict the use of motorized vehicles in the South Peace.
- Caribou Recovery Program staff worked collaboratively with the Saulteau First Nations, West Moberly First Nations, and the federal government on recommendations within the Winter Motorized Recreation Management Plan to help caribou recover in the region.
- A 45-day consultation period with local First Nations was part of the process. Discussions were also held with the federal government, local governments (including Mackenzie, Tumbler Ridge, Chetwynd, Dawson Creek, and Fort St. John) and the B.C. Snowmobile Federation.

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### Ministry of Land, Water and Resource Stewardship

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**Issue:** Spotted Owl recovery planning

**Recommend Response:**

- BC has put in place over 281,000 hectares of legally protected Spotted Owl habitat; enough to support a long-term population target of 125 breeding pairs. In 2007, BC also initiated the first ever Spotted Owl captive breeding and release program. There are currently 31 owls in the program.
- BC's known wild population of Spotted Owls has declined to three owls. All are located within established wildlife habitat areas that prohibit forest harvesting. The low number of owls in the wildlife is in part due to the Captive Breeding Program which captured owls from the wild.
- In February 2021, the Province applied a temporary harvest deferral in the Spuzzum and Utzlius watersheds in areas near to the locations of the owls in the wild. These deferrals were in response to concerns that any forest harvesting activities near to the occupied areas may impact the likelihood of there survival. Therefore, an immediate action was necessary to prevent the Minister of Environment Climate Change Canada from recommending an emergency habitat protection order to the federal Cabinet under the federal Species at Risk Act.
- The renewal of these deferrals in Spuzzum and Utzlius was completed at the end of March 2022 by the Ministry of Forests, Lands, Natural Resources and Rural Development.
- BC continue to discuss with Canada shared commitments and new approaches to recovering species at risk and effective conservation through the negotiation of the Nature Agreement.
- Environment Climate Change Canada has indicated interest to collaborate with BC on old growth, habitat restoration, and conservation initiatives to help achieve co-benefits of nature conservation and ecosystem services (e.g., Carbon

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sequestration) with species at risk recovery and federal protected area target of 25% by 2025.

- Partnership and collaboration with First Nations is critical for long-term success.

#### **Key Facts:**

- Species at Risk Recovery in BC is led by LWRS. Other ministries in the natural resource sector support the implementation of recovery strategies through permitting and authorizing activities set out in species at risk recovery plans (wildlife monitoring and management, habitat restoration).
- LWRS is leading work with ECCC to develop an updated Recovery Strategy and associated Action Plan for spotted owls that achieves the test of SARA and provides assurances to BC on species recovery that includes reconciliation and socio-economic considerations.
- Ministry of Forests leads the implementation of the current Spotted Owl Management Plan to ensure the protection of current and future habitat and owls to support species recovery.
- Spotted owl are wide ranging, require dispersal habitats and occupy forests of high timber values. Therefore, spotted owl recovery is typically viewed in conflict with resource development objectives and their recovery has short-term economic trade-offs.
- BC considers social and economic impacts when confirming the recovery objective and the actions (habitat and wildlife management) necessary to recover populations to the recovery objective, prior to approving the recovery approach.
- There is currently no ability within federal Species at Risk Act (SARA) for the federal Minister to consider social or economic impacts that may result from recommendations for the protection of species. As well the interpretation of threats to recovery and habitat requirements are set by Environment and Climate Change Canada (ECCC) and in many cases do not reflect provincial expert opinion. Recommendations by the federal Minister under SARA are provided to the federal Cabinet where social economic impacts and other provincial perspectives may be considered.
- Once a Recovery Strategy has been published with identified habitat, BC is at risk of an emergency habitat protection order in cases where there is a lack of protections for the identified critical habitat.
- The implementation of the deferrals in Spuzzum and Utzilius was partially provided so that BC and Canada could take more time to complete an updated Recovery Strategy for Spotted Owl that includes critical habitat. Consensus on critical habitat identification was not reached between federal and provincial staff. Innovative solutions are being explored to overcome technical disagreements; however, no option is completely without legal risk to the federal government, which results in a threat of an emergency order.
- There are three areas of divergent opinion between BC and Canada:

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1. ECCC has identified critical habitat using only age class and has ignored other habitat attributes that are important to spotted owl recovery. This results in a fragmented critical habitat with several gaps and inclusion of areas that are not spotted owl habitat.
  - Proposed resolution (short-term) – include two models as critical habitat that can guide the recovery program through time adaptively.
2. ECCC has identified dispersal habitat (area that juvenile owls will use when initially moving out from the nest) as part of critical habitat. Experts in BC and the US agree that dispersal habitat can be managed to an age and density standard to support recovery and does not need to be spatially protected. However, under SARA once habitat is identified as critical habitat, it must be recommended for protection to federal Cabinet.
  - Proposed resolution (mid-term) – establish a Land Use Objective Regulation order to identify the attributes to *manage toward* in these areas.
  - Proposed resolution (mid to long term) - Work with forest certification to have reporting requirements for the licencees enabling SARA section 56, which may be considered by the federal Minister as effective protection.
3. ECCC has included an additional 208,000 ha of critical habitat to account for increased risk of fires due to climate change. It is not clear what factors ECCC have used to verify this risk and the required habitat amount. Further, if this climate change risk is correct, it would likely call into question the overall viability of recovering spotted owls in BC.
  - Proposed resolution – all of the above.

**Date Prepared/Revised: April 28, 2022**

**Ministry Executive Sponsor:**

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**Alternate Contact for Issue:**

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### Ministry of Land, Water and Resource Stewardship

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**Issue:** Species at Risk Recovery

**Recommend Response:**

- LWRS works collaboratively with ministry regions and divisions, Indigenous groups, Ministry of Environment and Climate Change Strategy, Ministry of Energy, Mines and Low Carbon Innovation, Ministry of Forests and federal counterparts in Environment and Climate Change Canada (ECCC), Parks Canada and Department of Fisheries and Oceans to establish consistent and effective management actions for SAR.
- The province will continue to support and implement recovery actions for SAR. Our approach begins with setting population recovery goals and considers environmental, cultural, social, and economic values of the province.
- The province is working with ECCC on pilot projects to help inform how the federal SARA may be modernized.

**Key Facts:**

- Species at Risk Recovery in BC is led by LWRS. Other ministries in the natural resource sector support the implementation of recovery strategies through permitting and authorizing activities set out in species at risk recovery plans (wildlife monitoring and management, habitat restoration)
- Currently, 231 species in BC are listed under the federal SARA, 64 of which have legally identified critical habitat (approximately 28 million hectares) set out in the federal recovery strategies.
- Globally, biodiversity is in decline with an estimated 60% decline in populations of vertebrate species. While the state of biodiversity in B.C. is likely better than many jurisdictions, B.C. is increasingly seen as a last refuge for many North American species and is facing pressures internationally to achieve conservation outcomes.
- Declines in biodiversity are primarily due to 5 main threats: climate change; habitat loss or alteration; invasive species; overexploitation; and pollution. Solutions to these declines are complex with a multitude of inter-connected threats and interactions that involve complicated environmental, social, and economic trade-offs. If not effectively managed, loss of biodiversity can create significant barriers to achieving socio-economic objectives.
- The conservation of biodiversity is also a priority for Indigenous Nations, as noted through numerous ongoing Government-to-Government dialogues. Biodiversity has intrinsic cultural and ceremonial value to Indigenous Peoples, and they have

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voiced concerns over the current approach to managing biodiversity in B.C. and expressed a strong interest in shared conservation decision-making.

- The Provincial species at risk recovery framework involves multiple ministries that sometimes can have overlapping mandates and competing objectives. Conservation actions are guided by numerous statutes, few of which are held by the Ministry of Land, Water and Resource Stewardship and non-regulatory tools resulting in a fragmented approach with varying levels of conservation and a high level of uncertainty for stakeholders. This uncertainty has led to the federal Minister being unable to confirm that provincial strategies are adequately meeting the requirements of SARA, extensive criticism from non-government organizations, and legal risks.

**Date Prepared/Revised: April 28, 2022**

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Fisher Management

**Recommend Response:**

- The Province recognizes the importance of addressing the threats to provincial fisher populations, most critically those impacting the red-listed Columbian population in BC's Central Interior.
- To advance stewardship and conservation of fishers and their habitat, the province is pursuing several initiatives including preparation of comprehensive recovery planning guidance, habitat modelling and other analyses to fill knowledge gaps, and new methods to avoid incidental harvest.
- The Province provided approximately \$300,000 to fund fisher-related work in 2021/22, and an additional \$100,000 to support engagement and capacity-building with First Nations on fisher-related issues.
- The Province works directly with the forest sector on the development and implementation of voluntary measures developed on the best available scientific and technical information with consideration for socio-economic values.
- The Province works closely with the trapping community to implement measures to reduce the incidental harvest of fishers.

**Key Facts:**

- LWRS is responsible for leading species at risk recovery and leading the Together for Wildlife Strategy in order to improve wildlife stewardship and habitat conservation.
- Ministry of Forests supports this work by ensuring the permits and authorizations support the strategy and objectives set out for the recovery and management of species.
- Ministry of Forests will continue to lead matters related to fisher trapping regulations and policy, and the LWRS will lead fisher stewardship planning and science-based initiatives.
- There are two populations of fishers in BC: the blue-listed (special concern) Boreal population and the red-listed (risk of being lost) Columbian population.

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- Habitat loss and degradation from forestry, salvage logging, and wildfires are the most significant threat to fishers. Trapping activities compound these threats.
- In 2021, commercial trapping seasons for fishers were closed across the range of the Columbian population.
- Recent population models indicate that without further intervention, there is high probability of extinction for the Columbia population over the next 10 to 35 years.
- Three complaints have been made to the Forest Practices Board in recent years concerning the impacts of timber harvesting to fishers and their habitats.
- The Board has substantiated two of those complaints and called for improved government leadership on landscape-level decisions and increased use of available legal tools.
- The Fisher Habitat Extension Program continues to convert scientific information into forest management guidance and training for industry, government employees, and First Nations stewardship personnel.
- Work continues to reduce the incidental trapping of fishers by licensed trappers.

**Date Prepared/Revised: April 26, 2022**

**Ministry Executive Sponsor**

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**Issue:** Heli-Tourism Guidelines

**Recommend Response:**

- Species at risk recovery and wildlife stewardship are important to all British Columbians
- Helicopter-supported adventure tourism activity in BC is expanding, and now occurs in all seasons, often in or near sensitive wildlife habitats.
- Increasing helicopter activity in remote areas has the potential to impact wildlife habitats and to disturb wildlife during critical periods.
- The Province of BC is responsible for stewardship of all wildlife in British Columbia and to ensure that authorized activities do not infringe on the rights of Indigenous peoples.
- My ministry leads all species at risk recovery, and we are responsible improving wildlife stewardship and habitat conservation through the Together for Wildlife Strategy.
- As part of this work, we are collaborating with Ministry of Forests and Ministry of Tourism Arts and Culture to update the 2006 Wildlife Guidelines for Adventure Tourism/ Backcountry Recreation. These updates will include increased setback distances for caribou and requirements for helicopter operators to provide flight path data and priority wildlife observations to government.

**Additional Response points (if needed):**

- There are three main components to this project:
  - 1) Modernization of the Tourism Wildlife Guidelines (2006),
  - 2) Implementation of GPS flight tracking, increased separation distance, and wildlife reporting (for Helicopter supported adventure tourism tenure holders),
  - 3) Policy development to ensure all tenure holders are providing the data necessary to support sustainable management of wildlife resources.

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- Information is currently lacking regarding the location, duration, and intensity of helicopter activity in relation to priority wildlife habitats. This information is needed to inform risk-management strategies and avoid blanket recreation closures.

#### **Key Facts:**

- LWRS is responsible for leading species at risk recovery and leading the Together for Wildlife Strategy in order to improve wildlife stewardship and habitat conservation.
- Ministry of Forests supports this work by ensuring the permits and authorizations support the strategy and objectives set out for the recovery and management of species.
- Ministry of Tourism Arts and Culture as an advocate for the tourism sector supports the engagement with the Heli-tourism sector to ensure that LWRS' work includes input from the sector.
- Global Positioning System and data management technology now allows for passive collection and sharing of helicopter flight paths to support wildlife management.
- A secure database ("TRACKS") has been developed for the government to store GPS flight path data once received.
- In the short-term, the province is seeking voluntary adoption of these measures and will be working with the sector to refine approaches for mitigation strategies to reduce wildlife disturbance/displacement. Longer-term regulatory options are also being investigated.
- Engagement with Transport Canada Aviation on these efforts has been initiated and early conversations have been positive.
- Staff are planning to attend the HeliCat Canada Annual General Meeting in May 2022 to initiate engagement with the adventure tourism sector and enable discussions regarding how the Province will work with operators to implement disturbance mitigation strategies and recognize successes with industry partners.
- Communicating actions being taken to mitigate impacts to wildlife is key to building public trust and confidence that measures are effective and that all parties are meeting stewardship expectations.

**Date Prepared/Revised:** April 28, 2022

**Ministry Executive Sponsor:**

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**Issue:** Water Protection Act

**Recommend Response:**

- The *Water Protection Act* (WPA) is the responsibility of the Minister of Land, Water and Resource Stewardship (LWRS).
- The WPA was enacted in 1996 to restrict the bulk export of B.C.'s freshwater.
- The WPA also defines and limits the amount of water that can be removed in bulk from B.C. Under the WPA, no one can remove water from B.C. unless they:
  - Began bulk water removal prior to June 1, 1995 and are registered with the Comptroller of Water Rights, or
  - Remove water in containers holding 20 litres or less, or
  - Obtained the water outside of B.C., or
  - Carry the water in vehicles, vessels or aircraft for human / animal use while moving across B.C. borders.
- The WPA and the *Water Sustainability Act* (WSA) complement each other as:
  - The WSA requires a person or company to apply for a water licence to divert and use water, and
  - The WPA restricts the diversion and use of water in relation to bulk water export, water bottling and large-scale transport of water outside B.C. or across major watersheds.

**Additional Response points:**

- Bulk water export restrictions are distinct from water bottling restrictions. No new bulk water exports have been permitted in B.C. since 1996, whereas a person or company can apply for a WSA water licence for water bottling which if granted is subject to WPA container volume restrictions.
- The B.C. water bottling sector represents a very small fraction of total water use in B.C. The sector includes a few major beverage companies and a greater number of small

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operations, generally serving local markets and drawing water from water purveyors such as local governments.

#### **Key Facts:**

- The WPA was previously the responsibility of the Minister of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD), with policy support provided by the Ministry of Environment and Climate Change Strategy.
- As of March 31, 2022, the Minister of LWRS is responsible for the WPA, in alignment with LWRS' provincial water leadership mandate.
- Bulk water export and water bottling are distinct:
  - Bulk water export is prohibited in B.C. Only the remaining five active registrants may export bulk water.
  - Water bottling in B.C. is only permitted in containers no larger than 20 litres in volume for export or cross-basin transfer.
- The WPA provided unique privilege to thirteen bulk water exporters actively pursuing water licences before June 1, 1995. They were granted opportunity to continue business development, provided they register with the Comptroller of Water Rights, comply with the former Water Act, now WSA, and remain active.
- Today, there remain five active bulk water exporters on the Comptroller's registry which is publicly accessible, online registry of all authorized bulk water exporters.
- The public has significant interest in the trade and export of water from B.C.:
  - The Union of British Columbia Municipalities (UBCM) passed a resolution in 2019 asking the Province to cease the licensing and extraction of groundwater for commercial water bottling and/or bulk water exports.
  - The Environmental Law Centre has claimed that water bottling is de facto bulk export of water (*Water for the Future: Why BC Needs an Immediate Moratorium on New Water Bottling Licences*, 2021).
- Indigenous interests in water bottling and bulk water export vary:
  - Some First Nations are opposed to both water bottling and bulk water export while others are authorized to bottle and sell water or are actively pursuing authorizations.
  - Business Information; Intergovernmental Communications
- Water bottling is a small fraction of total water use in B.C., heavily relied upon in times of emergency and complex to regulate. Beverage production facilities can easily switch production of water-based drinks and many businesses draw water from water purveyors. A moratorium on water bottling would involve changing food and beverage sector regulation, the WSA and local government jurisdiction.

**Date Prepared/Revised: April 28, 2022**

**Ministry Executive Sponsor:**

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### Ministry of Land, Water and Resource Stewardship

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**Issue:** *Water Sustainability Act; Groundwater Licensing*

**Recommend Response:**

- The Water Sustainability Act (WSA) and associated regulations took effect February 29, 2016, replacing the former *Water Act* (WA).
- The WSA modernized how B.C. manages water resources by introducing new requirements for the licensing of non-domestic groundwater use, new tools for managing water scarcity, and enabled alternative water governance approaches and watershed management plans.
- The Minister of Forests (FOR) is the minister responsible for the WSA. FOR is the primary agency responsible for the operational implementation of the WSA. The BC Oil and Gas Commission (OGC) also implements the WSA in relation to oil and gas sector water use.
- LWRS' Water Protection and Sustainability Branch develops policies and programs that support WSA implementation.
- Those using groundwater for non-domestic use prior to the WSA needed to apply by March 1, 2022 to benefit from the transitional provisions.
- A water licence is not required for household or domestic groundwater use, such as water used inside the home and for watering small lawns and gardens.
- Now that the deadline has passed, all non-domestic groundwater users must apply as new applicants to secure their water rights and to comply with the WSA.

**Key Facts:**

- The Minister of Forests (FOR) is the minister responsible for the WSA. FOR is the primary agency responsible for the operational implementation of the WSA. The BC Oil and Gas Commission (OGC) also implements the WSA in relation to oil and gas sector water use.
- LWRS is responsible for WSA provisions relating to Water Sustainability Plans, water objectives and advisory boards. LWRS' Water Protection and Sustainability Branch develops policies and programs that support WSA implementation.

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#### The *Water Sustainability Act* (WSA) and Groundwater:

- The WSA and associated regulations brought in a new requirement for the licensing of non-domestic groundwater use. The WSA carried forward the provisions of allocating and licensing surface water from the previous WA.
- Examples of non-domestic groundwater use purposes include irrigation, industrial, waterworks and commercial.
- Groundwater licensing is a very important change to B.C. water policy because our water law now mirrors water in the natural environment; groundwater and surface water are connected, and so too is our groundwater and surface water management.

#### Existing Use Groundwater, deadlines, data, implications, compliance:

##### *Existing Use Groundwater*

- As many British Columbians have a long history of drawing groundwater from their wells without government regulation, those using groundwater before the WSA took effect (existing users) were granted six years (until March 1, 2022) to apply for rights to their non-domestic groundwater use and to benefit from transitional provisions provided under legislation only to existing users.
- The transitional provisions were, 1) exemption from paying application fees, 2) ongoing lawful use of water until a decision on the application is finalized, 3) a priority date based on evidence of when the well was installed groundwater use started, and 4) no requirements for additional costly studies to be submitted.

##### *Deadlines*

- The existing use groundwater application deadline has been extended once:
  - from March 1, 2019, to March 1, 2022.
- The existing use groundwater application fee waiver deadline has been extended three times:
  - From March 1, 2017, to December 31, 2017,
  - Then December 31, 2017, to March 1, 2019,
  - lastly March 1, 2019, to March 1, 2022.

##### *Application data*

- Government received 7,711 applications before the deadline passed. This represents approximately 40 percent of the estimated 20,000 applicable groundwater users. Government received applications from approximately 44 First Nations.
- 2019 and 2022 deadlines saw sharp increases in application submission in the three-month lead up to the deadlines, however 2022 saw the highest activity with roughly 3419 or 44 percent of the total applications submitted over two months.
- Analysis completed in 2015 estimated approximately 20,000 non-domestic groundwater wells could potentially become WSA licensed. This estimate was extrapolated from government's database of voluntarily submitted well records, rounded upward by a few thousand to account for uncertainty in the data.
- Some domestic well registrations should have been existing use applications, some applications included more than one well and other applications were for multiple water use purposes for one well.
- Consequently, our understanding of the number of wells that should be licensed will become clearer as we review the domestic well registrations and

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groundwater applications that have been received, and conduct more studies of aquifers.

#### *Post-deadline implications for existing users*

- Existing non-domestic groundwater users who did not apply by deadline must now apply as a “new applicant” and they:
  - Have lost recognition of their date of first groundwater use;
  - Are unauthorized and must stop using the water until a licence is obtained;
  - Must pay application fees; and,
  - May need to pay for additional studies to prove groundwater availability.
- The historical date of first use or priority date is significant in times of water scarcity, because the oldest water licence gets first access to water.

#### *Compliance*

- Government anticipates many groundwater users who did not apply will continue to use groundwater.
- FOR intends to make a focused effort on reviewing submitted existing use groundwater applications in a timely way and to continue compliance promotion to encourage more applications.
- Security Concern
- Reviews and site visits will be conducted as required to determine if water is being used without an authorization and, where found, steps will first be taken to support users to apply and come into compliance.
- Security Concern
- We experience drought every year in B.C. When this happens, government takes action to protect aquatic ecosystems, fish populations and the rights of senior licensees. During a drought, those water users not in compliance with the WSA will be the first to lose their access to water.

#### Outreach and Communications:

- Government made significant outreach efforts since 2016, particularly in 2021 and 2022, to communicate the licensing requirements and encourage all, and especially existing groundwater users to apply.
- Outreach highlights include:
  - ~180,000 flyers mailed to rural addresses (Feb 2022);
  - ~50,000 letters mailed (2017-20);
  - ~67,000 brochures distributed;
  - 239 customized ads in 118 publications (2019-20);
  - Dozens of applications and informational workshops and events where staff provided in-person support to applicants;
  - Government hired additional resources to proactively contact potential groundwater applicants and offer application assistance; more than 2,500 British Columbians were contacted by phone;
  - Free one-on-one assistance was provided to groundwater users who

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- needed help with their online application;
- Social media and interviews: twitter (Minister Conroy) and CBC interview (Jan 31, 2022);
- Regular blog posts and Information Bulletins;
- Articles in stakeholder publications, e.g., newsletters from BC Groundwater Association, BC Cattlemen's Association, B.C. Real Estate Foundation, Union of BC Municipalities; and,
- 54 government staff provided 802 hours of overtime support to the FrontCounter BC Contact Centre to ensure timely responses to increased numbers of inquiries.

**Date Prepared/Revised: March 31, 2022**

**Ministry Executive Sponsor:**

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Healthy Watersheds Initiative

**Recommend Response:**

- Through Budget 2022, we're investing \$30 million to continue safeguarding B.C.'s watersheds, which will further mitigate the impacts of a changing climate on community health, and support watershed security and the economy.
- This builds on the \$27 million investment made through StrongerBC to conserve and restore wetlands and watersheds through nature-based climate solutions that have supported more than 800 jobs across B.C.
- The work supported by that investment, known as the Healthy Watersheds Initiative, will continue through the next year and is producing positive results; several restoration projects increased the capacity to hold water during the November floods and provide a refuge for salmon.
- The Real Estate Foundation of BC is a valued partner in this important work and will continue to play a role as we enter the next phase of wetland and watershed restoration.
- The Make Way Foundation, in partnership with Watersheds BC, will support a suite of Indigenous-led and co-led watershed security projects. Six other large organizations will further support a range of watershed security and wetland restoration initiatives, providing an opportunity for the Province to build important relationships.
- Learnings from these relationships and the Healthy Watersheds Initiative will help inform development of the Watershed Security Strategy and Fund.

**Key Facts:**

- Through the Water Protection and Sustainability Branch, LWRS leads the work on both the Healthy Watersheds Initiative under Stronger BC and the watershed security funding under Budget 2022. The ministry works with external partners and engages other ministries as appropriate.

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- **Healthy watersheds are critically important for watershed health and climate resiliency since they can reduce the impacts and costs from increased floods, droughts and wildfires.**
- In Fiscal Year (FY) 2020/21, as part of StrongerBC, **government transferred \$27M to the Real Estate Foundation of British Columbia (REFBC) for watershed-related work.**
  - The funding, administered by REFBC and Watersheds BC (WBC), became the Healthy Watersheds Initiative (HWI).
- More than 60 projects were funded, focused on conserving, restoring, and rehabilitating streams and wetlands; maintaining infrastructure such as ditches and dikes; monitoring water quality and quantity; and undertaking surveys and assessments (e.g., riparian function). REFBC with WBC supported projects through learning and outreach programs. An Indigenous Leaders Advisory Circle (ILAC), which provided advice on the program was also established.
- In Budget 2022, **Government identified an additional \$30M from 2021/22 contingencies for watersheds work.**
- Due to the nature and type of funding that was available at year-end for watersheds work, the Province is unable to further fund the Healthy Watersheds Initiative.
  - As a Government Reporting Entity, REFBC is considered to be part of government; therefore any expenditures are not actually expensed until the funds leave REFBC itself.
  - This was not a primary concern for the first period of funding under Stronger BC.
- **Key outcomes** the Province wishes to realize for this work include:
  - Restore and maintain ecosystem services, and watershed health;
  - Support climate resiliency;
  - Support local organizations in meeting their mandates;
  - Economic stimulus through direct and indirect job creation; and,
  - Support for reconciliation with Indigenous Peoples and advance UNDRIP.
- Government has allocated **\$15M for Indigenous-led and co-led watershed security projects** and **\$15M to another six organizations** whose work supports watershed security. Organizations will have at least two years to expend the funds.
  - BC Wildlife Federation, \$5.5M
  - Living Lakes Canada, \$4M
  - Rivershed Society, \$1.5M
  - Redd Fish Restoration, \$1.5M
  - Farmland Advantage, \$1.5M
  - Ducks Unlimited, \$1M
- This investment **supports reconciliation work with Indigenous communities** and important partnerships across different levels of government, with NGOs, and with universities, to create a strong future for the people who live in British Columbia.

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### Ministry of Land, Water and Resource Stewardship

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**Date Prepared/Revised:** March 28, 2022

**Ministry Executive Sponsor:**

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Phone: 250 645-9259

## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Nicola Watershed Governance, post flood recovery

#### ***Recommend Response:***

- Our government remains committed to its work in the Nicola Watershed.
- The complex water challenges in the Nicola Valley underscore the need to find long-term solutions for watershed health. Our government will continue to support the communities as they recover from the devastating fall flooding.
- Funding for the collaborative work has been vital for building the capacity of our partner First Nations and contributing to advancing shared priorities in the watershed.

#### ***Key Facts:***

- Ministry of Forests (MOF) is the lead for the work in the Nicola watershed under the Partnership. LWRS continues to play a supporting and advising role, in such areas as policy development and alignment and coordination with other LWRS initiatives. LWRS continues to connect the work under the Partnership with other initiatives ongoing in other watersheds such as in the Koksilah.

#### **Nicola Watershed Governance Partnership (NWGP):**

- In March 2018, five Nicola Chiefs and the Province of B.C. signed a three-year Memorandum of Understanding (MOU) to **collaboratively address water management issues in the Nicola watershed under a government-to-government framework**.
  - The MOU was extended for one year until September 2021.
  - Discussions on a new MOU will be initiated once a bilateral Governance Working group is re-established.
- A **strategic forum** (Forum) comprising the five Nicola Chiefs and five provincial representatives sets priorities and direction for work to be undertaken.
  - Provincial members currently include the ministries of Forests (MOF), LWRS, and Indigenous Relations and Reconciliation (IRR). Membership may be re-visited as part of the NRS re-organization with LWRS.
- An operationally focused Core Council, comprising project and government staff, and appointed members from the Nicola Bands, enact the direction of the Forum. MOF staff are the current provincial members of Core Council.

#### **Past and Current Funding:**

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- The NWGP is one of five Collaborative Stewardship Forum (CSF) projects, marking a concrete step forward in taking action on reconciliation and building constructive relationships with Indigenous governments and communities.
  - CSF projects have been supported by one million dollars per year. Entering year five of the project, one million dollars for the 2022/23 fiscal year has been committed while a three-to-five-year mandate is developed under LWRS for 2023.
  - Additional funding has been leveraged through the B.C. Freshwater Legacy Initiative and the Province's land use planning work.
- Sustained long-term funding is key to ensure an enduring partnership.

#### **Nicola watershed issues and solutions:**

- **The Nicola watershed annually experiences significant water management issues** such as drought, flooding, low water supply, risks to community drinking water, and impacts to fish and fish habitat.
- **Several of the Nicola Bands were directly impacted by the severe flooding in November 2021.** Communities are still being supported by Emergency Management BC in the aftermath, and many residents continue to be displaced from their homes.
  - In response to the flooding, **a new Watershed Restoration Table** was formed to identify and coordinate short term restoration priorities. The first meeting took place late January 2022, with widespread participation from the Province, the five Nicola Bands, Cooks Ferry Band, and numerous academic and environmental organizations local to the Nicola Valley.

#### **Other multi-year projects underway and funding:**

- Much of the **work to date has focused on relationship building, joint work-planning, project work on key priorities, co-learning, and strengthening the collective knowledge of the watershed.** Several of these projects were put on hold while responses to 2021 summer drought, and then the fall flooding were underway, though several have resumed. Some of those projects include:
  - Land and water use planning for the Nicola watershed;
  - Learning about and from Indigenous governance models, with learning from Syilx and Nlaka'pamux water laws forthcoming;
  - Developing a broad Data Sharing Agreement; and,
  - Collaboratively making decisions related to drought planning and response.
- The COVID-19 pandemic and impacts of flooding continue to affect the ability for the NWGP to effectively engage with communities in the watershed; however, efforts to adapt and maintain G2G relationships are ongoing.

Date Prepared/Revised: April 1, 2022
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Prepared for 2022/23 Estimates Debate

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### Ministry of Land, Water and Resource Stewardship

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**Ministry Executive Sponsor:**

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**Issue:** Livestock Watering

***Recommend Response:***

- A Livestock Watering (LSW) policy and accompanying legislative changes to the *Water Sustainability Act* (WSA) were developed in 2020.
- The policy proposal aimed to secure water for use by livestock on extensive Crown and private grazing lands and to protect water quality and riparian habitat.
- Government paused this work in 2021 in response to uneven support across the ranching sector for the proposal, and to focus on new legislative priorities, to address organizational restructuring, and to advance development of a Watershed Security Strategy and Fund.
- This policy may be advanced for government decision at a future date.

***Additional Response points (if needed):***

- Post-deadline ranchers can now apply for new surface or groundwater licences, but should expect to receive priority dates based on their dates of the application.

***Key Facts:***

- The Minister of Forests (FOR) is the minister responsible for the WSA. FOR is the primary agency responsible for the operational implementation of the WSA which includes allocating water for livestock watering. FOR also manages Crown rangelands.
- LWRS' Water Protection and Sustainability Branch develops policies and programs that support WSA implementation.
- LWRS is responsible for the WSA provisions relating to Water Sustainability Plans, water objectives and advisory boards.

**LSW Development and Postponement:**

- LSW policy development was a cross-ministry collaboration directed by ADMs of the Ministry of Agriculture, Food and Fisheries (AFF), the former Ministry of Environment and Climate Change Strategy (ENV) and the former Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNR).
- The BC Cattlemen's Association (BCCA) was engaged throughout the policy development, but some of their membership were opposed to government

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requiring them to hold water authorizations for their water use. Support was particularly lacking in the Northeast. BCCA was unable to consolidate unanimous support across their membership prior to the ministries advancing the policy for government's decision.

- The decision was made to postpone further work due to BCCA's lack of full support and so that government could focus on new legislative priorities, address organizational restructuring of the ministry implementing this policy (then FLNR) and advance development of a Watershed Security Strategy and Fund.
- Government will continue to work with Indigenous Peoples to align LSW policy development with the Declaration Act and to advance reconciliation.

#### About Priority Dates:

- Every licence is issued with a priority date. The precedent is for decision makers to select the date of application as the priority date, unless other compelling information is provided, or legislation supports selecting a different date.
- The legislation did provide a one-time opportunity for existing groundwater users who applied before March 1, 2022, to have their date of first use set at the priority date in the water licence issued.
- The priority date is set at the statutory decision maker's (SDM) discretion, however, without the benefit of the law supporting them, it is very difficult for SDMs to issue licences that go back in time, especially in areas with a lot of water rights holders.
- That is because such a decision carries the risk of negatively impacting existing water rights holders whose priority dates have been "jumped over" by the issuance of a new licence earlier in time than theirs, especially in times of drought when priority dates are most important.

#### Industry Response:

- Ministers Popham and Conroy met with the BCCA to advise them of the decision to postpone further LSW policy development.
- Following government's decision to postpone the advancement of the LSW policy, BCCA provided a position paper on March 15, 2021, requesting that government:
  - Resume LSW policy work for implementation in 2022;
  - Provide a one-year extension to the existing use groundwater (EUGW) deadline which was March 1, 2022;
  - Create provisions guaranteeing their priority of access to water over other uses during drought; and,
  - Remove regulatory barriers and create opportunities to encourage sector growth.
- Government did not respond to the position paper.
- Ranchers were strongly encouraged to submit their EUGW applications before the March 1, 2022 deadline.

#### Cattle ranching is a long-established industry in rural B.C.:

- B.C. cattle ranches occupy over five million hectares of private land and have

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tenure on a further 21 million hectares of Crown rangeland.

- Over 96 percent of livestock grazing on rangelands in B.C. are cattle.
- The B.C. beef herd is approximately 203,000<sup>1</sup> cows on approximately 4,600 ranches.
- Revenue from cattle sales in 2020 was approximately \$232 million<sup>2</sup>.

**Date Prepared/Revised: April 7, 2022**

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<sup>1</sup> Fast Stats 2020: British Columbia's Agriculture, Food and Seafood Sector (Published January 2022)

<sup>2</sup> Ibid

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**Issue:** Koksilah Water Management

***Recommend Response:***

- Our government remains committed to its work in the Koksilah River Watershed.
- Designating the Koksilah River Watershed for the purposes of a Water Sustainability Plan is a first step in enabling the long-term, sustainable management of the watershed.
- Developing the Water Sustainability Plan will require additional resources to develop and implement and will alleviate the need for additional resources and reactive measures over the long-term.
- Collaboration with Cowichan Tribes on this initiative strongly supports our government's mandate to work towards reconciliation.

***Key Facts:***

- LWRS is the lead for the work in the Koksilah River watershed. As part of this work, the ministry will coordinate with other ministries who have interests in watershed management in the Koksilah.

**Koksilah River Temporary Protection Order:**

- **In recent years, recurring low flows in the Koksilah River watershed have been a cause for concern due to the significant impact on fish populations.**
  - The main causes of recurring low flows in the watershed are generally believed to be (1) unsustainable water use (surface water and groundwater) for agriculture; (2) impacts of a changing climate; and (3) cumulative impacts of forestry practices.
- Since 2017, Ministry of Forests (MOF, formerly FLNRORD) water staff have been engaging with water users in the watershed to conserve critical stream flows.
- During summer droughts in 2019 and 2021, voluntary measures were insufficient, and **Temporary Protection Orders (TPOs) were issued in the watershed** to restore flows and address water quality issues resulting from low flows, both of which are lethal to fish.
  - Under the 2021 TPO, nearly 50 operators including irrigators of forage crops (grass and corn) and industrial users (aggregate production) had restricted water use. Government Financial Information Government

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- The **regularity of critical low flows, and impacts of climate change**, suggest that regulatory responses such as this will likely become more frequent in future summers. For now, MOF:  
Advice/Recommendations
  - Continues to monitor flows in the Koksilah Watershed and make the information public.

#### **Koksilah River Water Sustainability Plan:**

- **Cowichan Tribes and the Province have been working together** to identify a tool best suited to address the issues resulting from low flows.
  - On February 7, 2020, an Interim Letter of Agreement was signed between the Chief of Cowichan Tribes and the Province to collaboratively explore a long-term solution for sustainable water management in the watershed.
- A Steering Committee made up of Cowichan Tribes and MOF staff identified areas of common understanding and **recommended moving forward with a water sustainability plan (WSP)**.
  - Recurring low flows in the watershed are causing impacts that align with the reasons for which an area may be designated for a WSP.
  - The Steering Committee hopes to guide the WSP planning process based on a commitment of effective and collaborative watershed stewardship.
  - As members of the Steering Committee, Cowichan Tribes support a WSP, and other First Nations whose territory overlaps the watershed have provided letters of support.
- **On January 13, 2022, Minister Conroy signed a Ministerial Order under the Water Sustainability Act, designating the Koksilah River Watershed for the purpose of a WSP.**
  - Next steps include preparing an order establishing the plan development process, and, if required, an order limiting the planning process or recommendations may be made under a WSP.
- **Funding to support Cowichan Tribes' involvement in this work has been provided through multiple pathways.**
  - FLNRORD transferred \$75,000 to Cowichan Tribes in March 2020 to support the scoping of a WSP and capacity funding.
  - Cowichan Tribes received an additional \$50,000 from the Indigenous Funding Program to continue this work in November 2020. The Freshwater Legacy Initiative (a philanthropic NGO) matched the Province's funding.
  - Malahat Nation received \$40,000 from the Indigenous Funding Program in 2020/21 to support their engagement and involvement in the project as their traditional territory extends across the upper Koksilah Watershed.
  - Cowichan Tribes was awarded a further \$500,000 under the Healthy Watersheds Initiative to support hiring of staff and contractors for the scoping work.

Date Prepared/Revised: April 4, 2022

Prepared for 2022/23 Estimates Debate

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### Ministry of Land, Water and Resource Stewardship

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**Ministry Executive Sponsor:**

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### Ministry of Land, Water and Resource Stewardship

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**Issue:** Hullcar

#### **Recommended Response:**

- Clean, safe and secure drinking water is critical for the health of British Columbians and is a key priority for government.
- My ministry provides leadership on and delivers strategic approaches for all aspects of water, including drinking water. We have a lead role in the coordination of a source to tap strategy which will be instrumental in the management of drinking water.
- Government continues to help ensure residents who rely on groundwater from the Hullcar aquifer have access to a safe drinking water supply.
- The Province and Splatstine continue to collaborate on technical matters and work on a new Memorandum of Understanding to support shared management and collaborative work on water in the Hullcar area.
- The Ministry of Health is addressing improved drinking water governance and management in its response to the Auditor General's report. Learnings from Hullcar are key in informing this response.

#### **Key Facts:**

- LWRS is the lead for the work in the Hullcar aquifer area. As part of this work, the ministry will coordinate with other ministries who have interests in watershed management in the Hullcar.

#### **Hullcar (Clcahl) Aquifer Response:**

- **The Hullcar aquifer is a drinking water source for 22 private water wells and for the Steele Springs Waterworks District (SSWD), which provides water for roughly 250 residents.**
  - Several factors are thought to affect water quality in the Hullcar aquifer. A 2017 consultant's report identified agriculture (farms/feedlots) as the primary cause of nitrate contamination, with residential septic systems potentially contributing to a lesser extent.
- **In 2017 POLIS completed an independent review of nitrate pollution in the**

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**Hullcar aquifer. In response, Government published its Hullcar Aquifer Response Plan (HARP) in November 2018.**

- To implement the HARP, LWRS is working collaboratively with Splat-sin, Interior Health Authority, and the Ministries of Health, Forests, Agriculture, and Food (AGRI), and Indigenous Relations and Reconciliation (MIRR).
- **The Hullcar Steering Committee is the primary venue for the Province, Splat-sin, and Interior Health's relationship to address drinking water concerns in the Hullcar Valley.**
  - This relationship had been guided by an MOU, signed in 2017, to formalize ongoing collaboration to address improved water quality in the Hullcar area and to implement the HARP.
  - The MOU expired in 2020 and the Province and Splat-sin will be working with a facilitator to finalize a new MOU.
  - A renewed MOU will include the Ministries of Health, Forests, AGRI, MIRR and LWRS. Provincial signatories to the MOU will be reassessed with ministry reorganization.
  - Advice/Recommendations
- In Winter 2020-21 the Steering Committee agreed to delay establishment of an Advisory Board until the MOU is complete.
- **HARP implementation including technical work continues.**
  - Between 2019 and 2020 six new monitoring wells were drilled in the Hullcar Valley.
  - While nitrate levels in shallow wells remain close to the Maximum Allowable Concentration of 10 milligrams per litre (mg/L), they are not necessarily representative of nitrate concentrations at depths where wells are typically sourcing drinking water.
  - Preliminary February 2022 groundwater well readings ranged from <0.010 mg/L in deeper wells to 11.2 mg/L in shallower wells.
- The Province continues to support the Agriculture sector with implementing the Agricultural Environmental Management Code of Practice (AEMCOP) under the *Environmental Management Act* (EMA) and promoting best management practices. AEMCOP is implemented by ENV and AGRI. The Code:
  - Is being phased in over 10 years with Hullcar Valley being one of the first areas where implementation is occurring;
  - Applies to all agricultural operations in B.C., from small hobby farms to large commercial operations and aims to ensure that drinking water, watercourses and air are protected;
  - Will enhance environmental protection measures, improve compliance and enforcement, and make it easier to establish environmentally-sound farm practices;
  - Requires some producers to develop nutrient management plans to help manage land application of manure which can lead to high nitrates in the aquifer; and,
  - Compliance and enforcement activities are led by ENV.

<b>Date Prepared/Revised: April 4, 2022</b>
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<b>Prepared for 2022/23 Estimates Debate</b>
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### Ministry of Land, Water and Resource Stewardship

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### Ministry of Land, Water and Resource Stewardship

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**Issue:** Lake Koocanusa Water Quality Objectives

**Recommend Response:**

- B.C. and Ktunaxa Nation Council (KNC) co-developed a Draft Selenium (Se) Water Quality Objective (WQO) for water concentration of 0.85 µg/L and a whole-body fish tissue concentration of 5.2 mg/kg to protect all water uses and values in Lake Koocanusa, including the most sensitive use: human health based on the preferred consumption rate of fish by Ktunaxa peoples.
- The Draft Se WQO for Lake Koocanusa is the result of a rigorous multi-year collaborative and transparent process using the best available data, sound science, and established B.C.-specific protocols and procedures for developing provincial water quality objectives.
- An approved Se WQO for Lake Koocanusa represents conditions considered to be of low risk to human health and aquatic life.
- B.C. is ready to proceed to the Public Comment Period on the Draft Se WQO for Lake Koocanusa once the ENV Ministerial Order for the Area Based Management Plan (ABMP) has been issued.
- An approved Se WQO will inform ABMP targets and mine-related permit decisions in B.C. that may influence water quality of Lake Koocanusa.

**Key Facts:**

- LWRS leads and approves WQOs; ENV must consider WQOs in regulatory decisions, including ABMP updates under the Environmental Management Act.
- Lake Koocanusa is a transboundary reservoir formed by construction of the Libby Dam in 1973 on the Kootenay River near Libby, Montana (MT).
- Coal mining activities in B.C.'s Elk River Valley have resulted in elevated levels of Se downstream in the transboundary waterbody of Lake Koocanusa.
- Elevated Se concentrations can cause embryo mortalities and/or developmental deformities in both fish and birds, and increased human health risks at high levels.

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- The current Se target for Lake Koocanusa under the existing ABMP of two µg/L - based on B.C.'s water quality guideline - is sometimes exceeded at the monitoring point in the Canadian portion of the reservoir.
- Through permit conditions, Teck is accountable for meeting the requirements outlined in the ABMP. Teck's implementation of the ABMP includes water treatment and mitigation actions.
- In 2014, B.C. committed to working with the State of Montana to examine the selenium target in Lake Koocanusa based on sound science. Developing a Water Quality Objective for Lake Koocanusa was an appropriate first step.
- WQOs provide science-based policy that represent low-risk conditions that protect the most sensitive uses and values of specific water bodies. WQOs help guide decisions around human activities that may have adverse effects on water quality and can inform discussions on limits of acceptable change to water quality in consideration of a range of environmental, social, economic and other factors.
- In late 2019, ENV and KNC co-designed a Collaborative Process to work together and with Montana Department of Environmental Quality (MT DEQ) on striving for alignment on a provincial water quality objective and US water quality criteria for Lake Koocanusa; conceptually, "one lake, one number."
- In 2020, MT DEQ established a Water Quality Standard of 0.8 µg/L in the U.S. side of Lake Koocanusa. US EPA approved the Standard.
- Se concentrations in the reservoir are well above measured background concentrations.
- There is no evidence yet of improvements in selenium concentrations in Lake Koocanusa, nor in fish tissue.
- Teck continues to assert that the WQO work is overly conservative, is not scientifically sound, the process is flawed, and adjustments to a selenium target in the ABMP are not needed to protect fish or KNC health.
- B.C., in collaboration with KNC and with support of external consultants, has undertaken efforts to ensure B.C.'s analysis is scientifically defensible. This has been discussed in depth during our engagement activities with Teck.
- ENV staff are currently working on a draft Ministerial Order to amend the ABMP, including updating the Koocanusa reservoir Se target to reflect the new learnings from the water quality objective (WQO) development process, and developing a new process to consider emerging contaminants and better support adaptive management and continuous improvement.
- An approved Se WQO for Lake Koocanusa will inform ENV's planned ABMP target reassessment. Along with the new WQO, the reassessment will also consider additional monitoring data and impact and risk assessment results, which were not available during the WQO development process, plus other relevant information such as achievability and socio-economic factors that do not inform WQO development.

**Date Prepared/Revised: March 22, 2022**

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**Prepared for 2022/23 Estimates Debate**

## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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### Ministry of Land, Water and Resource Stewardship

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**Issue:** First Nations Fisheries Council

**Recommend Response:**

- British Columbia (BC) has had a successful working relationship with the First Nations Fisheries Council (FNFC).
- BC and the FNFC entered into a Memorandum of Understanding (MOU) in 2019.
- The MOU formalizes the commitment to advance shared priorities regarding development of policy, management, and initiatives related to fisheries and the aquatic ecosystems.
- Joint projects are identified and delivered through an annual implementation plan.
- Provincial fish and aquatic habitat management has been spread across multiple ministries. Indigenous partners have long been asking for government to coordinate.
- This ministry now provides a clear provincial lead on fish and aquatic habitat.
- The FNFC is a key partner, working with us to explore new pathways to co-design policies and programs.
- The work with the FNFC is additional to work this Government does directly with the rights holders and with other Indigenous organizations.

**Additional Response points:**

- The FNFC and the respective ministries have come together and established a Strategic Oversight Committee. This Committee oversees joint work plan.
- The Committee determines projects receiving targeted funding.

**Key Facts:**

- LWRS is the lead Ministry responsible for working with the FNFC on shared priorities associated with fish and aquatic habitat.
- Ministry of Indigenous Relations and Reconciliation (MIRR) works in collaboration with LWRS to support this MOU.

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### Ministry of Land, Water and Resource Stewardship

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- The FNFC was established in 2009.
- The FNFC is one of the three resource councils to the First Nations Leadership Gathering (the BC Assembly of First Nations, the Union of BC Indian Chiefs, and the First Nations Summit). The other two are the Forestry Council and the Energy and Mining Council. The FNFC is not a rights holder. The FNFC works with, and on behalf of, First Nations.
- The FNFC vision is for fish management that focuses on the health and sustainability of ecosystems and species, and the equitable sharing of fisheries and aquatic resources among Indigenous and non-Indigenous people alike.
- The FNFC established an MOU with Canada in 2013.
- In 2018 BC engaged in building a strategic relationship with the FNFC, resulting in successful projects and a formal MOU in 2019.
- In 2021/22, over \$935K was provided to the FNFC to support joint priorities. This funding came from the Indigenous Funding Program administered by the Ministry of Indigenous Relations and Reconciliation. Each project had significant funding or in-kind contributions from the FNFC.
- Projects being continued from 2021/22 largely fall to staff now residing in the LWRS. The FNFC have acknowledged their appreciation for this government realignment.
- Joint project planning is underway with senior staff and the FNFC, which will determine the final 2022/23 allocation.

Collaborations include work on:

- Salmon Strategy
- Coastal and Marine Planning.
- Watershed Security Strategy.
- Traditional Knowledge and bio-cultural indicators for salmonid management.
- Salmonid Cumulative Effects methodology assessments.

The FNFC Mandate includes:

- Advance and protect Title and Rights including priority access for food, cultural and economic purposes.
- Support First Nations to build and maintain capacity for fishing, planning, policy, law, management, and decision-making at a variety of scales.
- Facilitate discussions for a BC management framework that recognizes and respects First Nation jurisdiction, management, and authority.

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### Ministry of Land, Water and Resource Stewardship

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**Date Prepared/Revised: March 21, 2022**

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**Issue:** Fish Support for Treaty

**Recommend Response:**

- The provincial government's relationship with First Nations in British Columbia (BC) is based on respect, recognition and accommodation of Indigenous title and rights.
- LWRS is developing a path forward with First Nations to build a co-managed land and resource management regime that will ensure natural resources are managed effectively (*from Minister Osborne's Mandate letter, Feb 25, 2022*).
- In tripartite treaty negotiations the Department of Fisheries and Oceans Canada (DFO) has led on many fish components due to jurisdiction with salmon and tidal fisheries management and allocation.
- Under the provincial lead of the Ministry of Indigenous Relations and Reconciliations (MIRR), fisheries staff from this ministry and the MOF actively support MIRR.
  - Examples:
    - Fish Chapters (e.g., Kittselas-Kitsumkalum).
    - Foundation Agreements (e.g. Lake Babine First Nation).
    - Fish-Carveout proposals (e.g. K'omoks fish harvest).
- In addition to supporting treaty work, this ministry will continue to expand collaborations directly with First Nations on policies, programs, and co-management opportunities regarding freshwater fish and aquatic ecosystem management.

**Key Facts:**

- **LWRS** is developing a path forward with First Nations to build a co-managed land and resource management regime that will ensure natural resources are managed effectively (*from Minister Osborne's Mandate letter, Feb 25, 2022*).

Treaty negotiations on fish have both federal and provincial involvement:

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- DFO has a key role in tripartite negotiations and has led on many fish components due to jurisdiction with salmon and tidal fisheries management and allocation.
- MIRR leads provincial involvement in treaty negotiations.
- Fisheries staff from **LWRS** and the MOF actively support MIRR on Fish Chapters (e.g., Kittselas-Kitsumkalum), Foundation Agreements (e.g. Lake Babine First Nation), and Fish-Carveout proposals (e.g. K'omoks fish harvest).

It is recognized that First Nations have a constitutional right for priority access to fisheries, ahead of all other uses of the resource, after conservation.

Fisheries objectives during negotiations often include:

- Articulation of fishing Rights.
- Co-management and governance (e.g., Joint Fisheries Committees).
- Economic opportunity.
- Access to fish (allocation) and fishing.
- Building First Nation fisheries capacity.
- Stable project funding and infrastructure.
- Recreational and commercial fisheries management.

Thirty-nine First Nations representing 72 current or former Bands are currently Implementing modern Treaties (8), finalizing negotiations (15), or actively negotiating (16) treaties or tri-partite agreements. Twenty-seven nations are not currently negotiating.

In September 2019, the Principals of the BC treaty negotiations process endorsed the *Recognition and Reconciliation of Rights Policy for Treaty Negotiations in British Columbia*. Prominent commitments include rights recognition, non-extinguishment, implementing the United Nations Declaration, support for Indigenous self-determination, and ensuring treaties are adaptable, living agreements (BC Treaty Commission).

**Date Prepared/Revised: April 7, 2022**

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**Issue:** Coastal Marine Planning Initiatives

- a. Marine Plan Partnership (MaPP)
- b. Northern Shelf Bioregion Marine Protected Area Network Action Plan
- c. Marine Spatial Planning South Coast

**Recommend Response:**

- The Province of British Columbia has been a long-time advocate and driver for integrated marine planning across the coast, complementing our work in upland areas and watersheds.
- Current initiatives, including implementation of the Marine Plan Partnership (or MaPP), are helping us to proactively plan for the future, support economic recovery and environmental sustainability, and contribute to lasting and meaningful reconciliation with Indigenous peoples.
- The Province is committed to continuing the important work underway, in partnership with First Nations and the federal government.

**Key Facts:**

- There are several marine planning processes currently underway in British Columbia, at different stages of development and implementation.
- The Marine Plan Partnership (MaPP), a co-led initiative between the Province and 17 First Nations, has created and is now implementing four sub-regional marine plans, covering the marine waters from approximately Bute Inlet/ Quadra Island to the BC-Alaska border including Haida Gwaii (an area known as the Northern Shelf Bioregion).
  - The MaPP plans were approved in 2015 and implementation agreements signed in 2016. In 2021, MaPP received an inaugural British Columbia Reconciliation Award from the BC Achievement Foundation in partnership with The Office of the Lieutenant Governor of British Columbia, and more recently was endorsed as a project under the United Nations Decade of Ocean Science for Sustainable Development (2021-2030).
  - Implementation of MaPP is being carried out under a public-private partnership model. Since 2019, the Province has provided \$5.2M in funding to MaPP partner Nations, to support their capacity and operational needs, and committed an additional \$1.5M for fiscal year 2022/23. Since

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Intergovernmental Communications; Government Financial Information

- In the same geographic area, the Province has been working with the MaPP partner Nations and the federal government to develop a network of marine protected areas (MPAs), bolstering the level and scope of protection in the region to include federally-regulated activities. This process has been underway for close to a decade, guided by the *Canada-British Columbia Marine Protected Area Network Strategy* jointly agreed to and released in 2014.
  - Intergovernmental Communications; Government Financial Information
- South of the Northern Shelf Bioregion, the Province has recently been engaged with the First Nations Fisheries Council and the federal government, primarily through Fisheries and Oceans Canada, to develop a marine spatial plan for the Strait of Georgia and Southern Shelf bioregions.
  - This work is still in the preliminary stages with a Letter of Understanding (LoU) between the partners expected to be completed this spring. This LoU would set out principles and structures for working together, as well as the expected scope and outcomes for the process.
  - The federal government is the primary lead on this initiative inclusive of securing necessary budgets. The Province has secured \$125k per year for its participation as one of the Tier 1 (funded) Modernized Land Use Planning (MLUP) projects. With this funding, the Province is currently contributing one dedicated staff person to this file and using the remainder to support initial economic baseline assessments.
- Given the integrated nature of coastal marine planning, this work touches on the mandates and interests of multiple ministries. LWRS remains the provincial lead for advancing this work, but works with:
  - The Ministry of Forests to clarify the intent of spatial zoning and ensure its consideration in decision-making processes for tenure authorizations;
  - The Ministry of Agriculture and Food on opportunities to grow sustainable seafood operations in rural coastal communities;
  - The Ministry of Environment and Climate Change Strategy (BC Parks) on designation of coastal marine areas for long-term protection;
  - The Ministry of Indigenous Relations and Reconciliation on overarching collaborative governance agreements; and others.

**Date Prepared/Revised: April 6, 2022**

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Prepared for 2022/23 Estimates Debate

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**Issue:** Fisheries and Aquaculture 2022 Outlook

**Recommend Response:**

- The aquaculture and fisheries sectors provide thousands of jobs to British Columbians and sustain many Indigenous and non-Indigenous communities.
- Continued demand for seafood globally, population growth, and climate change will likely increase the importance and value of fisheries and seafood to B.C. moving forward.
- However, increasing uncertainty related to access of the resource combined with some species on declining trends will challenge some of the B.C. seafood sector to maintain markets
- The impacts of the COVID-19 pandemic were widespread throughout B.C.'s seafood producing and processing sectors and their markets in 2020-2021 and will continue in 2022.
- B.C.'s seafood sectors are facing increasing levels of uncertainty due to management decisions being made by Fisheries and Oceans Canada, the agency responsible for marine fisheries management.

**Key Facts:**

- LWRS is working with DFO to advocate for fisheries and B.C. based issues.
- The Ministry of Forests issues land tenures for aquaculture developments.
- The Ministry of Agriculture and Food manages the marketing side of the seafood industry.
- B.C.'s extensive coastline and unique geography provide for a significant fisheries and seafood industry.
- In 2020, fisheries and aquaculture in B.C. harvested 272,000 metric tonnes (MT) of over 100 different species of fish, shellfish, and marine plants with a wholesale value of \$1.6 billion (B), which represents a 10 percent decrease in wholesale value from 2019.
- The aquaculture and fisheries sectors provide thousands of jobs to British Columbians and are specifically important to Indigenous and non-Indigenous rural coastal communities.

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- Continued and increasing demand for seafood globally, population growth, and climate change will likely increase the importance and value of fisheries and seafood to B.C. moving forward.
- First Nations have been participating in fisheries, including shellfish culture, since time immemorial and have been significant participants in B.C. commercial fisheries, primarily in the fishing fleet and as employees in the processing sector and more recently the aquaculture sector.
- Access to marine resources remains important for food, social and ceremonial fisheries, and economic development opportunities for First Nations communities.
- One third of fish harvesting jobs are in First Nations communities. There is now growing Indigenous involvement in contemporary aquaculture, with 78 percent of B.C. salmon production in areas covered by partnerships with First Nations who hold approximately 20 percent of the jobs in B.C. associated with salmon farming.
- First Nations are active participants in shellfish aquaculture with increasing interest in the emerging seaweed farming sector. Some First Nations have also established or acquired processing companies with mixed success.
- The recent Ahousaht decision, that grants a Constitutional right to sell fish for five Nuu-Chah-Nulth First Nations, and other fisheries Indigenous Reconciliation initiatives, will likely change the current market and allocation formulas.

**Date Prepared/Revised: March 30, 2022**

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#### Appendix – Species Details

#### Snapshot of 2022 Seafood Trends

Species	Harvest	Landed Value	Wholesale Value
Wild Salmon	↓	↓	↓
Farmed Salmon	↓	↓	↓
Herring	↓	↓	↓
Halibut	↑	↑	↑
Groundfish	↔	↔	↔
Wild Shellfish	↔	↔	↑
Farmed Shellfish	↔	↔	↔
Marine Plants	↑	↑	↑
Other Species	↔	↔	↔
Total B.C.	↔/↓	↔/↓	↔/↓

B.C. Seafood statistics (Ministry of Agriculture and Food) produce a Seafood Year In Review document annually which summarizes B.C. seafood trends using 3 metrics: **Harvest** – the round (whole) weight of fish harvested; **Landed Value** – the price paid to fishers and aquaculturalists; and **Wholesale Value** – Value of fish products after processing which includes imported fish that was processed in B.C. facilities.

#### Salmon and Finfish Aquaculture:

In 2020, farmed finfish contributed 34 percent of the production (100,000 MT) and 46.0 percent of the wholesale value (\$822M) of B.C. seafood in 2020. Within aquaculture, farmed salmon are the dominant species group representing 89.0 percent of the harvest (89,000 MT) and 96.0 percent of the wholesale value (\$710M) and is B.C.'s top agriculture food and seafood export commodity. The landed and wholesale value of farmed salmon in 2020 was \$635M and \$750M respectively. Compared to 2019, these values decreased by 5.0 percent and increased by 0.2 percent respectively. Most farmed salmon are Atlantic salmon, with modest amounts of chinook and minor amounts of coho, steelhead and Arctic char. Other finfish species producing minor volumes include sablefish, tilapia, and sturgeon.

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The outlook for the B.C. farmed salmon sector is tenuous given past and recent policy developments, including the Discovery Island decision (see below), the removal of farms from the Broughton Archipelago (for further information see Estimate Note Title: *Broughton Recommendation and Implementation*), the Federal Minister of Fisheries and Oceans Canada's mandate commitment to review a "substantiable transition from open-net pen operations", and the Provincial moratorium (Order in Council 174) from 2008 prohibiting the disposition of crown land in tidal waters for finfish aquaculture on the North Coast. An immediate concern of the industry is the June 30, 2022 federal license expiry of the remaining 79 farms. DFO will be required to renew these licenses, or the industry will effectively cease operating.

Additional issues that have resulted in stalled growth and investment of the salmon farming sector include uncertainty over perceived environmental impacts, allocation of Crown land tenures and First Nations' interests. Despite these challenges, the industry had committed to further investment in the sector, which is now uncertain with much investment (in the order of hundreds of millions of dollars) for salmon farming development in Newfoundland, Nova Scotia, and New Brunswick.

Additionally, two land-based farms (one tilapia and one barramundi) farms were severely damaged in the flooding events in the Fraser Valley, November 2021.

#### Shellfish Aquaculture:

In 2020, within aquaculture, farmed shellfish represented 7.0 percent of the harvest (6,670 MT) and 4.0 percent of the wholesale value (\$32.6M). The landed and wholesale value of cultured shellfish in 2020 were \$24.7M and \$32.6M, respectively, representing a 25 percent decrease and a 50 percent decrease, respectively, from 2019. The dominant farmed species is oysters, followed by modest production of clams, mussels, and scallops.

Demand for B.C. shellfish typically far exceeds supply; however, growth of the industry is constrained. Furthermore, between 2017 and 2018, B.C.'s farmed shellfish declined by 10 percent in harvest volume and 20 percent in wholesale value. To address these issues, B.C. set innovation in the shellfish aquaculture industry as one of its priorities for the second intake of the B.C. Salmon Restoration and Innovation Fund (BCSRIF) which resulted in the B.C. Shellfish Growers Association (BCSGA) being awarded a \$3.5M sub-fund to provide to various smaller shellfish aquaculture projects in B.C.

DFO has reported a high volume of illegally harvested shellfish being laundered into regular market distribution channels, representing a serious public health risk. Plans to address this issue are underway, and DFO has updated the shellfish Conditions of License to assist in the enforcement of proper handling and traceability.

#### Commercial Fisheries:

B.C.'s commercial fishing and seafood processing sectors are facing significant uncertainty regarding access. Currently, there are 11 marine planning processes on the

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B.C. coast at various stages of development and scale. Once implemented, these marine protected areas will significantly restrict access to marine resources and force harvesters to travel further to grounds or leave the industry. Climate change, ocean acidification and hypoxia are also contributing to uncertainty within the sector as species experience increased natural mortality.

Further, it is becoming increasingly common for Fisheries and Oceans Canada, the management agency for fisheries in B.C. to make unexpected or delayed decisions without suitable mitigation strategies which are further described below. Finally, reconciliation objectives set by the governments of Canada and British Columbia provide a level of uncertainty in access and effort on the coast.

#### 'Other' Wild Shellfish:

B.C.'s 'other' wild shellfish fisheries include wild oysters, clams, gooseneck barnacles and swimming scallops. Oyster and clam fisheries are experiencing challenges with poaching and presence of European green crab. Further, First Nations on the Sunshine Coast are reporting high levels of recreational harvest from buses full of tourists coming to harvest clams in their territory. This is impacting their community's ability to harvest traditional foods.

These smaller fisheries face challenges funding their surveys, science, and monitoring as there are not many harvesters, industry is not organized, and this harvest typically takes place in remote areas without quick access to markets. Overall, most wild shellfish stock will likely remain at relative stable levels again for 2022. The impacts of changing environmental conditions, and in particular impacts from climate and ocean acidification, will increase uncertainty in forecast and harvest levels. Market conditions are expected to remain strong.

#### Shrimp:

Since 2017, there has been a large decline in biomass which resulted in limited fishing opportunity and loss of markets. The fishery is further challenged with market access due to competition from the U.S. and Atlantic Canadian mechanically processed, cheaper products which are Marine Stewardship Council (MSC) certified. Shrimp biomass is correlated with ocean temperatures, so there will generally be low abundance two years after a warm water event. The 2021 shrimp fishery experienced low stock biomass in many management areas with additional limitations due to reaching the Eulachon bycatch limits on the west coast of Vancouver Island and closed areas. In 2020, shrimp landings were 4,300MT which was a 54 percent decrease from the 2019 landings. However, the 54 percent decrease in landings corresponded to only 17 percent decrease in wholesale value (\$13.29M). The 2021 fishery did not come close to fishing the entire Total Allowable Catch (TAC). The 2022 shrimp trawl fishery will face similar constraints with many areas' stock biomass being in the critical and cautious zones. Indigenous communities on the North Coast are lobbying DFO for the introduction of eulachon bycatch limits for the North Coast which will impact fisheries in the area. The shrimp trawl industry is currently working with DFO and researchers at the

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University of British Columbia to improve stock assessment with the goal of opening more areas to shrimp trawling on the coast.

#### Prawn:

This fishery landed 2,050MT, generating \$40.4M in wholesale value in 2020 which represents an increase of 3.3 percent and decrease on 33.4 percent respectively. The impact of COVID-19 on valuable international markets early in the pandemic contributed to loss overall value. However, many harvesters in the prawn sector turning to domestic markets, selling their prawns direct to consumers and taking home a greater portion of revenue for themselves. The outlook for 2022 is expected to be very similar to 2021. The issue raised by DFO in 2021 around the practice of tubbing prawn tails has been resolved and the practice will be allowed to continue. As a result, harvesters will be able to maintain and grow their share of the domestic market. Moving forward, DFO and industry will engage on standardizing packaging and traceability tagging.

#### Crab:

The Dungeness crab fishery is one of the most socio-economically important fisheries on the coast. Fishing occurs coast-wide and has one of the highest participation rates, approximately 92 percent of licensed vessels are active. From 2019-2021, Dungeness landings were among some of the largest on record. North Coast fisheries (Areas A and B) account for most Dungeness crab landings. In 2021, the main markets in China and the U.S. continued to be impacted by COVID-19 however, industry experienced some of the highest prices in recent years. Dungeness crab biomass experienced regular fluctuations in fishable biomass and cannot be accurately forecasted into 2022.

Marine planning initiatives, like the Northern Shelf Bioregion, reconciliation processes, and illegal fishing are creating uncertainty and impeding success of the Dungeness fishery. Illegal fishing in all crab sectors has now spread coast-wide but is still largely concentrated on the South Coast.

The 2021/2022 American Dungeness crab fishery opened on time for the first time in several years and has seen significant landings to date. The American fishery's impact to crab inventories and B.C.'s crab fishery headed into the spring are unknown at this time. LWRS is continuing to work with the sector to assist with these issues and with domestic marketing through the Canadian Fish and Seafood Opportunities Fund.

A recent B.C. Court of Appeal decision (April 2021) has required DFO to reallocate effort (i.e., traps) from Area E on the west coast of Vancouver Island to the Five Nations fishery. Industry was notified of this decision in December 2021 that the commercial trap limits within Area E will be reduced by 50 percent and the commercial harvesters will be forced to divide up this reduced trap limit between its 33 licence holders. With high running costs and half of the access to product, most of these small businesses have expressed the inability to continue this season. DFO has expressed that it intends to mitigate and provide license buybacks but that it cannot happen in time for the 2022 fishery, leaving the commercial fleet without options.

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Within further conversations, DFO has heard that the Five Nations will not be equipped to take advantage of the increase in quota immediately upon the start of the new fishing season. DFO has implemented a phased approach that was released after discussion with the Five Nations and Industry. Industry is also in conversation with the Five Nations to discuss potential collaboration of vessel and gear sales as DFO is only discussing the transfer of licences. DFO has released the updated trap limits with the 2022 phased approach and is expecting to release more information imminently regarding other aspects of this issue including license buyback next steps.

#### Wild Pacific Salmon:

The overall outlook for most Pacific salmon stocks in 2022 will be very poor and like 2021, which was one of the lowest on record. Thompson and Chilcotin River steelhead populations have reached critical lows and are undergoing Committee on the Status of Endangered Wildlife in Canada (COSEWIC) reassessment. Several Fraser River bound salmon stocks and steelhead will undergo assessments for potential Federal *Species At Risk Act* (SARA) listing and are stocks of concern. In reaction to low returns, Fisheries and Oceans Canada (DFO) announced their \$641M Pacific Salmon Strategy Initiative (PSSI) which included significant closures and plans for restructuring the fleet, as well as rebuilding plans. The Big Bar rockslide has impeded natural fish passage beyond it, further impacting several salmon species migration in the Fraser River. In 2021, most salmon were able to pass through the Big Bar site unobstructed.

Salmon returns will be highly variable, with an overall continued trend of reduced productivity, especially for southern salmon populations and chinook in all areas. A key factor is the poor conditions for ocean survival for the sea entry and freshwater rearing years for salmon stocks returning in 2021. However, this will be an Adams cycle year and there could be a relatively abundant return of Fraser sockeye (close to 10 million). This may result in more challenges as DFO balances conservation requirements, its new Pacific Salmon Strategy Initiative (PSSI), and demands for fisheries opportunities for all interests including the US, First Nations, and commercial and sport fishing sectors. There will be limited economic opportunities for all salmon fisheries in the next several years

- **Sockeye:** Sockeye returns are expected to remain below historical averages in both north and south coastal regions. A relatively large return of Summer and Late run Fraser sockeye is expected from this dominant group of Adams River stocks in 2022. There remains significant uncertainty with these runs. There will likely be very limited economic opportunities for salmon fishermen as a result.
- **Chinook:** Northern and southern populations of chinook salmon are expected to produce poor returns. Conservation efforts for stocks of concern and further plans for SRKW recovery efforts being considered by DFO may also further limit commercial and recreational harvest opportunities in 2022.

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- **Pink:** 2022 is an even year and therefore not a 'pink year' (odd years see larger returns than even years). Fraser River pink returns are expected to be low. Some Central Coast pink runs could see better than average returns in 2022.
- **Coho:** Abundance will remain uncertain and depend on marine survival. Southern coho populations will mostly remain at historic lows for 2022. Harvest restrictions will likely continue. Northern coho populations are expected to be more variable but will likely show declines.
- **Chum:** Forecasts are highly uncertain. 2022 is not expected to be as productive as previous years. Poor chum returns are expected in northern systems while southern inside populations are expected to yield some fisheries opportunities, despite high stock variability and conservation concerns for other species.

#### Tuna:

The USA-Canada Albacore Tuna Treaty fishing arrangement expired in 2019. A new 3-year roll-over arrangement was agreed to extending from 2020 to 2023 which provides some stability for B.C.'s tuna fishermen. The wholesale value of B.C. albacore tuna products was \$33.4M in 2020. Fish behaviour in 2021 had stocks in Canadian waters for longer, contributing to a productive season, with high catches of 'peanuts' (small albacore). Albacore tuna catches in 2021 were 2,420 MT in 2021, which is a 2 percent increase from 2020. Catch levels are expected to remain relatively stable for 2022. Tuna markets and prices remain strong.

#### Herring:

In 2021, the Total Allowable Catch (TAC) was set at approximately 18,000 MT (food, bait, special use and roe). The drop in TAC over the last few years in the Strait of Georgia (SOG) has impacted the commercial fishing industry as well as the seafood processing industry as roe herring is one of the only fisheries that sustains employment through winter months when most other fisheries are closed.

For 2022, DFO presented several Management Procedures (MPs) with various harvest rates and probabilities of achieving conservation targets. All MPs for the SOG with a harvest rate (HR) of 20 percent or more met conservation objectives with significant probability and robustness. Herring stocks in SOG are predicted to be slightly less than 2021 but, still higher than the last 10-15 years. Industry supported a HR of 20 percent however, in December 2021, Minister of Fisheries, Oceans and the Canadian Coast Guard, The Honourable Joyce Murray announced a decrease in harvest rate by half for the SOG roe herring fishery for 2022 in consideration of declining wild Pacific salmon stocks.

The 2022 TAC for roe herring in the SOG is 7,850MT. Further, there will be no commercial spawn on kelp (SOK) harvest opportunities coastwide. SOK harvesters also require a Provincial Wild Aquatic Plant Harvest Licence to harvest the kelp required for

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their SOK fishery and it costs \$110.00 per application with a cut off October 1<sup>st</sup>, 2021 meaning harvesters applied and paid before they knew there wouldn't be fishing opportunities.

Overall, the reduced TAC will present challenges for industry to maintain Japanese and Chinese markets, especially with the anticipation that Sitka's stocks are rebounding. There is growing public concern, and advocacy groups are calling for a complete moratorium on the herring fishery. There were no significant conflicts on the water for the 2021 season but, lack of protest may have been influenced by COVID-19. On the Central Coast, the Heiltsuk First Nation has worked with DFO to reach the decision to not allow a roe herring fishery despite the DFO science advice to allow harvest since 2019. Of the five main herring stocks that are managed in B.C., three of five appear to still be recovering from a low in 2010.

#### Hake:

While the 2021 data are not yet finalized, confirmed Canadian hake landings have decreased again from the record setting harvests in 2017-2019 due to lack of recruitment of juvenile hake into the fishery. In 2020 and 2021, the U.S. and Canada were unable to reach an agreement under the Pacific Hake Treaty. The U.S. was advocating for continued high catch levels, and Canada sought a reduction in catch given the long-term status of the stock. Hake stocks are dependent on large recruitment years that bring large harvestable masses of fish that can sustain both countries for years. Large recruitment years occurred in 2014 and 2017 and the stocks have been decreasing as these are aging out or being caught. The stock assessment data is now showing that there is potential for the 2020-year class to have strong recruitment which is promising for the stocks and may have helped to ease treaty negotiations and the ability to reach agreement in 2022. This year's negotiations just concluded in March 2022 with an agreement reached.

#### Halibut:

Halibut stocks are well managed and see expected increases and decreases which inform total catch levels. For the 2022 season the surveys show an overall increase in abundance which will result in an increase to the coastwide TAC and Canada's TAC. Coastwide TACs, which have been stable up until 2017, were thought to be in decline, so the coastwide TAC was reduced significantly in 2018 down to 27.9M lbs. An agreement was reached with the U.S. at the 2019 International Pacific Halibut Commission (IPHC) negotiation sessions, which gives provided B.C. a proportional share of 17.7% of the coastwide TAC halibut for four years. The 2022 coastwide TAC for Pacific halibut was set at 41.22M lbs. which provides Canada with 7.56M lbs. (up from 7 M lbs. in 2021). The commercial fishery remains very strong in recent years in B.C. as prices and consumer demand are high. With 2022 being the last year of the interim agreement which provides Canada a fixed share of the total stock, it is expected that 2023 will see more tense negotiations and the US pushing for Canada to receive a smaller share.

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#### Other Groundfish:

Groundfish hook and line harvests may show a small decrease or remain stable in 2022 due to navigating area changes due to rockfish conservation concerns, mostly around yelloweye and bocaccio rockfish. Bocaccio rockfish has shown a historic recruitment event that expects to provide enough fish by the 2023 fishing season to satisfy DFO's rebuilding plan and ease pressure on the trawl fisheries. The groundfish trawl outlook is good, however, with similar conservation concerns for some rockfish, including bocaccio rockfish and Arrowtooth flounder. Opportunities for lingcod and other minor species should be like last year. Sablefish enter the final year of their harvest rate ramp down and DFO has recommended a TAC of 2,623MT which is a decrease of 264t from the 2021 season. Markets and prices remain strong, and harvest should remain stable through 2022.

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**Issue:** Provincial Impacts of DFO Fishery/Seafood Decisions

**Recommend Response:**

- In recent years, the federal government through Fisheries and Oceans Canada (DFO) has announced multiple reductions and closures in various B.C. fisheries and aquaculture sectors that are having cumulative impacts on many of B.C.'s coastal communities which rely on these opportunities.
- B.C. respects the federal government's position and their authority over licensing marine fisheries, salmon fisheries and aquaculture. However, the Province is requesting that DFO provide a coordinated strategic approach to mitigate the compounding impacts on B.C. fishing communities.
- We recognize the importance of finding ways to mitigate the cumulative impacts to our interconnected fisheries, aquaculture and seafood businesses and the communities that rely on them.
- A lack of federal support to mitigate the impacts caused by these fisheries and aquaculture decisions puts pressure on provincial social supports and resources.
- We are strengthening our approach with the federal government to ensure they are bringing supports to affected industries, including the individuals and businesses that support our many coastal communities in B.C.
- On March 10, 2022 our Premier sent a letter to Prime Minister Trudeau making clear that any plan developed by 2025 to transition from current open-net pen technology must be built on meaningful and principled engagement involving industry, First Nations, local governments, and the Province.

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- To this end, we are now fully engaged in DFO's development of a transition plan for salmon farming, in order to ensure that provincial interests are reflected in that process, and that solutions can be found that respect First Nations' rights and community needs.

#### **Key Facts:**

- LWRS is responsible for strategic policy, advocacy, and intergovernmental collaboration with DFO to mitigate the impacts of DFO decisions on provincial interests.
- Ministry of Agriculture and Food works with industry on the impacts to business development, marketing, and export and that occur due to DFO decisions as related to B.C. seafood products.
- In recent years, DFO has announced multiple reductions and closures in various B.C. fisheries and aquaculture sectors (See appendices 1 through 5 for closure details) that are having cumulative impacts on many of B.C.'s coastal communities:
  - December 17, 2020, DFO announced the phase out of salmon farming operations in the Discovery Islands by June 2022. This affects approximately 26 percent of B.C. farmed salmon and 20 percent of B.C.'s aquaculture revenue (\$132 million in 2019).
  - During the 2019 federal election, DFO was mandated to create a plan to transition from open net-pen salmon farming in B.C. by 2025, which has caused high uncertainty in the future of farming Atlantic Salmon, B.C.'s largest agricultural commodity.
  - June 29, 2021, DFO announced sweeping closures of nearly 60 percent of the province's commercial salmon fisheries in areas with significant stocks of conservation concern, as well as a commercial licence retirement program yet to be unveiled.
  - December 16, 2021, DFO announced major reductions in B.C. herring fisheries by reducing the Strait of Georgia fishery by half and closing any other commercial fishing opportunities along the coast.
  - April 19, 2021, the British Columbia Court of Appeal (BCCA) released a decision regarding access to crab for the Five Nations. DFO's response was to provide the Five Nations with 50 percent of the crab allocation in Area E which will result in the 33 commercial crab license holders having 50 percent less access by April 1, 2022.
  - Federal, provincial and First Nations governments have been working on a draft Network Action Plan (NAP) and implementation of a network of Marine Protected

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Areas (MPAs) in the Northern Shelf Bioregion (NSB). DFO has paused efforts on this initiative due to concerns with their agency's ability to implement fisheries management measures related to it. The Province and First Nations are continuing to press DFO to move forward with implementation. The current proposed draft NAP does cause concern for some commercial, recreational, and Indigenous fisheries operations that would see large portions of resource access removed.

- The Province has not disputed DFO's jurisdiction or authority over marine fisheries, salmon fisheries and aquaculture; however, it has requested that DFO provide a coordinated strategic approach to mitigate the compounding impacts on the affected communities.
- Many Pacific salmon stocks have suffered significant declines in recent years along with the Big Bar Land Slide and more recently with the catastrophic flooding events, leading to large reductions in harvest and fishing opportunities. DFO announced the suite of significant closures of commercial fisheries under the Pacific Salmon Strategy Initiative (PSSI) as part of its harvest transformation pillar. The PSSI announcement included a 60 percent cut to planned salmon fisheries across the coast. The closures focused on fisheries that have potential to interact with stocks of concern and will have the greatest impact on fisheries using gillnet gear.
- This is a particular issue on decisions founded in reconciliation where, confirmed by court interpretation, government should bare/compensate for the cost of reallocation decisions, not the affected non-Indigenous industry subject to the impacts of it. DFO has approached many of these decisions in a one-off nature, dealing with individual court cases or fisheries management decisions, without mitigating the cumulative impacts to the infrastructure and well-being of the coastal communities that support fisheries and aquaculture.
- Without federal support to mitigate the impacts caused by these decisions there becomes added pressure on provincial social supports and resources such as Employment Insurance and career support services (e.g., WorkBC Centres). Without federal support, the indirect costs are downloaded to the Province and local governments.

**Date Prepared/Revised: March 30, 2022**

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#### **Appendix 1: Open net pen salmon farming phase outs**

In December 2020, the DFO Minister announced a phase out of all salmon farming operations in the Discovery Islands (DI) by June 2022. This affects approximately 26 percent of B.C. farmed salmon capacity representing 20 percent of provincial aquaculture revenue (\$132 million in 2019). For more detailed information on the phase out of salmon farms in the Discovery Islands, see Estimates note: Salmon Aquaculture Policy and Decisions FAWSB

The DFO decision to phase out salmon farming in the Discovery Islands area follows the 2012 Cohen Commission of Inquiry into the Decline of Sockeye Salmon in the Fraser River, which resulted in three DFO actions specific to the area. They included Recommendation #19, which would determine if DFO would continue to license farms in the area, pending scientific consensus on the potential for harm to Fraser River fish stocks.

The Province will be participating in the federally led 2025 Transition Plan working group and will be advocating for solutions that balance environmental considerations, the economic interests of coastal communities, job opportunities, protecting the health of wild salmon, and our government's commitment to reconciliation with First Nations.

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#### **Appendix 2: Herring fishery reductions and closures**

In June 2021, The Ministry of Agriculture, Food and Fisheries (AFF) sent a letter to DFO Minister Jordan outlining that the Province would like to see clearer objectives for managing herring based on their importance to ecosystem processes. The letter encouraged DFO to ensure timely implementation of the work DFO is doing on the Ecosystem Approach to Fisheries Management (EAFM) and that herring management is considered in conjunction with efforts on wild salmon recovery. The letter states support for collaboration with First Nations, industry and DFO in any work made towards these goals.

In December 2021, DFO announced a reduction to a 10 percent harvest rate for the SOG roe herring fishery (half of the standard 20 percent), and the closure of the limited remaining commercial spawn on kelp fisheries with catch limited to First Nations FSC fisheries. These changes have been met with frustration by the herring fishing industry as the decisions do not align with the science that DFO presented to the HIAB and IHHPC or the methods used in previous years to determine the harvest rate and TAC from that science. The DFO announcement states that the decision was in consideration of declining wild Pacific salmon, and the impacts of flooding and landslides on B.C. fish habitats.

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#### **Appendix 3: Area E crab fishery access removed from commercial sector**

The B.C. Dungeness crab fishery is B.C.'s most financially valuable wild fishery, and one of B.C.'s most independent fisheries by having a higher rate of license holders participating in the fishery and more benefits directly flowing to adjacent coastal communities. Area E harvesters have proven landings of 1 - 2.5 million (M) pounds on average.

On April 19, 2021, the BCCA released its decision in relation to the appeal brought forward by the Five Nuu-chah-nulth Nations of Ahousaht, Ehattesaht/Chinehkont, Hesquiaht, Tla-o-qui-aht, Mowachaht/Muchalaht (Five Nations). The BCCA decision resulted in DFO being obligated to reconsider what level of crab harvesting opportunity it must provide to accommodate the Five Nations' rights. DFO decided to provide 50 percent of crab trap allocations in the areas to the Five Nations to satisfy the court's rulings.

The Courts stated that an inability to mitigate for the commercial fleet is not a justifiable reason to delay providing the Five Nations with access. As a result, by April 1, 2022, the commercial trap limits within Area E will be reduced by 50 percent and the commercial harvesters will be forced to divide up this reduced trap limit between its 33 licence holders, who will each receive half of the traps they are accustomed to. With high running costs and half of the access to product, most of these small businesses have expressed the inability to continue this season. DFO has expressed that it intends to mitigate and provide license buybacks but that it cannot happen in time for the 2022 fishery, leaving the commercial fleet without options.

Within further conversations, DFO has heard that the Five Nations will not be equipped to take advantage of the increase in quota immediately upon the start of the new fishing season. DFO has implemented a phased approach that was released after discussion with the Five Nations and Industry. Industry is also in conversation with the Five Nations to discuss potential collaboration of vessel and gear sales as DFO is only discussing the transfer of licences. DFO has released the updated trap limits with the 2022 phased approach and is expecting to release more information imminently regarding other aspects of this issue including license buyback next steps.

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#### **Appendix 4: Proposed Marine Protected Area impacts**

The draft NAP has been collaboratively developed through a trilateral partnership between the governments of Canada, B.C. and 17 First Nations. FLNR Coast Area staff have been leading the Province's involvement in this initiative, with LWRS and ENV participating in joint technical tables and contributing to product development. This process has been ongoing for almost a decade, with significant investment of provincial staff time and resources.

The NAP process includes creation of design 'scenarios', evaluated using ecological, cultural, and socio-economic performance measures and stakeholder feedback, and then revised to reflect input from a diversity of user groups. It provides a proposed MPA network design with recommendations for its implementation including governance, management, and monitoring. The draft NAP was released for First Nations, stakeholder, and public engagement in winter 2022 and a final NAP is expected by fall 2022. Public release of the draft NAP would also be accompanied by a socio-economic analysis, outlining potential implications of proposed conservation measures. Some costs to certain user groups are expected, including the commercial fishing sector, of which First Nations play a large role. Many fisheries will experience changes to harvest opportunities for some fisheries in certain locations. Advice/Recommendations; Advice/Recommendations; Intergovernmental Communications

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**Issue:** Climate Related Impacts on B.C. Seafood Sector

**Recommend Response:**

- Our commercial fisheries and aquaculture sectors play an important part in B.C.'s food security and trade but are increasingly vulnerable to the impacts of climate change including ocean acidification, oxygen deficiency (hypoxia), and ocean warming.
- Many of our seafood harvesters and farmers have had an incredibly difficult year due to impacts from wildfires, the heat dome, and the fall flooding.
- Impacts from flooding in B.C.'s rivers on the future of our salmon and steelhead stocks and habitat are not yet known.
- Recognizing the critical importance of fisheries in B.C., we are committed to the protection and revitalization of B.C.'s wild salmon populations as demonstrated by our ongoing development of a Wild Salmon Strategy & Action Plan. A corner stone of this work will be Indigenous and federal partnerships, and a focus on climate resiliency.
- B.C. is working collaboratively to better understand the impacts of climate change to the B.C. seafood sector, and to develop strategies to help deal with these.
- Through the B.C. Salmon Restoration and Innovation Fund, we have funded several projects that research the effects of climate shifts on B.C.'s fish stocks.
- As part of Phase 1 of the B.C.'s Climate Preparedness and Adaptations Strategy, the Fisheries and Aquaculture Ocean Acidification and Hypoxia Action Plan will help foster resilient species and ecosystems.
- B.C. is also contributing to implementation of clean technologies in the fisheries, aquaculture, and seafood

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processing sectors through the Fisheries and Aquaculture Clean Technology Adoption Program.

#### **Key Facts:**

- LWRS is managing the BCSRIF fund and the development of Marine Protected Areas within the province.
- The Ministry of Agriculture and Food is leading the OAH Action Plan and supporting climate adaptation through FACTAP and the Aquaculture Innovation Challenge.
- The Ministry of Environment and Climate Change is overseeing all CleanBC initiatives related to climate adaptation.
- Emergency Management BC is handling the flood response and restoration.
- The changing climate affects life in the oceans and waterways, as droughts, fires, floods, rising seas, ocean acidification, hypoxia and warming oceans change the productivity of our waters and where fish live, spawn, and feed. Recent natural disasters highlight the urgency for addressing the impacts of climate change across all levels of government.
- For fisheries and aquaculture, the impacts are evident in freshwater, coastal nearshore and open ocean habitats. Some species like Pacific salmon rely on all of these.
- The 2021 heat dome on B.C.'s coast created localized impacts to shellfish growers and harvesters. The temperature caused the loss of approximately 700,000 farmed oysters and represented a loss of 52 to 93 percent for some growers. There is currently no business risk management funding available to this sector like there is in agricultural farming.
- The November 2021 atmospheric river flooding event impacted critical salmonid habitat on the Fraser River and severely damaged two land-based fish farms (one tilapia and one barramundi). The floods led to wash-out of the recently spawned salmon eggs and the 'scouring' of gravel beds necessary for salmon reproduction.
- In 2019, the B.C. Ministry of Environment and Climate Change Strategy completed a Preliminary Strategic Climate Risk Assessment as a part of B.C.'s Climate Preparedness and Adaptation Strategy (CPAS) to better understand climate-related risks and help B.C. develop appropriate measures to address those risks. This climate risk assessment identified ocean acidification as one of several priority climate risks for B.C.
- Phase 1 of CPAS, and the BC Fisheries and Aquaculture Ocean Acidification and Hypoxia Action Plan (BC OAH Action Plan) being developed by the Ministry of Agriculture and Food, will help strengthen our foundational information and ultimately foster species and ecosystem resilience. Development of the BC OAH Action Plan is taking place in 2021 and 2022 and is consistent with the United Nations Ocean Decade initiative.

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- Beyond the Wild Salmon Strategy and Action Plan, other related provincial strategies are in development, including the Coastal Marine Strategy and the Watershed Security Strategy and Fund. Responsibility for all three of these strategies rests within the Water, Fisheries and Coastal Policy & Planning Division of the new Ministry of Land, Water and Resource Stewardship, and staff are working to ensure alignment.
- BCSRIF presents a funding opportunity to prioritize climate adaptation and mitigation for the fisheries and aquaculture sectors in further intakes of this program.
- The B.C. Ministry of Agriculture and Food, has supported the Fisheries and Aquaculture Clean Technology Adoption Program (FACTAP) which funds climate mitigation projects in the fisheries, aquaculture, and seafood processing sectors.

**Date Prepared/Revised: April 1, 2022**

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#### Appendix 1

#### Detailed Program Expenditure / Revenue Implication:

- **FACTAP:** (MAF lead) - For the 2021/22 fiscal, the province expended \$80K to support eight projects (four aquaculture, two fishing, and two processing projects) with total project costs of \$3.3M. Projects intend to mitigate climate change by reducing fuel consumption and reducing greenhouse gas emissions in the fisheries, aquaculture, and seafood processing sectors.
- **Climate Preparedness Adaptation Strategy Phase 1 – Fisheries and Aquaculture Ocean Acidification Action Plan (OAH Action Plan):** (MAF Lead) - \$155K is being allocated to several initiatives that will inform B.C.'s OAH Action Plan. To date, \$12.5K has been used to carry out four workshops focusing on various expert and stakeholder groups and the materials gleaned from the workshops will support the creation of B. C.'s OAH Action Plan. Further planned work includes ocean acidification data collection along the B.C. coast and a carbon footprint accounting methodology review for the commercial fishing sector.
- **BCSRIF:** (LWRS lead) - BCSRIF is valued federally at \$143M over five years, including a \$5M grant to the Pacific Salmon Foundation Endowment Fund in 2018/19. The 30% provincial contribution is \$42.85M over five years beginning in 2019/20. To date, BCSRIF has allocated \$16.55M (= \$5M provincial funds) towards climate monitoring, and climate adaptation and mitigation projects, including:

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- International pan-Pacific Salmon Expedition (2021): \$3M to the North Pacific Anadromous Fish Commission to conduct collaborative pan-Pacific winter and summer surveys to monitor abundance, and productivity of salmon to directly inform fisheries management decisions and enforcement efforts. The project will provide insight into how climate variability influences the distribution, migration, growth, and fitness of Pacific salmon.
- Place-based risk of climate change to sustainability of B.C. wild and hatchery-origin salmon: \$1M to Pacific Impacts Consortium (University of Victoria) to conduct research that will improve understanding of potential threats posed to Pacific salmonids and their habitats posed by climate change and develop risk assessment tools to support adaptive regional management approaches
- Winter salmon survey: \$650K to the Pacific Salmon Foundation to support international research in the Gulf of Alaska to study the abundance, health, and habitat use of Pacific salmonids during the winter. This will provide researchers with information to inform strategies to address ecosystem change under future climate conditions.
- Climate Action Priorities for Salmon: \$3.3M to the Pacific Salmon Foundation to create a Climate Action Plan for B.C. salmon.
- Enhancing estuary resiliency: An innovative approach to sustaining fish and fish habitat in a changing climate: \$8.6M to the Nature Trust of BC to undertake monitoring and research to assess estuary resilience to sea level rise and other climate impacts across the coast of B.C.
- **Aquaculture Innovation Challenge**: (MAF lead) - In January 2021, AFF signed an MOU with Innovate B.C. to support the Aquaculture Innovation Challenge Program. Innovate B.C. is a B.C. Crown agency that helps innovators access funding, launch their ideas, and connect with experts they need to build great companies. \$325K in monetary prizes (2x \$150K and 1x \$25K) were granted. A panel of judges comprised of industry experts, investors, potential customers, and government reviewed applications and select the two grand prize winners. The pitches took place on May 5, 2021, recipients were selected by the panel of judges. Projects are ongoing and include efforts to mitigate climate change through reduction in diesel fuel consumption in the aquaculture sector.

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**Issue:** BC's Marine Economy

**Recommend Response:**

- In 2018, BC's marine economy generated 7.8% of provincial GDP, generating \$21.5 billion in direct, indirect, and induced GDP contributions.
- The marine economy generated \$14.8 billion in labour income and 196,000 jobs.
- The marine economy drives innovation and growth, with key sectors averaging 4 to 8% annual growth from 2005 and 2018.
- The marine economy is important to all coastal communities, but especially First Nations as sectors driven by the ocean economy can provide 41% of on-reserve employment.

**Additional Response points (if needed):**

- BC is actively engaged with Canada as they continue work on a Blue Economy strategy. BC is working to ensure opportunities and priorities that arise through the Coastal Marine Strategy, the Marine Plan Partnership and other provincial and community initiatives are included in the strategy.
- The StrongerBC Economic Plan shows we continue to invest in BC's marine economy. Commitments include a thriving tourism economy, partnering with Indigenous Peoples on Economic Development opportunities, committing to a provincial ship-building strategy, and developing BC's Coastal Marine Strategy.

**Key Facts:**

**Shared Jurisdiction:**

- The ocean is a shared jurisdiction. BC cooperates closely with the Federal Government and many coastal First Nations governments on many aspects of the Ocean Economy.

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- Recently BC co-funded a study of the Marine Economy in BC with the Federal Department of Fisheries and Oceans (DFO) and Pacific Economic Development Canada (PacifiCan).
- Joint expenditures on this contract are \$147,000.00

#### Key findings from the Ocean Economy report:

- Marine transportation grew 8% per year from 2005 and 2018.
- Marine related tourism grew 4% per year from 2005 and 2018.
- Ranked by provincial contribution, the ten sectors of BC's marine economy are:

1. Marine Transportation	6. Marine Technology
2. Marine reliant Forestry (about 80% of coastal forestry)	7. Ship and Boat Building and repair
3. Tourism and Recreation	8. Port and Harbour Construction
4. Fisheries, Aquaculture, and Seafood	9. Research (Universities and Non-governmental Organizations)
5. Government Expenditures (DFO, Coast Guard, National Defence, Provincial ministries)	10. Oil and Gas (there is no marine oil and gas extraction in BC, but the sector is looking to increase it's reliance on marine transportation)

#### The Marine Economy is an Indigenous Economy:

- Indigenous people living on reserve are three times more likely to work in a sector fully attributable to the marine economy than those in the non-indigenous workforce.
- First Nations living on reserve are more likely to engage in entrepreneurial activity in the marine sectors than in other sectors of the economy.

#### Role of LWRS and other Ministries:

- LWRS leads the Coastal Marine Strategy and provincial engagement on the Marine Plan Partnership both which have economic components.
- The Ministry of Jobs, Economic Recovery, and Innovation (JERI) is leading the StrongerBC economic recovery plan which includes commitments BC's marine economy.
- Ministry of Forests manages marine tenures for everything from aquaculture to tourism and recreation.
- Ministry of Agriculture and Food maintains a role in promoting BC's seafood products and

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**Issue:** Fisheries Economics

**Recommend Response:**

- The fishing sector is made up of five components:
  - First Nations Food, Social and Ceremonial (FSC) fishing
  - Recreational sport fishing
  - The capture fishery (often called commercial)
  - Fish and seafood processing
  - Aquaculture
- The sector generates over \$3.3B in revenue, contributes over \$1B GDP and over 15,000 jobs.
- All five sectors are important to British Columbia (BC) and require an integrated management approach.
- BC is committed to advancing collaborative management with Indigenous Peoples in order to retain and recover this important resource for generations to come.
- BC collaborates with Federal Government to improve the integrated approach to managing the collective fisheries.
- BC directly regulates the freshwater recreational sport fishery, which generates approximately \$1B in direct and indirect revenue.
- Recreational Sport Fishing licence sales fund the operations of the Freshwater Fisheries Society of BC (FFSBC) and projects through the Habitat Conservation Trust Foundation.

**Key Facts:**

MOF is the lead ministry with fisheries allocation. LWRS supports MOF with the management of species of conservation concern, and in collaboration with first nations and Fisheries and Oceans Canada.

Our most accurate information is from BC Statistics, which does not include FSC due to reporting differences with Federal Government.

- Excepting the FSC, the total economic value of all sectors \$3.3B and an estimated 15,000 British Columbians were employed.
- Wages and salaries were estimated at \$465M.

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The Recreational Sport Fishing, including both marine and freshwater:

- Accounts for 33% or \$1.11B in revenue.
- 9,000 of the 15,000 people are employed by sport fishing.
- Wages and salaries are \$236.5M (out of \$465M).
- The freshwater portion generates \$546M in revenue and almost \$1B in combined direct/indirect economic benefit (2013 FFSBC Economic Report).
- Freshwater recreational fishing is one of BC's top five adventure tourism activities promoted by Destination BC domestically and internationally and is equal in value to golf.

The Capture Fishery represents \$41M in revenue.

Aquaculture represents \$78M in revenue, with an increase largely due to growth in sales of farmed salmon products.

Fish and seafood processing represents \$1B in revenue.

Covid Impacts:

- Resident (from BC) recreational sport fishing licence sales increased in the first year of COVID as sportfishing was a positive and valued activity and resulted in similar overall revenues as pre-COVID. Those numbers dropped in 2021/22 as COVID restrictions dropped.
- COVID has had a large negative economic impact on the recreational fishing sector as guiding and tourism businesses rely on international clients.

Year	2017/18	2018/19	2019/20	2020/21	2021/22
<b>Total Licenses Sold</b>	509,751	527,823	510,887	516,125	479,227

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### Ministry of Land, Water and Resource Stewardship

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**Issue:** BC Salmon Restoration and Innovation Fund

**Recommend Response:**

- The protection of wild salmon is critically important to B.C.'s environment, history, economy and way of life.
- On March 15, 2019, the Province of British Columbia and the Federal Government announced a joint commitment of \$142.85 million dollars over the next five years to protect wild salmon.
- Our government's \$42.85 million investment in the B.C. Salmon Restoration and Innovation Fund (BCSRIF) was the largest provincial financial commitment to protect wild salmon in the past 20 years.
- We are committed to helping restore abundant wild salmon stocks, while we develop sustainable wild fisheries and support communities around B.C. and on our coast.
- BCSRIF is providing support for many wild salmon initiatives in B.C. with focus on high impact areas including:
  - Habitat protection and restoration for rivers and streams that are crucial for salmon reproduction;
  - Maintenance of healthy and diverse salmon populations; and,
  - Supporting lasting and meaningful reconciliation.
- These priorities align with the 2019 report from the B.C. Wild Salmon Advisory Council, the province's work with First Nations, industry, and the federal government; as well as our new Wild Salmon Strategy and Action Plan that is currently being developed by the Province.
- To date, over 90 projects have received support from BCSRIF totaling over \$126 million of funding. The projects are very diverse in terms of location, scale, and proponent, but all contribute to protecting and restoring wild salmon stocks and

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creating a more sustainable future for local communities and workers.

- The program is also having significant co-benefits including over 450 people being employed through BCSRIF projects, over a 100 of which are in rural communities, and over 330 people being trained.
- Building on the program's success and continued need for such a funding mechanism, our government has made the commitment to work towards doubling BCSRIF to ensure strong, healthy wild salmon stocks are available for future generations of British Columbians.

#### **Key Facts:**

- LWRS is overall provincial lead on BCSRIF in collaboration with DFO. The Ministries of Agriculture and Food, Forests, Indigenous Relations and Reconciliation, and the Environment provide input on priority setting for funding and proposal review.
- In 2019, the B.C. Salmon Restoration and Innovation Fund was launched. This fund is a federal-provincial collaboration that helps to restore the habitat of our wild fish stocks in B.C. and protect our vulnerable wild Pacific salmon species. Canada is investing \$100 million (M) over five years, and B.C. is investing \$42.85M over five years
- The BCSRIF Framework Agreement identifies Fisheries and Oceans Canada (DFO) as the "implementing party" for the fund. DFO is responsible for:
  - Financial administration;
  - Project information collection and reporting;
  - Development and management of funding agreements with proponents; and,
  - Secretariat for the associated federal-provincial committees.
- LWRS's role in BCSRIF is focused on:
  - Strategic oversight of the initiative, such as annual priority-setting, in partnership with DFO;
  - Cross-Ministry collaboration to represent provincial interests in BCSRIF;
  - Sector and industry engagement on provincial priorities and project concept development, in cooperation with DFO; and,
  - Collaboration with DFO in the adjudication of project applications.
- To date, BCSRIF has funded over 90 projects (Appendix A) from a wide range of applicants including: Indigenous groups, conservation groups, commercial organizations in the wild fisheries and industry sectors, recreational fisheries, as well

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as non-commercial organizations such as universities and academia, industry associations and research institutions.

- The fund supports projects that leverage local knowledge such as local Indigenous monitoring and guardianship programs and community-led habitat restoration, among other innovative projects aimed at protecting and restoring wild fish stocks.
- BCSRIF had 192 submissions for its first in take of “Expression of Interest” (EOI) in 2019 requesting nearly \$300M in funding, and 126 EOI applications requesting \$197.1M in 2020, demonstrating the popularity of the fund.
- Working to doubling the size of BCSRIF is included in both Minister Osborne’s and Parliamentary Secretary Donnelly’s Mandate Letters. The Government of Canada has already committed an additional investment of \$100M in the Federal Budget 2021 to expand the program.
- Announcements regarding 19 of the most recently funded projects are anticipated in in Spring 2022 by LWRS.
- DFO and LWRS staff are currently reviewing the application process based on feedback received from applicants including during a series of roundtables held in Summer 2021 by Parliamentary Secretary Donnelly with support from Robert Chamberlin.
- Currently, applications follow a two-stage joint review process involving DFO and provincial subject matter experts, which has been praised for its professionalism but criticized for being arduous and lengthy.

**Date Prepared/Revised: April 1, 2022**

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#### Appendix A – BCSRIF Approved Projects to date

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
Elaho River Chinook Salmon Restoration  <b>Project Complete</b>	Squamish River Watershed Society	The Elaho River chinook salmon restoration project will restore fish passage and increase chinook productivity in the lower Elaho River. The project will reduce obstructions and provide fish access to over 40 kilometers of ideal fish habitat in the upper section of the watershed, improving the natural productivity of char and salmonids including chinook, coho, pink salmon and steelhead	1-Sep-19	31-Mar-22	\$522,486.00
Electronic Application for Enhanced Selective Fishing and Bycatch Avoidance	Canadian Groundfish Research and Conservation Society	The Canadian Groundfish Research and Conservation Society, in partnership with Vericatch Solutions Inc. will develop an electronic application for fishing vessels that utilizes at-sea monitoring data from commercial groundfish vessels in real time to create heat maps showing where marine species of concern (such as Chinook Salmon, Bocaccio Rockfish, etc.) are being encountered to minimize bycatch	15-Aug-19	31-Mar-24	\$600,000.00
Creation of Salmon Conservation Facility	Juan de Fuca Salmon Restoration Society	Funding will support upgrades to the Sooke River Jack Brooks hatchery facility and interpretive center. Facility upgrades will meet green building codes, include new effluent treatment system, a chiller unit to support the recommended otolith marking for salmon management and restoration data as well as hatchery aeration systems. Planning and upgrades are intended to provide a template to support similar upgrades and contribute to the overall effectiveness of community-operated hatcheries	15-Apr-20	31-Mar-22	\$920,000.00

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Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
Enhancing rockfish recovery through citizen science, outreach & field experiments	University of Victoria, School of Environmental Studies	The University of Victoria (UVic) will support BC rockfish recovery and assessment through outreach and citizen-science emphasizing angler awareness of regulations (via MyCatch app) and through an evaluation of the effectiveness of descenders on reducing rockfish mortality. UVic will partner with academia, conservancy organizations and local First Nations	15-Aug-19	30-Apr-23	\$758,780.00
Build wet lab to investigate wild/farmed interaction & stock restoration  <b>Project Cancelled</b>	BC Centre for Aquatic Health Sciences	The BC Center for Aquatic Health Sciences and partners, including the BC Salmon Farmers Association, will establish a wet lab facility in the Campbell River area to increase research and diagnostic capacity to identify and examine fish health threats and interactions between farmed and wild stock	15-Jul-19	30-Jun-21	\$742,443.00
Innovative Habitat Restoration Demonstration	British Columbia Conservation Foundation (BCCF)	Led by the British Columbia Conservation Foundation, the 'Innovative Habitat Restoration Demonstration' is a multi-year, watershed-scale demonstration project to showcase innovative habitat restoration methods that accommodate the effects of recent ecosystem shifts with benefits to Chinook, coho, sockeye and steelhead. The project will promote restoration, protection and maintenance of healthy and diverse salmon populations and their habitats	1-Aug-19	31-Mar-24	\$4,952,373.00
National Indigenous Fisheries Institute ENGAGEMENT  <b>Project Complete</b>	National Indigenous Fisheries Institute	The National Indigenous Fisheries Institute will engage with Indigenous communities to identify potential large-scale, multi-Nation initiatives that could be supported by BCSRIF. This work will also encourage increased Indigenous involvement in science partnerships, innovation, and infrastructure investments that would improve productivity,	15-Aug-19	30-Jun-20	\$355,095.00

## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
		sustainability, and safety across the sector			
Rehabilitation of Critical Infrastructure to Improve Survival of Thompson Steelhead & Chinook	Nicola Tribal Association	The Scw'exmx Tribal Association and partners will assess and rehabilitate degraded habitats in the Coldwater River and Guichon Creek watersheds to improve survival of Thompson steelhead and Chinook salmon	1-Aug-19	31-Mar-24	\$1,314,027.00
Determination of Bottlenecks Limiting Wild and Enhanced Juvenile Salmon and Steelhead Production in BC using PIT tags and Spatially Comprehensive Arrays	Pacific Salmon Foundation	Together with partners, the Pacific Salmon Foundation will develop monitoring and evaluation framework to determine survival bottlenecks in freshwater and marine environments for hatchery and wild Chinook, Coho and Steelhead. Research, monitoring, and evaluation activities will seek to maximize the performance of hatchery and wild stocks; and the installation of new infrastructure will support adaptive management of hatchery programs to meet harvest, conservation, and sustainability objectives	1-May-20	31-Mar-24	\$4,619,877.00
Enhancing Estuary Resiliency: An Innovative Approach to Sustaining Fish and Fish Habitat in a Changing Climate	Nature Trust of BC	Through the 'Enhancing Estuary Resilience: An Innovative Approach to Sustaining Fish and Fish Habitat in a Changing Climate', the Nature Trust of BC will undertake monitoring and research to assess estuary resilience to sea level rise and other climate impacts across the coast of BC using the Marsh Resiliency to Sea Level Rise	15-Jul-19	31-Mar-24	\$8,552,415.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
		(MARS) tool, followed by restoration projects to restore core natural estuarine processes. The Nature Trust of BC has partnered with various local First Nations groups, environmental organizations and academic institutions			
Innovation for community-run terminal fisheries – scientific foundations for adaptive management of salmon	Pacific Salmon Foundation	This project will integrate traditional and modern technologies through the development of new computer vision deep-learning programs to automate salmon counting and species identification from video and sonar data. Connecting these tools with community-run escapement monitoring programs around the North and Central Coast will support the transition towards real-time data integration and in-season monitoring to inform adaptive management of salmon fisheries	1-May-20	31-Mar-23	\$410,300.00
Enhancing Sustainability of capture & release marine recreational Pacific salmon fisheries using new tools/technology	UBC (Department of Forest and Conservation Sciences)	The University of British Columbia will lead a science partnership project to conduct research on improving the sustainability of capture and release marine recreational Pacific salmon fisheries using new tools and technology	29-Jul-19	31-Mar-24	\$1,938,002.00
Improving Sustainability of British Columbia's Commercial Spot Prawn Fishery and Prawn Stocks	Pacific Prawn Fishermen's Association	The Pacific Prawn Fishermen's Association will develop a robust Management Procedure to improve the sustainability of the BC Spot Prawn fishery. Funding will allow for the evaluation of expected outcomes of fishing impacts to wild prawn stocks under alternative fishing practices and provide an opportunity for valuable stock assessment, research, and	7-May-20	31-Mar-22	\$117,996.00

## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
		management training for harvesters, First Nations, and others			
Elephant Hill Fire Riparian Restoration Project	Secwepemcul'ecw Restoration and Stewardship Society	The Secwepemcul'ecw Restoration and Stewardship Society, in partnership with Secwepemc communities and the 100 Mile Natural Resource District will undertake restoration of critical habitat affected by the 2017 Elephant Hill Wildfire in the Traditional territories of the 8 Secwepemcul'ecw Nations	15-Jul-19	31-Mar-24	\$2,629,833.00
Plateau Fire Recovery – Riparian Plant Collection and Planting for Restoration of Chinook and Coho Salmon Habitat in the Nazko Area	Baker Creek Enhancement Society with Nazko First Nations	The Baker Creek Enhancement Society will collaborate with the Nazko First Nation to undertake restoration of critical habitat affected by the Plateau Fire. This work will also prevent further habitat degradation from normal precipitation and predictable storm events	15-Aug-19	31-Mar-24	\$750,000.00
Place-based Risk of Climate Change to Sustainability of BC Wild and Hatchery-origin Salmon	Pacific Climate Impacts Consortium	The Pacific Climate Impacts Consortium (UVic) will conduct research to improve our understanding of potential threats posed to Pacific salmonids and their habitats posed by climate change. Results from this work provide regional stakeholders with the information they need to develop plans for reducing the risks associated with climate variability and change (CVC).	1-Sep-19	31-Mar-24	\$1,025,000.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
Upper Fraser Chinook Strategic Enhancement Project  <b>Project Complete</b>	Spruce City Wildlife Association	Funding will support infrastructure upgrades to the to the Spruce City Wildlife Association's conservation hatchery to improve biosecurity and enhance production at the facility. To support the restoration and rebuilding of Upper & Middle Fraser Spring and Summer 5-2 Endangered or Threatened Chinook stocks. Activities include purchase and installation of enhanced biosecurity equipment, upgraded brood holding containers and equipment to mitigate risks of water borne diseases and water supply. This project will also support the collection of critical natal stream data to inform rearing and stocking practices.	10-Jul-19	31-Mar-21	\$240,362.00
Inkaneep Creek Restoration	Osoyoos Indian Band	This project will support post-mudslide restoration and effectiveness monitoring for Inkaneep Creek and the floodplain. Restoration work will improve the survivability of Okanagan Steelhead, Rainbow Trout and Chinook Salmon and apply an innovative combination of traditional knowledge and science towards sustainable fisheries co-management	1-Apr-20	31-Mar-23	\$360,283.00
Optimizing Recirculating Aquaculture Systems for Sustainable Salmon Production	The University of British Columbia	This study aims to provide a BC-based solution for growing larger, more physiologically robust Atlantic salmon smolts in freshwater recirculating aquaculture systems (RAS). This project will help to improve both the sustainability and productivity of BC's aquaculture industry by increasing the amount of time farmed salmon are reared in land-based RAS and reducing the amount of time farmed Atlantic salmon spend in marine net-pens.	1-Jul-20	31-Mar-24	\$1,829,490.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRF Funding
Drivers of Inter-annual variability in Zooplankton Feeding in the Strait of Georgia: A combined model-observation approach	University of British Columbia	Research to improve understanding of the changing ecosystem facing out-migrating juvenile salmon in the Strait of Georgia by understanding and quantifying the key drivers of their prey's ability to feed. Activities include quantifying key drivers of zooplankton feeding in the Strait of Georgia by expanding the time series of the SalishSeaCast biological-chemical-physical model for the Salish Sea and using the expanded model to evaluate the sensitivity of Strait of Georgia zooplankton production to environmental factors (e.g. freshwater flux, wind mixing and upwelling).	1-Jul-20	31-May-22	\$165,000.00
Seymour Watershed Restoration Project	Seymour Salmonid Society	This multi-year, watershed-wide initiative combines rockslide mitigation work to enable upstream fish passage, along with physical habitat enhancement and restoration works to improve the habitat quality and functionality within the watershed. The Seymour Salmonid Society will also conduct monitoring to confirm the success of the project in establishing fish passage and providing restored and enhanced habitat for wild Pacific salmonid stocks for future generations.	15-Jan-20	31-Mar-24	\$618,844.00
Upper Adams Salmon Restoration Program	Adams Lake Indian Band (ALIB)	The goal of this project is to support Secwepemc leadership in the restoration of the Upper Adams early summer run sockeye to a sustainable level and improve opportunities for sustainable use. Limiting lake nutrients will be applied to Adams Lake rearing habitat to restore historical lake productivity which will assist in Sockeye fry/smolt survival and possibly early summer run sockeye escapement	1-Apr-20	31-Mar-24	\$2,521,181.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
Broughton wild salmon restoration project	Namgis First Nation	The 'Namgis, Kwikwasut'inuxw Haxwa'mis, and Mamalilikulla First Nations will partner on activities to use a watershed-based fish sustainability planning framework to assess and prioritize restoration projects for critical salmon habitat in the Broughton Archipelago, key watersheds include the Nimpkish and Kokish Rivers, Rivers flowing from Bond Sound, Thompson Sound, Wakemen Sound, Viner Sound and Rivers Near Hoyea Sound and Lull Creek.	1-Sep-19	31-Mar-24	\$4,220,529.00
Phase 1: Independent First Nations' Genomic Lab for BC  <b>Project Complete</b>	Namgis First Nation	The 'Namgis, Kwikwasut'inuxw Haxwa'mis, and Mamalilikulla First Nations will work together on the first steps towards establishing a genomics lab to analyze samples collected by First Nations with an interest in conducting independent fish health sampling	15-Jul-19	4-Oct-19	\$50,560.00
Phase 2: Independent First Nations' Genomic Lab for BC	Namgis First Nation	Funding will support Phase 2 of a project to establish an Independent BC First Nations Genomics Laboratory. Project partners will equip the laboratory with Fluidigm BioMark™ technology to analyze samples collected through the Indigenous Monitoring and Inspection Plan (IMIP), as well as providing services to other First Nations in British Columbia with an interest in conducting independent fish health sampling	1-Nov-19	31-Mar-24	\$1,977,828.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
Implementation of the Broughton First Nations Indigenous Monitoring and Inspection Plan	Namgis First Nation	The 'Namgis, Kwikwasut'inuxw Haxwa'mis, and Mamalilikulla First Nations will implement the 'Broughton First Nations Indigenous monitoring and inspection plan', using BCSRIF support to build monitoring and oversight capacity over finfish farms in the Broughton, capacity to monitor wild salmon, other marine species (and their ecosystems) and to conduct salmon habitat restoration activities.	24-May-19	31-Mar-24	\$7,349,000.00
Field application and testing of tools for identifying, mapping and quantifying important forage fish populations and their habitats to support enhanced conservation of chinook salmon in coastal BC	Comox Valley Project Watershed Society	The Comox Valley Project Watershed Society and partners will apply and test tools for identifying, mapping and quantifying important forage fish populations and their habitats. This work will contribute to the conservation of important food sources for Pacific salmon, including Chinook and coho	19-Aug-19	31-Mar-22	\$321,779.00
Lower Fraser Coho PIT Barge and Tagging Project	Lower Fraser Fisheries Alliance	Funding will contribute to an improved understanding of stock status and trends through the development and demonstration of PIT tag mark-recapture techniques for hatchery Coho Salmon in the Chilliwack River using large PIT arrays to enumerate annual hatchery returning fish during spawning migration. The infrastructure developed for this project will be used to inform future work on stock level PIT tagging enumeration studies of Fraser salmon	1-Apr-20	31-Mar-24	\$679,690.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
Connected Waters: Phase 1	MakeWay Charitable Society (Tides Canada Foundation)	Makeway and the Watershed Watch Society along with other partners, will implement 'Resilient Waters', a project to identify priority sites requiring infrastructure upgrades and habitat restoration across the Lower Fraser River watershed, which will support the reintegration of vital wild salmon habitat	1-Sep-19	31-Mar-21	\$598,755.00
Millstream Fishway Project	Peninsula Streams Society	This urban habitat restoration project will improve fish passage in Millstream Creek by creating a "fishway" that will allow fish to move up to and through a large culvert under Atkins Road near Mill Hill Regional park. This will aid fish passage and allow resident trout and spawning adult coho salmon access to over eight kilometres of habitat upstream in the Greater Victoria area on Vancouver Island	6-Aug-19	31-Mar-21	\$300,000.00
Partnership for a novel framework for assessing and managing Pacific Herring fisheries on the West Coast of Vancouver Island	Nuu-chah-nulth Tribal Council	The recipient and partners will undertake an evaluation of spatial and in-season management options for associated food, social and ceremonial (FSC), and commercial Herring fisheries to ensure the sustainability of these fisheries on the West Coast of Vancouver Island. This project provides the opportunity for shared ownership of the Herring Renewal science process with Nuuchahnulth Nations, ensuring their unique cultural and scientific perspectives are formally included in the management of Herring fisheries on the West Coast of Vancouver Island.	1-Jun-20	31-Mar-24	\$390,500.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
Cowichan River Salmon Restoration program - Sustainable Water Supply - Engineering	Cowichan Valley Regional District	The Cowichan Valley Regional District and partners, including Cowichan Tribes, will conduct an evaluation of the natural boundary of Cowichan Lake to support building critical new water storage infrastructure, to provide flows required to sustain Cowichan salmon populations	1-Aug-19	31-Mar-22	\$2,999,218.00
Salish Sea Salmon Action Plan	Pacific Salmon Foundation	The Pacific Salmon Foundation (PSF) will conduct a science-based review of hatcheries in the Pacific Region (including community hatcheries and Fisheries and Oceans Canada's major facilities) to evaluate performance and the effectiveness of current genetic and genomic tools, in order to optimize salmon production in BC	1-Sep-19	30-Jun-22	\$1,083,498.00
BC Fish Passage Joint Venture	Canadian Wildlife Federation	The Canadian Wildlife Federation will bring together partners, including federal and provincial governments, non-governmental organization, First Nations, and communities to prioritize fish passage remediation efforts across B.C. to maximize the benefits for steelhead trout and Pacific salmon	1-Jul-19	31-Mar-22	\$3,999,721.00
Kitwanga River Sockeye Salmon Recovery Plan Implementation	Gitanyow Fisheries Authority	The Gitanyow Fisheries Authority will undertake small scale enhancement and habitat restoration projects to maximize spawner success over the next five years and to identify the limiting factors to Kitwanga sockeye production. The goal of the project is to identify and develop solutions to ultimately stop and reverse the decline of Kitwanga sockeye and help rebuild the stock	1-Oct-19	31-Mar-24	\$867,020.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
Bear River Autonomous Salmon Enumeration	Skeena Fisheries Commission	Purchase, installation and operation of an autonomous electronic counter (i.e., Security Surveillance system) on a fish fence in the lower Bear River to increase accuracy and cost-effectiveness of escapement estimates for Chinook, Coho and Sockeye, as well as comparisons of migration timing and influence of associated environmental factors.	1-Jun-20	31-Mar-24	\$402,439.00
Promotion of Habitat Restoration and Stewardship on Agricultural Lands in the BC	Farmland Riparian Interface Stewardship Program delivered by British Columbia Cattlemens Association	The British Columbia Cattlemen's Association will deliver the Farmland riparian interface stewardship program, promoting habitat restoration and stewardship and on agricultural lands in BC. The program will encourage environmental farm planning within the agricultural sector for more "fish friendly" land management practices around riparian corridors, as well as promoting water conservation for BC Interior salmon streams experiencing frequent critical low flows	15-Jul-19	31-Mar-24	\$550,000.00
IYS: International Pan-Pacific Salmon Expedition (2021)	North Pacific Anadromous Fish Commission	Pan-Pacific vessel surveys in winter/summer 2021 to monitor distribution, abundance, and productivity of salmon to directly inform fisheries management decision and enforcement efforts. Research will also be conducted to test hypotheses related to mechanisms affecting the current and future distribution and productivity of Pacific salmon	15-Aug-19	30-Nov-23	\$3,305,457.00
BC Fishing App  <b>Project Complete</b>	Sport Fishing Institute of BC	The Sport Fishing Institute (SFI) will develop the Fishing BC mobile app, an online information and catch monitoring tool	15-Aug-19	31-Mar-22	\$910,500.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
Vision 2021	Sport Fishing Institute of BC	BCSRIF will also support elements of SFI's Vision 2021: an action plan to maximize the social and economic potential of the recreational fishery on Canada's Pacific coast. The project aims to improve representation of the fishing community and increase participation in the fishing sector by youth, new Canadians, and others	15-Aug-19	31-Mar-21	\$700,879.00
Winter Salmon Survey in the Gulf of Alaska  <b>Project Complete</b>	Pacific Salmon Foundation	This project will support a second year of international research in the Gulf of Alaska to study the abundance, health, and habitat use of Pacific salmonids during winter conditions. This research will increase the understanding of the environmental factors affecting salmon production and allow researchers to consider strategies to address ecosystem change under future climate conditions	15-Sep-19	31-Mar-21	\$650,000.00
The Fermentative production of Microalgae as food for juvenile bivalves in BC	Seed Science Ltd	The project will enable the development of heterotrophic algae production technology for feeding bivalves. Successful completion of the project will contribute to improved health for the bivalves as pathogens transferred with large volumes of algae produced in the traditional methods have been implicated in disease outbreak. The development and production of axenic heterotrophic algae will minimize these occurrences.	1-Jun-21	31-Dec-22	\$475,492.00
Shellfish aquaculture strategic renewal program	BC Shellfish Growers Association	The BC Shellfish Growers Association is proposing to create the Shellfish Aquaculture Strategic Renewal Program which aims to ensure the industry remains a key socio-economic contributor to BC's coastal communities. Key components will include improved traceability of shellfish products and application of innovative handling and processing technology in the BC shellfish industry.	1-Jul-21	31-Mar-24	\$3,500,000.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
Evaluation of coastal kelp farms as novel habitat for migrating salmonids and their prey	Cascadia Seaweed Corp	Cascadia Seaweed Corp. and partners will research how coastal kelp farms can provide novel habitat for migrating Pacific salmonids and their food sources by integrating traditional and cutting-edge monitoring technologies. This project will inform how placement of kelp farm tenures can help to mitigate declines in salmon species as the result of declining nearshore nursery habitat. It also serves as a pilot study for the broader application of the monitoring framework.	1-Apr-21	31-Mar-24	\$1,886,046.00
Kingfisher intake restoration	Kingfisher Interpretive Centre Society	This project is intended to aid with the salmon enhancement efforts made by the Kingfisher Interpretive Centre community hatchery. Repairing critical infrastructure will improve operational conditions for the community hatchery in turn producing a higher survival rate for juvenile Chinook salmon and meeting their Production Plan objectives	20-May-21	31-Dec-21	\$43,396.00
Chapman Creek Hatchery water supply and capacity upgrades	Sunshine Coast Salmonid Society	The Sunshine Coast Salmonid Enhancement Society will explore an alternative ground water supply for the Chapman Creek hatchery. This will be done in an attempt to avoid the use of water supplies from Chapman Creek	26-Jul-21	31-Dec-21	\$70,000.00
Seymour Hatchery Infrastructure Renewal	Seymour Salmonid Society	This project will undertake maintenance and facility upgrades over a three-year period to ensure the Seymour hatchery and education center can continue fisheries operations into the future.	1-Jul-21	31-Mar-24	\$80,410.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
Modernizing catch reporting in Canada's Pacific Region Salmon Fisheries	Archipelago Marine Research	The goal of the project is the development of an easy-to-use, mobile application for salmon fishermen to record their fishing logbook data and submit daily catch reports and hauls. Archipelago Marine Research will leverage its existing mobile applications, data management platform and services developed to exchange electronic data with DFO to develop the application	1-Jan-22	31-Mar-24	\$317,557.00
A-Tlegay Kelp Production and Restoration	A-Tlegay Fisheries Society	The A-Tlegay Fisheries Society is proposing to construct at least four permaculture sites located within Johnstone Strait/Northern Strait of Georgia to improve the quality of important marine habitat for salmon and to determine the commercial potential for kelp permaculture in the region.	1-Apr-21	31-Mar-24	\$487,024.00
Understanding the extent of European green on Haida Gwaii and mitigating	Secretariat of the Haida Nation	In July of 2020, the first European Green Crab ( <i>Carcinus maenas</i> ) was detected on Haida Gwaii. This project aims to mitigate impacts of the European Green Crab invasion to support the preservation of salmon habitat critical to Haida marine cultural and ecological systems in Haida Gwaii. The project will use intensive and extensive monitoring and research to understand, assess, develop and then implement management measures. The specific project objectives are; to map the current geographic extent of the EGC invasion, identify habitat most likely invaded and identify areas at risk that overlap with important habitat and Haida cultural and traditional use areas, to develop and implement a long-term response strategy, and to develop a community engagement and training program to increase capacity of Haida communities in EGC response.	1-Apr-21	31-Mar-24	\$1,246,886.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
Chemainus/Koksilah twinned watershed sustainability project	Cowichan Tribes	This project is a natural extension of existing work and relationships that have been building strength and momentum within the Region and would contribute to the development of BC's first Water Sustainability Plan (WSP) for the Koksilah river as well as exploring groundwater/surface water interactions and water management regimes in the Chemainus river. For both watersheds, this project will: assess the status of each river's anadromous salmonid populations, carry out the necessary scientific and TEK assessments to document the effects of low flows on critical habitats of all freshwater life history phases of anadromous salmonid species, and identify, implement, and monitor restoration priorities.	25-Jan-21	31-Mar-24	\$1,192,090.00
Developing a cumulative effects modelling framework for the recovery of aquatic salmonid populations	UBC	This project proposes to develop a framework for modeling cumulative impacts on salmonid populations to guide recovery planning and adaptive management based on stressor-response functions related to multiple threats. The intent is to develop user-friendly modeling framework compatible with a range of data complexity and quantity, that will allow assessment of cumulative effects on stream salmonids and the outcomes of different recovery actions at a watershed scale.	1-Jul-21	31-Mar-24	\$253,610.00
UAV Habitat Mapping to Inform wild Salmon Stewardship	First Nations Fisheries Legacy Fund Society	This project consists of three pilot projects hosted by the First Nations Fisheries Legacy Fund, Okanagan Nation Alliance, and Skeena Fisheries Commission. This initiative will develop First Nations' capacity for salmon stewardship through the development of methodologies for community mapping and rapid UAV salmon habitat assessments. Outputs from this work will be used	1-Jul-21	31-Mar-24	\$2,478,221.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
		to inform long-term water and salmon stewardship planning processes and provide valuable information regarding watershed dynamics and trends critical to wild salmon populations.			
Skeena Estuary Habitat Management and Protection Planning	NCSFNSS	This project proposes a phased, multi-year approach to develop a Skeena Estuary Habitat Management and Protection Plan and to implement identified priority estuarine habitat restoration projects. Effective management of competing interests and the cumulative effects of multiple users in the Skeena estuary is critical to protecting the marine and coastal ecosystems and resources, ensuring human wellbeing and to enable sustainable development. This includes the protection of key species such as salmon and the habitats they depend upon to ensure a sustained First Nations fishery.	23-Jan-21	31-Mar-24	\$2,334,024.00
Ecosystem Management of kelp forest	North Pacific Kelp Wild Foods	This project proposes to enhance kelp forest monitoring to stewardship that strengthen rural economic development and restoration of salmon and other species (i.e. northern abalone) in Haida Gwaii. The project will provide information and implement methods to better manage unprotected marine areas with high ecological value that are impacted by human and environmental disturbances. NPK will observe and track stresses to kelp canopies in the Skidegate channel and Skidegate Inlet. This will include information on the ocean floor, water samples for biological and chemical analysis,	1-Aug-21	31-Mar-23	\$99,999.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRF Funding
		turbidity, salinity, temperatures species richness including those of particular importance like herring roe, northern abalone, salmon and other fish in the canopy e.g. eulachon larvae. NPK will also track the age and density of kelp blades to one another, plasticity, reproduction status, where to trim to stimulate more growth and total stored carbon as well.			
South Coast European Green Crab Control	Coastal Restoration Society	The South Coast European Green Crab Control Project (SC EGC CP) seeks to plan for, monitor and subsequently mitigate the proliferation of European green crab (EGC) and their destructive effects as ecosystem engineers engaging in eelgrass destruction; thereby supporting the preservation of wild salmon and wild salmon habitat throughout the South Coast of the Pacific Region. Project outcomes focus on developing management and control methodology for EGC while continuing and strengthening relationships with First Nations, DFO Aquatic Invasive Species (AIS), academia and marine industry partners. This project will prioritize trapping locations where possible that are intersecting vectors of high EGC infestation, areas that have received prior eelgrass environmental remediation work supported by the Government of Canada and the Province of British Columbia, and areas that carry cultural and social significance to local First Nations.	1-Aug-21	31-Mar-24	\$1,984,214.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
Supporting West Coast Oyster Industry	Nova Harvest	This project aims to increase capacity for large high quality seed through the development of an ocean based oyster nursery, known as a Floating Upwelling System (FLUPSY), specifically to support the continued development of TDC oyster program with additional capacity to support other west coast farmers.	1-Jun-24	28-Feb-22	\$210,000.00
Selective Fishing Using a Salmon Trap	Tsawwassen First Nation	TFN is requesting funds to design and operate a tidal waters salmon trap close to the traditional TFN fishing sites near the mouth of the Fraser River. Project objectives include identification/assessment of a suitable trap site, building, operating, maintenance of the trap and monitoring of fish health.	1-Jun-21	30-Nov-23	\$875,325.00
Highway 16 corridor fish stranding	Kitsumkalum Indian Band	This project intends to perform engineering assessments and determine prescriptions for permanent solutions of up to 16 sites to regain freshwater rearing habitats that have been cut-off due to infrastructure development. This project will also salvage juveniles from stranding during low water from these areas of concern to reduce juvenile mortality and enhance salmon stocks in the Skeena River watershed.	15-Apr-21	31-May-24	\$175,032.00
Babine Lake Creel Survey	Lake Babine Nation Fisheries	The Lake Babine Nation is proposing to undertake a creel survey to determine the harvest levels of sockeye salmon from the vicinity of Fulton River.	15-Jul-21	31-Mar-24	\$372,951.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
Development and establishment of Vancouver Island Chinook Committee	Island Marine Aquatic Working Group	IMAWG, with support from participating Vancouver Island AAROM's, have requested to facilitate and coordinate the Vancouver Island Chinook Chapter and joint technical working group by building upon the established foundation of the Island Marine Aquatic Technical Working Group. Based on DFO expert input, BCSRIF recommendations are to re-scope this project as a Tier 1 Technical Working Group focused on science and Indigenous Knowledge regarding Chinook in the territories of participating Vancouver Island AAROM groups.	15-Apr-21	31-Mar-24	\$397,540.00
Landslide impact on the flow dynamics, fish migration and genetics of Fraser River Salmon	SFU	This project will seek to understand risks posed by natural earth surface processes, such as landslides and hydraulic barriers, on Fraser River salmon. The project will use innovative technologies to measure and monitor earth surface processes and frontline techniques in molecular genomics. The work will contribute to a better understanding of the infrastructure needed to enable successful fish migration across hydraulic barriers such as the Big Bar Landslide.	1-Apr-21	31-Mar-24	\$3,566,728.00
Assessment methods, Gulf of Alaska March 2022	Pacific Salmon Foundation	Multi-vessel survey to study the distribution of Pacific salmon across the North Pacific Ocean, building on two research expeditions to the Gulf of Alaska in 2019 and 2020 undertaken through the International Year of the Salmon (IYS) initiative. Parallel sampling with Japanese drift gillnets and Longlines will enable direct comparison of sampling capabilities of trawl nets versus other gears in the deep water environment of the Gulf of Alaska. The project is an extension of high seas conducted through the Salish Sea Marine Survival Project,	1-Jul-21	31-Mar-23	\$308,000.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
		assessing the factors that affect survivability of key salmon stocks.			
Causes and consequences of vateritic otoliths in hatchery-reared Coho salmon	University of Victoria	This project will investigate the prevalence of vateritic otoliths by comparing the frequency and percentage coverage of vateritic otoliths between wild-origin and hatchery-reared Coho salmon across hatchery facilities, rearing years, life-stages and stocks. Secondly, the project will investigate the causes of vateritic otoliths in hatchery-reared Coho salmon by determining which hatchery-rearing practices influence the frequency and percentage of vateritic coverage of otoliths.	1-Apr-21	31-Mar-24	\$512,458.00
Climate Action Priorities for Salmon	Pacific Salmon Foundation	This project will create a Climate Action Plan for BC salmon through three initial project components: developing improved genetic baselines to understand genetic differences at a scale finer than Conservation Units; developing a 'playbook' to guide landscape recovery strategies and priorities for salmon following major fires; and assessing Fraser River migration impediments.	1-Apr-21	31-Mar-24	\$3,270,151.00

## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
Clayoquot Wild Chinook Salmon Initiative	Central West Coast Forest Society	This project is proposing to restore critical spawning and rearing habitat in Clayoquot Sound for high conservation concern and Endangered wild Chinook and chum salmon. The project will be carried out across three watersheds Bedwell, Atleo and Tranquil: the traditional territory of the Ahosuaht and Tla-o-qui-aht Nations. Engaging traditional knowledge holders from the Nations, biologists and engineers from BC, Oregon, and Washington this project employs a holistic and innovative approaches.	1-Apr-21	31-Mar-24	\$500,000.00
First Nations-led Freshwater Salmon Habitat Assessment & Restoration Planning in the Central Coast	Central Coast Indigenous Resource Alliance	This project will support the development of watershed-scale habitat assessments and prioritization of areas and actions for restoring hydrological function in targeted watersheds in the Central Coast sub-region of BC. The specific components of this process align with the Watershed-based Fish Sustainability Plan (WFSP) and include: 1) using existing information and local knowledge to identify watersheds that are the highest priority for restoration planning; 2) developing higher resolution assessments of each of the priority watershed planning areas; 3) developing restoration plans for these priority watershed planning areas; 4) implement habitat restoration plans for key priority areas to improve hydrological stability and increase resilience to climate change in salmon habitats; and 5) develop monitoring plans that will be used beyond the end of this project to evaluate the success of habitat restoration actions and improve restoration planning based on new information.	1-Apr-21	31-Mar-24	\$2,747,628.00

## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
Kleanza Creek Salmon Habitat Enhancement and Restoration Project	Kitselas First Nation	The Kleanza Creek Salmon Habitat Enhancement and Restoration Project will restore historically productive spawning and rearing habitat by constructing side-channel habitat in lower Kleanza Creek. The project has three phases: planning, construction, and monitoring. The project has 5 outcomes; A comprehensive fish habitat restoration and enhancement plan for lower Kleanza Creek, improved salmon spawning and rearing through construction of off-channel fish habitat, a monitoring plan to evaluate the long-term effectiveness of the constructed habitat, including habitat condition and fish use, increased expertise and capacity of Kitselas First Nation to plan, construct, and monitor fish habitat restoration projects, improved understanding by Kitselas First Nation, project collaborators, and the public of the importance of fish habitat to protect wild salmon within the Skeena watershed.	10-Jun-21	31-Mar-24	\$561,335.00
Applying innovation and collaboration to improve productivity, economic stability and environmental performance of oyster farm	Mariculture LP.	The Barkley Sound Oyster Joint Venture farming initiative aims to develop new and underutilized aquaculture tenures in the Barkley Sound by modernizing traditional shellfish farming practices through innovation and use of the latest technology. This project will focus on three activities: 1) design and produce an innovative new oyster tray to reduce handling, enhance product quality and increase oyster survival; 2) increase automation and streamline processes; and 3) adopt solar power technology to reduce reliance on fossil fuels and increase environmental performance.	1-Jun-21	30-Sep-22	\$558,015.00

## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRF Funding
Gwabalís Aquaculture Opportunity & Sustainability Survey	Gwabalís Fisheries Society	This project aims to identify potential for economic development opportunities for Gwabalís Fisheries Society (GFS) members (Quatsino, Da'naxda'xw, Mamalilikulla & Tlatlasikwala First Nations). GFS will undertake an area-wide aquaculture survey to identify, assess and report on sustainable aquaculture opportunities within the Nations' respective traditional territories.	15-Jun-21	31-Mar-22	\$107,167.00
Exploring Spatial Management Opportunities for Rockfish using Indigenous Knowledge and Subtidal Surveys	Ha'oom Fisheries Society	This project will use Indigenous Knowledge and the Department of Fisheries and Oceans Canada's rockfish habitat model to identify survey sites and record the presence and absence of three COSEWIC-listed rockfish species (Canary, Quillback and Yelloweye) Rockfish and other nearshore rockfish species within the Five Nations' Court Defined Area for groundfish access. CDA. The results of this study will be used to develop and recommend measures to minimize the groundfish fishery's impacts on rockfish, and to inform the DFO Rockfish Conservation Area renewal process.	1-Apr-21	31-Mar-24	\$202,500.00
Understanding FRIM in the BC Public Fishery	Sport Fishing Institute of BC	This project aims to establish a BC-based program to raise awareness, understanding and appreciation of the importance of selective fisheries and minimizing Fishing-Related Incidental Mortality (FRIM) amongst local salmon anglers. This increased awareness and understanding will encourage anglers to adopt tools and best practices, enabling fishers to support the recovery process.	April 1, 2022	31-Mar-24	\$205,916.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
Modernizing Recreational Catch Monitoring, Data Collection and Communication	Sport Fishing Institute of BC	This project includes improvements to the FishingBC app to enhance and modernize catch log expansion and improve the quality of data collection, as well as public education and outreach to promote awareness of the app and the importance of collecting accurate recreational fishery data. The proposed activities address an acknowledged gap in recreational catch data collection, and support the modernization of systems and practices of providing information about fisheries.	1-Apr-21	31-Mar-22	\$343,750.00
Recreational Release Mortality Studies and Fishing Related Incidental Mortality (FRIM)	Sport Fishing Institute of BC	The proponent will undertake research on the impact of short-term FRIM and its main causes, to better understand total mortality associated with recreational fishing. Results of this research will inform future fishery management decisions, enabling the fishery to adapt through gear restrictions and the most effective fishing and release methods, rather than resorting to full closures.	1-Jan-22	31-Mar-24	\$833,250.00
Salmon Management Program	Fraser Salmon Management Council (FSMC)	This project will bring together Indigenous biologist and technical staff, as well as experts from DFO or other agencies, to share findings, conclusions, and make recommendations for consideration that will support the protection and restoration of Fraser Chinook and other salmon stocks. Project outcomes include the development of a technical working group capable of providing advice and recommendations to empower Indigenous leaders from the Fraser and approach areas to make informed decision about salmon fisheries, conservation, protection, and enhancement, the development of annual Indigenous fisheries plans, and a suite of adaptive tools and techniques for	1-Jan-22	31-Mar-24	\$400,000.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
		modeling outcomes and providing options for decisions makers.			
Fraser River Estuary Salmon Habitat (FRESH) Restoration Projects	Ducks Unlimited Canada	This project will restore key Fraser River estuary tidal marsh habitat, and provide access to key critical habitats for Fraser River Chinook, coho, steelhead, sockeye, other juvenile salmon species, white sturgeon, and other wild BC fish stocks. In addition to habitat restoration activities, this project will establish scientific partnerships to develop innovative solutions needed to build the resilience of key estuary marsh habitats and coastal flood protection infrastructure through a sediment enhancement pilot project.	1-Apr-21	31-Mar-24	\$5,019,091.00
Conservation Fishing - A First Nations Demonstration Selective Fishing in the Lower Fraser River	Harrison Salmon Producers LP	This project aims to demonstrate the effectiveness of community-led selective fishing through the use of hybrid river seine to trap sites, as well as river purse seining where non-selective gear is restricted. These demonstrations will help to identify effective selective fishing alternatives to gill nets, for when fishing opportunities are most restrictive, and ultimately support the modernization and sustainability of Fraser River salmon fisheries.	1-Apr-21	31-Mar-24	\$789,200.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
SFAB Vision - Phased Implementation	Sport Fishing Institute of BC	This project aims to build on a current BCSRIF project to further the implementation of the Sport Fishing Advisory Board's Vision for the recreational fishing sector in BC. This phase of the project will focus on modernizing the SFAB model by establishing the governance and financial management structure, and confirming the long-term funding and operating process for the Board, to ensure that the interests of the recreational fishery are represented to regulators and decision-makers.	1-Sep-21	31-Mar-23	\$453,324.00
Salmon River Collaborative Salmonid Habitat Enhancement and Restoration Initiative	Yucwmenlucwu (Caretakers of the Land) 2007 LLP	The proponent and partners will undertake comprehensive research to develop recommendations that will enhance the ecological function of the Salmon River watershed through the application of Indigenous Knowledge, science-based data and a more holistic approach to better manage and restore ecological flows for a healthy watershed and an increase in local salmonid populations.	1-Apr-21	31-Mar-24	\$208,289.00
MakeWay - Resilient Waters Lower Fraser Valley Rehabilitation	MakeWay Charitable Society - Resilient Waters	Building on Phase 1 of the Resilient Water project currently funded by BCSRIF (BCSRIF_2019_124), this project aims to design, construct, and restore four high priority areas having flood control infrastructure (FCI) that limits fish access to upstream tributaries, through infrastructure upgrades that will reconnect fish with over 50 hectares of habitat. These sites provide crucial resting and foraging habitat for out-migrating juvenile Chinook; Lower Fraser Coho and Chum will benefit from improved access to historical spawning and rearing areas; and White sturgeon are expected to benefit from slough reconnections to the Fraser River.	1-Sep-21	31-Mar-24	\$2,686,478.00

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Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRF Funding
Wuikinuxv Assessment and Restoration of Rivers Inlet Salmon	Wuikinuxv Nation	This project aims to build the fisheries expertise and operational capacity within the Wuikinuxv Nation Stewardship Office through three key activities: 1) assessing the productivity of Owikeno Lake and its carrying capacity for juvenile Sockeye Salmon; 2) purchasing the sonar equipment needed to count adult salmon returns to the Waanukv River; and 3) building capacity related to procedures and the operation of equipment needed to support local salmon projects (sonar stations, test fishing, broodstock collection, stream surveys etc.).	1-Jun-21	31-Mar-24	\$543,374.00
Supporting the Ongoing Use and Development of the Pacific Salmon Explorer	Pacific Salmon Foundation	This project focuses on the expansion, continuous improvement, and application of the Pacific Salmon Explorer (PSE) tool. Planned activities include: 1) a complete the build-out of the PSE to all salmon-bearing watersheds in BC; 2) collaboration with First Nations and federal/provincial regulators to establish best practices in the assessment of salmon and their habitats; 3) addition of new functionality to the PSE deemed critical by end users; and 4) leadership in understanding the impacts of climate change on salmon in BC and developing strategies for mitigating climate threats.	1-Apr-21	31-Mar-24	\$3,776,300.00
Selective Fishing Gear Pilot in the Fraser River	Lower Fraser Fisheries Alliance	This project aims to demonstrate the effectiveness of community-led selective fishing to support the modernization of Fraser River salmon fisheries in the face of climate change and declining salmon populations. This project will pilot selective fishing gear in the Fraser River and its tributaries through applying traditional First Nations methods in modern ways to achieve economically sustainable and culturally sensitive	1-Apr-21	31-Mar-24	\$1,564,668.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
		outcomes. Participating nations will develop, test, and operate selective fishing gear and techniques best suited for each nation and fishing sites. The four nations with existing selective fishing will test their selective gear; additional nations will be engaged during the first year for potential additional pilot project sites and design.			
Technology for more sustainable fisheries in BC	T Buck Suzuki Environmental Foundation	This project aims to enhance the sustainability of BC's fisheries using innovative technologies to reduce bycatch, increase survivability, and prevent entanglements through two key activities: 1) pilot LED light usage in shrimp trawl fishery to prevent bycatch of eulachon; and 2) replace knotted net with knotless net in the salmon and herring seine test fishery to increase survivability of bycatch species.	1-Aug-21	31-Mar-23	\$320,700.00
First Nations-led catch monitoring to inform sustainable mixed-stock fisheries management on the Central Coast	Central Coast Indigenous Resource Alliance	This project aims to fill data gaps related to Central Coast salmon populations, to inform management measures to promote sustainable opportunities for marine and FSC fisheries. Building on the recently developed Central Coast Monitoring Framework and ongoing First Nations-led catch monitoring initiatives, this project will focus on: (1) designing and implementing a coordinated strategy to quantify catches in recreational and FSC fisheries; (2) conducting representative mixed-stock sampling in Areas 6-9; and (3) estimating exploitation rates for hatchery Coho stocks on the Central Coast.	27-Jan-21	31-Mar-24	\$1,533,176.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
Collaborative Freshwater Research and Restoration Initiative in the Thompson Watershed	Secwepemc Fisheries Commission for and behalf of Shuswap Nation Tribal Council Society	This project aims to fill data gaps related to Fraser Coho and Endangered Interior Fraser Summer Steelhead, and Southern BC (42) Chinook), which will be used to inform fisheries recovery and rebuilding plans. Key activities include: 1) informing environmental flow setting by assessing juvenile salmonid habitat usage over a range of stream flows and temperatures; 2) investigating how juvenile stream-type salmon migration timing and production in freshwater relates to survival to adulthood (spawners); 3) improving real-time flow and temperature data monitoring network (hydrometric) for the Southern BC Interior and; 4) documenting the habitat state of a heavily disturbed Chinook and coho river (Louis Cr.) through detailed GIS mapping to track changes, identify sensitive habitat areas, and guide restoration.	2-Apr-21	31-Mar-24	\$789,102.00
Nanaimo Hatchery Upgrades to Improve Hatchery Performance and Assessment and Monitoring Capabilities	Nanaimo River Stewardship Society	Upgrades to the Nanaimo River Stewardship Society to address ageing infrastructure and allow the facility to adapt to changing enhancement objectives and watershed activities. Key elements include rebuilding the aeration tower, replacing aged incubation trays and boxes and optimizing the water supply to allow for biosecurity, water budget, and marking options. Upgrades to the stewardship building will allow the organization to maximize public and institutional education opportunities.	1-Jun-21	31-Mar-24	\$1,030,431.00

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Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
Coastal First Nations Salmon Enhancement and Restoration Initiative	Great Bear Initiative Society	Upgrade of existing infrastructure at six community hatcheries to incorporate more sustainable technology and enable restoration of wild BC stocks that are of red-listed concern in the region. Key elements include repair, replacement, or acquisition of additional incubation or rearing spaces or equipment storage areas, electrical upgrades and improvements to water supply (including river armouring to protect the water supply and repair of water intake and pipelines).	1-Apr-21	31-Mar-24	\$2,826,811.00
Watershed Restoration Prioritization Tool/Solutions for Gold River Steelhead	Nootka Sound Watershed Society	This project will use a spatial modelling tool and resulting threats assessment to develop an action plan to improve habitat for steelhead and other Pacific salmon species. With the goals of improved riparian and bank micro habitat function, reduced sedimentation and increased bank stability, select prioritized sites will be identified, ground-truthed, and restored; a comprehensive strategic plan of prioritized future restoration opportunities will also be developed.	1-Jun-21	31-Mar-24	\$324,953.00
Kitwanga River Sockeye Salmon Enhancement Project	Gitanyow Huwilp Society - DBA as GFA	The Gitanyow Fisheries Authority is seeking funding to purchase a hatchery in a box (HIB) and to set-up additional infrastructure to enhance Kitwanga River sockeye. The hatchery will be situated within the village of Gitanyow, on reserve land. Through the Kitwanga sockeye hatchery program, the GFA plans to initiate small scale enhancement to maximize spawner success over the long-term, with the ultimate goal of rebuilding the stock to more historical levels.	30-Oct-21	31-Mar-24	\$950,000.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
Finfish Environmental Assessment - Sablefish Aquaculture	We Wai Kai First Nation (Cape Mudge)	This project aims to investigate the possible environmental impacts and determine the potential business benefits in converting their finfish aquaculture tenures into sable fish aquaculture farm operations in a potential joint venture partnership with Golden Eagle Sable Fish. Baseline fish and fish habitat surveys will be undertaken to identify possible critical habitats and facilitate the development of a DEPOMOD for sable fish aquaculture.	1-Jul-21	31-Mar-22	\$144,200.00
The application of nanopore technology for the rapid detection and characterization of pathogenic organisms in enhancement hatcheries	BCCAHS	This project aims to validate Nanopore technology as a rapid and broad-range tool for the detection of salmon pathogens from biological (i.e., body fluids and organs) and environmental samples from hatcheries. The technology will be applied to three applications: broodstock screening, examination of pathogen sources and distribution in hatchery systems and to identify/characterize the agent/agents associated with disease occurrences. Once validated, Nanopore technology can be added to existing screening tools to provide supplementary information on the microbial community (case of co-infection) associated with disease manifestations as well the source and distribution of these agents in hatchery settings.	1-Jul-21	31-Mar-22	\$306,000.00
Monitoring lipid content of Fraser-bound Chinook at Albion	UBC	The proponent will undertake research on lipid levels, as a proxy for energy density, of returning salmon (Fraser Chinook stocks) to better understand migration and spawning success. The project has particular relevance to situations where there are high water flow years or freshwater obstacles (e.g., Big Bar Slide) that can drain fish energy reserves. Lipid content is expected to	1-Apr-21	15-Feb-23	\$36,869.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
		provide an indication of the health and ecology of salmon runs, which is typically only inferred from size, and is anticipated as a tool to enable stronger protection and conservation of specific wild priority stocks.			
Deadman River Hatchery Upgrades	Skeetchestn Indian Band	Infrastructure upgrades to the 33-year Deadman Hatchery to address water supply and human safety issues. BCSRIF funding will also support a feasibility study to plan future upgrades needed to enhance operational capacity at the facility, to support enhancement of Deadman River coho, a wild BC priority fish stock in the Skeetchestn and Secwepemc traditional territory.	1-Jul-21	31-Oct-22	\$385,000.00
Rebuilding Wet'suwet'en Sockeye Salmon Abundance and Diversity	Office of the Wet'suwet'en	This project builds on the Rebuilding Plan for the Morice Sockeye Recovery Unit (2019) and aims to fill key data gaps which were outlined in the plan, complimentary to stock-assessment actions. Key activities will include reconstruction of early baseline data, juvenile smolt count and health assessment, and radio-tagging of returning adults to understand spawner distribution as well as evaluate critical spawning habitat for the purpose of its protection and potential restoration.	1-May-21	31-Mar-24	\$848,160.00

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### Ministry of Land, Water and Resource Stewardship

Project Title	Recipient	Description	Project Start Date	Project End Date	Total BCSRIF Funding
Kus Kus Sum – Restoration of key habitat to re-establish ecosystem services that will support BC fisheries.	K'ómoks First Nation (KFN)	This project will address a significant migratory bottleneck in the Courtenay River (the confluence) and enable reconnection of fish habitat from the K'ómoks Estuary to the Tsolum and Puntledge Rivers. The project aims to re-naturalize a former industrial sawmill site. It will specifically address a steel-cladded retaining wall that borders the Courtenay River which is a significant pinch point to salmon migration; this locale is known as "the killing wall" as it is an opportunistic feeding area for seals. Estuarine channels and other habitats will be restored and connected to Hollyhock Marsh, an adjacent conservation area and tidal wetland. Salmonid access to over 10ha of tidally-influenced forested wetland adjacent to the Courtenay River will improve the likelihood of survival for key wild Pacific salmon, such as chinook.	April 1, 2021	31-Mar-24	\$1,419,870.00

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### Ministry of Land, Water and Resource Stewardship

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**Issue:** Steelhead - Overview

**Recommend Response:**

- There are 427 steelhead runs in British Columbia (BC).
- Steelhead populations are experiencing declines, similar to many salmon populations.
- Primary mortality factors are low ocean survival, predation, and by-catch in fisheries. While habitat is not a limiting factor, habitat improvement remains an ongoing priority.
- Steelhead are an economically important fishery.
- BC will continue to take conservation actions, such as recreation angling closures and restrictions.
- BC will continue to lead work with Indigenous and Federal partners on comprehensive rebuilding strategies.
- Resourcing for steelhead management is integrated into base budgets. Additional targeted fund include the BC Salmon Restoration and Innovation Fund.

**Additional Response Points:**

If asked about Steelhead hatcheries:

- There are currently nine steelhead hatcheries operating on eight rivers. All hatchery programs are continuously reviewed to ensure they do not put wild stock at risk.
  - The spawning forecast predicts the lowest returns in over 50 years (68 adult fish for the Thompson; 32 for the Chilcotin).
  - The critical goal is to retain enough wild fish so the stock can rebound once mortality factors are addressed.
  - The 2019-22 Action Plan Report is publicly available. The 2022-2024 Action Plan is currently being completed.

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### Ministry of Land, Water and Resource Stewardship

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#### **Key Facts:**

- LWRS is the lead for wild steelhead recovery planning and coordination in collaboration with First Nations and the Government of Canada
- MOF is the lead for the ongoing and sustainable management of wild steelhead, including fisheries allocation and population management.
- Wild Steelhead often have more resilience than salmon. Steelhead carry a significant larger number of eggs, some spawn two or three times, and with resident rainbow trout assuming steelhead behaviours and migrating to the ocean.
- Rebuilding at risk populations is challenging because the primary mortality factors are not within provincial control (ocean survival, predation, bycatch).
- The IFS have an action plan, but additional targeted activities are required. The 2019-22 Action Plan and Report is publicly available and includes the content in the 2019 BC-Department of Fisheries and Oceans Canada (DFO) Action Plan. BC's 2022-2024 Action Plan is being completed in collaboration with First Nations, using a BC-First Nations steering committee, and involves the Federal Government and stakeholders. This work is expected to be completed summer 2022.
- Skeena Steelhead are in Extreme Conservation Concern. The 5,500 estimate is significantly below the 8,000 threshold. Staff have initiated work on in-season protection (e.g. angling closures during drought) and a detailed population rebuilding strategy.
- So far, the use of hatcheries for steelhead conservation to rebuild wild populations has largely proven unsuccessful. In the last two years three hatchery programs were cancelled due to poor performance and increased risks to wild populations. BC continues to support hatcheries only where the risk to wild populations is low or there is no mixing of wild and hatchery fish e.g., Vedder and Chilliwack Rivers.
- Outside of traditional hatcheries, BC is investigating potential fish-culture actions (e.g. direct transfer to spawning grounds, adult reconditioning for a second spawning), however each of these actions also pose a mortality threat.
- Spring 2022 the province released the updated the Provincial Steelhead Management Framework. This will go to public review. The new Framework provides guidance on management actions based on the abundance and conservation risk level of a stock.

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### Ministry of Land, Water and Resource Stewardship

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**Date Prepared: March 21, 2022**

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### Ministry of Land, Water, and Resource Stewardship

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**Issue:** Steelhead – Hatcheries Past and Present

***Recommend Response:***

- Protecting and rebuilding wild steelhead stocks is a priority.
- Traditional hatchery practices, where large numbers of fish are released, are not used as a conservation strategy for steelhead due to risks to the remaining wild stock.
- However, there are a wide range of fish culture activities, including modern hatchery practices, which need to be explored further.
- British Columbia (BC) is reviewing literature, practices, and programs to identify potential fish culture actions.
- There is wild steelhead expertise both within and external to the province. The work between BC and First Nations will result in a discussion paper for public and additional expert dialogue.
  - This fish culture discussion paper is one element of the steelhead strategy which includes Interior Fraser Steelhead (IFS) Action Plans, provincial management framework and collaborative oversight with First Nations partners.
- The results of this dialogue will be used to update provincial policy and take management action.
- Cultural and traditional knowledge will be an essential component the review. BC will continue to take our Indigenous partners' lead on how best to collaborate.
- BC continues to work with First Nations and Canada to address the underlying causes for the decline of steelhead.
- The province will continue to advocate for a transition to fisheries that reduce the unintended by-catch of steelhead.

***Additional Response:***

- Hatchery releases to provide recreational steelhead fishing opportunities are appropriate where the risk of impacting wild

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fish is low (e.g. no wild fish are in the watershed or wild and hatchery fish do not mix). The Vedder and Chilliwack Rivers are a current example.

#### **Key Facts:**

LWRS is the lead decision maker on provincial policy for hatcheries in freshwater.

MOF is the licencing authority for freshwater fish releases (including steelhead, sturgeon, rainbow trout and Kokanee) and through the Freshwater Fisheries Society of BC (FFSBC), oversees hatchery production of all freshwater fish on behalf of the provincial government.

Department of Fisheries and Oceans Canada (DFO) hatcheries require provincial permitting (MOF lead) and occasionally uses the Freshwater Fisheries Society of BC to run their hatcheries.

BC is also the licencing authority for permitting water use, effluent discharge, and Crown Land tenures required by hatcheries.

The steelhead strategy, which includes the fish culture (including hatcheries) discussion paper, IFS Action Plan, provincial management framework and collaborative oversight with First Nations partners will adhere to the following timelines:

- Fish culture discussion paper (internal Gov BC review in May 2022, First Nations review in summer 2022 and general public review in fall 2022);
  - note: the draft has benefited from experts in BC and the US.

Hatcheries: Total is 43 major and community hatcheries, plus 95 smaller scale projects.

- There are 23 major hatcheries in BC. (Eight with BC - FFSBC; 15 with DFO - Salmon Enhancement Program).
- There are an additional 20 Community Hatcheries through DFO.
- There are an additional 95 small public involvement hatcheries with DFO.

Steelhead Hatcheries, eight of the hatcheries produce steelhead (see table 1).

- Steelhead stocking programs in BC are used to augment recreational fishing opportunities where the wild population is not at-risk, or there is no wild steelhead population.

In the mid-1980s, there were more than 90 waterbodies being stocked with juvenile steelhead by the Salmon Enhancement Program.

- Severe declines in steelhead population abundances, due to reduced ocean survival and by-catch, have occurred since the late 1980's.

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- During the 1990s it became increasingly difficult to obtain enough local, wild broodstock to support enhancement programs.
- Many steelhead hatchery programs were closed due to concerns with the risks of hatcheries to wild steelhead populations and the inability to obtain broodstock.

Current scientific literature indicates that hatcheries pose a significant risk to wild steelhead and traditional methods should not be used to conserve at-risk populations.

- Although retention of hatchery steelhead is permitted, recent data indicate it is relatively low (~30%).

Table 1. Hatcheries with Steelhead Production

Hatchery Name	Location	Lead	Facility Type
1. Fraser Valley Trout Hatchery	Abbotsford	BC - FFSBC	Hatchery
2. FVTH, DFO, Alouette Corrections	Abbotsford +	BC - FFSBC	Hatchery
3. Robertston Cr. – DFO (Steelhead)	Port Alberni	DFO	Hatchery
4. Capilano River Hatchery	North Vancouver	DFO	Hatchery
5. Chehalis River Hatchery	Agassiz	DFO	Hatchery
6. Chilliwack River Hatchery	Chilliwack	DFO	Hatchery
7. Seymour Hatchery	North Vancouver	DFO	Hatchery - Community
8. L. Campbell – Community	Campbell River	DFO -Volunteer	Hatchery - Community

**Date Prepared/Revised: April 8, 2022**

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### Ministry of Land, Water and Resource Stewardship

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**Issue:** Steelhead & Salmon Status and Bycatch

**Recommend Response:**

- Pacific salmon stocks including steelhead have suffered significant declines leading to equivalent declines in the ecosystems and economies that rely on them.
- We have a renewed mandate to develop new strategies to protect and revitalize B.C.'s wild salmon and steelhead populations.
- B.C. has taken strong steelhead management actions, which were enhanced in 2019 through the BC-Fisheries and Oceans Canada (DFO) Action Plan that outlined common priorities for that year.
- We are working across government to ensure that all of the Province's work aligns with the goal of restoring wild salmon and steelhead, and this objective will be built into other strategies that B.C. is undertaking.
- Currently, options for a B.C. Wild Salmon Strategy & Action Plan (WSSAP) are being developed that build off of work and recommendations from First Nations, stewardship groups and others.
- We are also aware of the significant commitment from the federal government through their \$647 million Pacific Salmon Strategy Initiative, and will work closely to ensure there is a coordinated strategy to recover wild salmon and steelhead in partnership with First Nations in B.C.
- B.C. is keenly aware of the concerns about Alaskan harvest of salmon and steelhead originating in B.C. rivers, and they will be raised in several forums, including the Pacific Salmon Commission.

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- There is a lack of available information on specific fisheries and bycatch data. As a first step, B.C. is working to collate data domestically, and from international partners on salmon and steelhead bycatch.
- We know there have been tough years for salmon harvesters and First Nations who depend on these stocks for their communities' well-being.
- B.C. will continue efforts with various governments and partners to encourage the reduction of by-catch in the Alaskan salmon, halibut, and trawl fisheries.

#### **Key Facts:**

- LWRS is working with DFO on providing strategic and scientific advice to manage steelhead and salmon and liaising with international partners to further the conservation efforts around BC Salmon.
- Ministry of Forests is lead on angling authorizations for freshwater fish including steelhead.
- Wild Pacific salmon stocks have suffered significant declines leading to declines in the ecosystems and economies that rely on them. Returns to B.C. natal streams overall in 2020 were the lowest on record, and 2021 was not much better.
- For 2022, salmon returns will be low, and much like 2021, although it will be a dominant Adams River sockeye year, which could bring some abundance and potential for harvest.
- Over 60 salmon and trout designatable units (DUs) have been recently, or will soon be, assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), for potential listing under the *Species at Risk Act*.
- In 2021, the return of steelhead stocks to the Skeena River also dropped dramatically, leading to significant conservation concerns.
- Interior Fraser Steelhead (IFS) remain at extreme conservation concern.
- B.C. is working within the provincial agencies, closely with DFO, recreational and commercial fishers, First Nations, and with stakeholders on the implementation of the Interior Fraser Steelhead Emergency Recovery Plan.
- The bycatch of Canadian origin salmon in Alaska's District 104 fishery – sockeye (from Skeena /Nass) and from the Fraser system, are a focus of attention again, as Canadian, and (Southern US stocks) decline, and harvests reduced. Other species such as Northern Coho, Fraser chinook, and steelhead are included.

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- The recent Marine Conservation Caucus (MCC) report - *Alaskan Interceptions of BC Salmon: State of Knowledge*, led to media interest and increased sensitivities with the U.S.
- While the data has not been verified, in some years, the southeast Alaskan interception of Fraser-bound sockeye salmon has exceeded the allowable catch by B.C.'s First Nations and commercial fishery.
- Given this uncertainty, BC is working under direction from the Pacific Salmon Commission to investigate and gather more data on steelhead and salmon bycatch in domestic and Alaskan fisheries.

**Date Prepared/Revised: April 6, 2022**

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## 2022/23 Estimates Debate

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**Issue:** Salmon - Hatcheries in BC

**Recommend Response:**

- Fish stocking supports a number of objectives, including Food, Social and Ceremonial (FSC) fisheries, commercial and recreational opportunities; as well as species recovery.
- British Columbia (BC) is committed to supporting and incorporating innovation into provincial hatchery policy and programs.
- BC has been a supporter of modernizing hatcheries in recent years through BC Salmon Restoration and Innovation Fund (BCSRIF) investments.
- BC is supportive that the Department of Fisheries and Oceans Canada (DFO)'s Pacific Salmon Strategic Initiative (PSSI) includes a shift towards conservation hatcheries rather than production.
- BC's Wild Salmon Strategy will ensure that the province is playing a key role in salmon management, in partnership with First Nations and DFO.
- Wild salmon management fits within BC's larger integrated resource management model. This ensures that the management of one species does not inadvertently impact another, and aquatic ecosystems remain resilient.
- Through the realignment of business areas into this ministry, BC is building an even stronger partnership with DFO.
- BC is evaluating how to best integrate salmon hatchery work into the wild salmon strategy in order to ensure an optimal balance in supporting innovation while mitigating risks to wild stocks of both salmonids and freshwater fish.

**Key Facts:**

- LWRS is the lead for strategic policy and science in support of using hatcheries as a tool for recovering wild fish populations under provincial authority.

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- MOF, through the Freshwater Fisheries Society of BC, oversees hatchery production of all freshwater fish on behalf of the provincial government, while the DFO Salmonid Enhancement Program (SEP) oversees salmon hatcheries. Finally there are also hatcheries operated by individual First Nations.
- MOF is the licencing authority for freshwater fish releases (e.g. rainbow trout, Kokanee, steelhead, and sturgeon).
- BC is also the licencing authority for permitting water use, effluent discharge, and Crown Land tenures required by hatcheries.

Hatcheries: Total is 43 major and community hatcheries, plus 95 smaller scale projects.

- Major Hatcheries. There are 23 in BC (eight led by BC; 15 by DFO).
- Community. There are 20 Community Hatchery Projects, operated by DFO.
- DFO Small Public Involvement Projects: include 95 hatcheries, incubation boxes, Stream keeper programs, storm drain marking, and other initiatives.
- Spawning Channels. There are six Spawning Channels operated by DFO.
- DFO is the licensing authority for salmon hatcheries, and BC is the licencing authority for freshwater fish releases (e.g. rainbow trout, Kokanee, steelhead, and sturgeon). BC is also the licencing authority for permitting water use, effluent discharge, and Crown Land tenures required by hatcheries.
- Freshwater Fisheries Society of BC oversees hatchery production of all freshwater fish while the DFO Salmonid Enhancement Program (SEP) oversees salmon hatcheries
- Production at SEP's major facilities covers a wide range of production levels depending on the facility, species, and objectives. Typically, these range from around one million releases to several million releases. Hatcheries usually produce more than one species of salmon and use different timing and release methods to accomplish the set goals. DFO releases pre- and post-production plans publicly.
- Risks of hatcheries include impacts on genetic diversity and resilience of wild stocks, "wandering" of hatchery fish to spawn in other streams and out-competing remaining wild stocks. Strategic use of hatcheries can manage some of the risks. Example, hatchery use in supporting Fraser River stock that have been affected by the Big Bar rockslide.
- As part of DFO's PSSI, DFO is restructuring SEP to focus using hatcheries for conservation objectives, rather than production to support harvest. SEP will be retrofitting existing hatcheries to be more flexible, significantly reducing overall production, and starting mass marking of released salmon. SEP is planning

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construction of two new hatcheries in the Upper Fraser River region and is considering building up to four more community-based hatcheries. SEP will also be expanding its science and research capacity and developing an enhancement policy to guide operations and decisions, through a significant budget increase.

- Hatchery management and integration with wild salmon and other wild fish as part of a healthy aquatic ecosystem is a complex and controversial subject.

**Date Prepared/Revised: April 8, 2022**

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**Issue:** Salmon – Columbia Salmon Reintroduction

**Recommend Response:**

- The Columbia River Salmon Reintroduction Initiative (CRSRI) is a multi government commitment to develop feasible options for reintroducing salmon to the watershed.
- The Columbia River Watershed has historically supported large numbers of anadromous salmon.
- Starting in 1933, hydroelectric dam construction in both Washington and British Columbia (BC) cut off access and altered river flows.
- In July 2019, BC and the Department of Fisheries and Oceans Canada (DFO) joined three Indigenous Governments to work together and develop options for potential salmon recovery.
- The initiative is Indigenous led. The three Indigenous Governments are: the Ktunaxa Nation, the Syilx/Okanagan Nation, and the Secwépemc Nation.
- The Indigenous leads are also working with Tribes in the US.
- Recovery considerations are complex.
- The three-year funding commitment ended in 2021-22.
- Funding has been provided for 2022-23 in order to support the finalization of options and jointly determine the path forward.

**Additional Response:**

- The work in 2022-23 will focus on continued implementation of the current project priorities and developing a longer-term proposal that considers the timelines needed to implement studies and address the complexities and challenges.

**Key Facts:**

- LWRS holds the executive oversight and leadership role, MOF leads the technical work, DFO is a full partner, and process is led by the three First Nations governments (the Ktunaxa Nation, the Syilx/Okanagan Nation, and the Secwépemc Nation)
- The CRSRI collaborates with the Columbia Basin Trust, the US government (state) and tribes south of the Canada/US border.

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- The initial commitment recognized that the work would be complex, potentially contentious, require support from US Tribes and Washington State, and require an experimental design
- For these reasons, the initial focus was on setting up the initiative governance, exploring levels of support from partners and determining if the five governments could successfully build shared priorities and action the initial projects.
- The initial commitment was for three years, with the province, federal government, and the Columbia Basin Trust to each provide \$250K per year. This was a minister-level commitment made by Minister Donaldson.
- The three years have largely been successful, particularly in building alignment across the five governments. The workplan needs to be further built-out in order to provide feasibility options for consideration.
- Year-end funding was secured funding for a fourth year (2022-23) to support the completion of a feasibility options paper exploring ways to reintroduce wild salmon into the Columbia River. The options will need to consider the complexities involved, the timelines required for studies to provide results, and the potential high costs of reestablishing fish passage. The options paper would go to Minister Osbourne. First Nations partners have been requesting funding prior to the options paper being completed and considered by the collective Government's leadership.
- It was only 80 years ago that salmon were a foundational component of the ecosystem, so if access is achieved, there would be a high probability for successful reintroduction. This would provide extensive benefits to Indigenous and non-Indigenous peoples, the watershed's ecosystems, and local economies. However, finding solutions to pass through the numerous dams are likely to be expensive.
- The governance structure consists of an Executive Working Group (EWG), Implementation Team (IT) and a Technical Working Group (TWG).

The CRSRI has:

- Developed a governance structure and an Indigenous-led secretariat.
- Finalized a *Strategic Framework Document* to guide CRSRI's work.
- Established a *Technical Working Group*, co-chaired by BC specialists, which has been determining critical information gaps and initial actions.
- Established contact with *domestic power producers, and US tribes*, to further the necessary collaboration under CRSRI.

**Date Prepared/Revised: April 4, 2022**

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**Prepared for 2022/23 Estimates Debate**

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### Ministry of Land, Water and Resource Stewardship

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**Issue:** Salmon – Species at Risk and Trends

**Recommend Response:**

- Many wild salmon populations in British Columbia (BC) continue to decline to levels that they are at-risk.
- The Committee on the status of Endangered Wildlife in Canada (COSEWIC) has assessed 59 of those Designatable Units (DUs) and found 44 of those to be at risk.
- BC has made wild salmon management a top priority, including the commitment for a BC Salmon Strategy.
- BC will be working closely with the Department of Fisheries and Oceans Canada (DFO) and First Nation governments to take action.
- Beyond the development of a Salmon Strategy, many actions are being taken that support restoring wild salmon.
  - The Watershed Security Strategy's focus on healthy, sustainable watersheds directly supports wild salmon.
  - Work is underway to identify, and manage for, surface water flow requirements needed by salmon.
  - Habitat restoration is underway through programs such as the Fish Passage Remediation Program and the BC Salmon Restoration and Innovation Fund (BCSRIF).

**Additional Response points:**

There are five species of Pacific salmon in BC (Pink, Sockeye, Chinook, Coho, and Chum) creating approximately 450 populations, or DUs.

- Declines are due to reduced marine survival, climate change effects, habitat issues, and overharvesting of weak stocks in mixed stock fisheries.

**Key Facts:**

LWRS is the lead for the science and policy in support of recovery of wild salmon, including leading collaborations with First Nations and the Government of Canada, to make this happen.

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MOF, through the Freshwater Fisheries Society of BC, oversees hatchery production of all freshwater fish on behalf of the provincial government; the DFO Salmonid Enhancement Program (SEP) oversees salmon hatcheries. Finally there are also hatcheries operated by individual First Nations.

MOF is the licencing authority for freshwater fish releases (e.g. including Kokanee, steelhead, and sturgeon).

ENV, through the Conservation Officer Service, is responsible for enforcing fisheries regulations.

There is a standard process used to determine if a species gets listed under the Species at Risk Act (SARA).

- The federal SARA is the established, science based, act to recover a species which is determined to be at risk of extinction. It clarifies accountability, steps, timelines, and public reporting.
- COSEWIC is the independent body of scientific experts who assess the conservation status of Canadian species.
- Once a DUs has been deemed as 'at-risk' by COSEWIC, DFO conducts a Recovery Potential Assessment (RPA) with the participation of local and species experts.
- Once the RPAs are drafted, they are reviewed and published on the DFO website.
- The Federal Minister of Environment prepares the information for cabinet who decides if an assessed species will be listed under SARA.

Of the 450 DUs for the five species of Pacific salmon, the most diverse are sockeye (~240 DUs) and Chinook (~68 DUs. COSEWIC has assessed 59 populations (DUs) of Pacific salmon (32 sockeye, 26 chinook and one coho) and found 44 populations (75%) to be at-risk with 25 Endangered, 10 Threatened, and nine Special Concern. Three were found to be Extinct, three Data Deficient and nine Not at Risk. Steelhead, a form of anadromous trout, are showing similar population declines.

Threats to salmon are numerous due to their long migrations and reliance on both freshwater and marine habitats.

#### Freshwater:

- land use practices (logging, agriculture, mining);
- land conversion (urban development);
- dams / reservoirs and water management;
- invasive species;
- climate change (streamflow changes, water temperature impacts).

#### Marine:

- inshore predation by marine mammals (pinnipeds);
- climate change and cycles of ocean productivity such as ENSO (El Niño) and the Pacific Decadal Oscillation (PDO) which bring warm, nutrient poor water, salmon predators (hake, mackerel), and anomalies (e.g. the blob);

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- offshore competition for food between stocks and species;
- persistent over-harvesting in a variety of domestic and international fisheries.

Pacific Salmon are keystone species. Over 100 species of wildlife have been documented to eat salmon, with orcas and bears the most iconic. Significant effects on the abundance and diversity of other species can be expected if salmon are impacted or lost.

**Date Prepared/Revised: April 5, 2022**

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**Issue:** Sturgeon – Provincial

**Recommend Response:**

- British Columbia (BC) leads the provincial management of white sturgeon management and recovery.
- Both recovery and management efforts occur in collaboration with partners including First Nations, Department of Fisheries and Oceans Canada (DFO), industry, stakeholders.
- Management of the endangered populations in the Kootenay, Columbia and Nechako watersheds is guided by a federal recovery plan.
- Recovery of these three endangered populations include hatchery inputs as a stop-gap measure, and longer-term habitat restoration.
- A large-scale habitat restoration project (>\$2M) will be implemented on the Columbia River in 2022. The project will be delivered, by BC Hydro, in collaboration with this ministry.
- An updated habitat restoration plan is being developed for the Nechako River, meanwhile work continues on experimental habitat restoration projects in partnership with local First Nations.
- Through an Oversight Team, BC and First Nations are co-developing a unified Fraser Basin strategy for all four populations. The process will include public and expert involvement and the public phase will launch later this year.

**Additional Response points:**

- The lower Fraser River supports a growing recreational catch and release fishery valued at over \$30M. The portion of this fishery under BC regulations is evaluated annually and provincial requirements are updated (e.g. spawning area closures, additional licences).

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#### **Key Facts:**

- LWRS is responsible to ensure an effective multi-ministry, multi nation and multi-government strategy is in place. LWRS is the lead for the science and policy in support of recovery of white sturgeon in BC, including leading collaborations with Canada and First Nations to make this happen.
- MOF, through the Freshwater Fisheries Society of BC, oversees hatchery production of all freshwater fish, including white sturgeon in the Nechako River, on behalf of the provincial government.
- MOF has the authority for managing the white sturgeon recreational fisheries in the lower Fraser River, including setting angling regulations, closures, licence fees and habitat referral and protection.
- ENV, through the Conservation Officer Service, is responsible for enforcing fisheries regulations.
- Sturgeon have significant cultural importance to First Nations which includes spiritual linkages to ancestors and medicinal use. First Nations have a critical interest in the management of sturgeon and have priority rights and access for harvest opportunities under food, social and ceremonial (FSC) fisheries.
- White Sturgeon often live longer than 100 years. Females can take up to 35 years to mature and only spawn every two to seven years. Key threats to sturgeon populations include 1) incidental bycatch in salmon net fisheries; 2) habitat degradation; 3) dams and flow regulation; 4) illegal activities and poaching; 5) altered food supply with decreasing salmon/eulachon runs; 6) predation and 7) mortality in the catch and release fishery.
- A recreational catch and release (C&R) fishery within the Fraser River System has grown significantly (effort and catch) over the past decade and is valued at approximately >\$30M (direct and in-direct) to the local economy. The portion managed by the province extends from Mission Bridge to Hope, and then from Hell's Gate to Williams Creek. DFO regulates the sturgeon C&R from Mission Bridge to the ocean and does not require the same licencing conditions as the province.
- In 2003, the Federal Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assessed all White Sturgeon as endangered, using the six Nationally Significant Populations (NSPs). In 2006, the Lower and Middle Fraser were not listed under the Species at Risk Act (SARA) for social and economic reasons and the other four populations, Upper Fraser, Nechako, Columbia, and Kootenay, were listed as endangered.
- COSEWIC recently classified the Fraser as two Designatable Units (DUs) compared to the past four NSPs. The SARA status of both Fraser River DUs is currently under review by DFO with a decision expected late 2022.

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Population	SARA Listed?	Population Estimate (subadult & adult)	Has a Conservation Hatchery?
Columbia River Watershed	✓	1200	✓
Kootenay River Watershed	✓	1700	✓
Fraser Watershed – Lower Fraser River	X	45,000	X
Fraser Watershed – Mid Fraser River	X	10,000	X
Fraser Watershed – Nechako	✓	500	✓
Fraser Watershed – Upper Fraser River	✓	800	X

**Date Prepared/Revised: April 6, 2022**

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**Issue:** Fish Species at Risk

***Recommend Response:***

- This ministry will drive a coordinated and focused approach to address issues facing our aquatic ecosystems and the numerous creatures that rely on them.
- This ministry leads the cross-ministry involvement in federally led Species At Risk (SAR) processes.
- This ministry proactively leads the development of management strategies for species that BC deems at high risk, including for salmon, steelhead, and sturgeon.
- Developing and implementing effective recovery strategies requires deep collaboration with Federal and Indigenous Governments.
- This ministry will be looking for tangible actions that resolve issues contributing to species becoming at risk, such as forest practices and cumulative effects.
- The issue is big, and growing:
  - There are approximately 79 freshwater aquatic species at risk in BC. This includes 44 populations of wild salmon, two populations of steelhead, four populations of white sturgeon, three molluscs, and 28 other species of freshwater fishes.
  - Salmon are a keystone species; their loss would significantly impact other species. Over 100 species of wildlife eat salmon, including orcas and bears. Watersheds rely on salmon to fertilize aquatic and forest ecosystems.

***Additional Response points:***

- There are common threats including habitat loss from resource use and extraction (e.g. logging, farming, mining), water management, invasive species, and in some cases, over-fishing.

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#### **Key Facts:**

- LWRS is the provincial lead for the science, policy, and collaborations, including with First Nations, on aquatic species of conservation concern, including those listed as at risk under the federal Species at Risk Act.
- MOF is responsible for regulatory decisions affecting the management of aquatic species at risk that are not listed under the federal Species at Risk Act (i.e. the white sturgeon fishery in the Lower Fraser).
- ENV, through the Conservation Officer Service, is responsible for enforcing fisheries regulations.
- BC strives to take corrective management action when species are identified through provincial processes as of concern. The goal is to prevent a species from dropping to levels that may trigger a SAR Act review.
- The Government of Canada's SAR Act is the legislation that prevents fish and wildlife species in Canada from disappearing and provides for the recovery of listed fish and wildlife species.
- The Department of Fisheries and Oceans Canada (DFO) is the lead federal agency responsible for SARA designated fish and aquatic species.
  - See separate note on Terrestrial Species at Risk
- The BC Government works in close collaboration with DFO on the design and implementation of recovery initiatives.
- Jurisdictional responsibility for many of the threats to at risk species span across both governments.
- BC is responsible for the sustainable and integrated management of the natural resources in a manner that prevents species from becoming at risk.
- The current resource management regime has resulted in species becoming at risk, new resource management practices are required.
- Based on the mutual goal of sustainable fish and aquatic resources, this ministry is pioneering new ways of fully collaborating with First Nations in the design and oversight of comprehensive sustainability plans that look into all factors resulting in declines. The two processes most advanced are the Interior Fraser Steelhead, and the Fraser Basin Sturgeon.

**Date Prepared/Revised: April 5, 2022**

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## 2022/23 Estimates Debate

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**Issue:** Freshwater Fisheries Society of BC

***Recommend Response:***

- British Columbia (BC) is globally renowned for its unique freshwater fishing.
- The Freshwater Fisheries Society of BC (FFSBC) was formed as a non-profit organization in 2003.
- FFSBC works as a partner to deliver the lake stocking, hatchery and marketing programs that were originally part of government operations.
- Annually, FFSBC raises over \$4.8B fish in their hatcheries, including trout, kokanee, and char. There are 684 waterbodies stocked and FFSBC operates BC's conservation hatcheries for sturgeon.
- One hundred percent of provincial fishing licence sales revenue, approximately \$10M annually, goes to the FFSBC. A portion of the additional Conservation surcharges go to the Habitat Conservation Trust Foundation (HCTF).
- Freshwater Recreational Sport Fishing generates approximately \$1B in combined direct/indirect revenue.

***Additional Response points:***

- Highlight: BC's Family Fishing Weekend is Father's Day Weekend: June 17 -19, 2022. To encourage activity, a fishing licence is not required.
- Licence sales have fluctuated during COVID. Licence revenues were \$9.4M this year (2021/22), as compared to last year at \$10.6M.

***Key Facts:***

- LWRS is the lead for policy and science in support of using hatcheries as a tool for recovering wild fish populations under provincial authority.
- MOF, through the Freshwater Fisheries Society of BC, oversees hatchery production of all freshwater fish on behalf of the provincial government.

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- MOF has the authority for managing the recreational fisheries in BC, including setting angling regulations, closures, licence fees.
- Most of the FFSBC operational activities are conducted under the authority of the *Wildlife Act*. These include stocking, hatcheries, and brood stock collection.
- FFSBC Operational Cost Summary:
  - Eighty percent of costs arise from five areas: staff salaries, fish food, electricity, fuel for vehicles, and natural gas/propane.
  - Twenty percent go to a variety of smaller costs, including property taxes, insurance, equipment rental, oxygen, service contracts, and communications.
- Angling fees in BC have not been increased since 2003. The BC Government is considering increases in angling licence fees to match the Consumer Price Index (CPI) to support FFSBC's operational costs relative to inflation.
- FFSBC Fishing Licence Sales Revenue:

Year	FFSBC Revenue	HCTF Revenue
2019/20	\$ 10.466 million	\$ 3.8 million
2020/21	\$ 10.566 million	\$ 3.4 million
2021/22	\$ 9.400 million (estimate)	\$ 2.9 million (estimate)

- Licence sale revenue fluctuated during COVID. In 2020/21 sales remained stable due to an increase in BC resident sales while last year saw reductions due to restrictions being lifted while border access for non-BC residents remained limited. In 2020/21 licence sales to BC residents increased by 67,000 with sixty four percent of those being new anglers between 16 to 24 years old.

Year	2017/18	2018/19	2019/20	2020/21	2021/22
Total Licenses Sold	509,751	527,823	510,887	516,125	479,227

**Date Prepared: March 21, 2021**

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**Issue:** Fish Passage Program

***Recommend Response:***

- The Fish Passage Remediation Program (the Program) identifies road construction that is blocking salmon and other fish access to upstream habitat, and then fixes these sites.
- The Program was initiated in 2008.
- The Program's initial focus was on forestry road crossings built prior to new fish passage requirements in 1995.
- The program is now also prioritizing areas with at risk fish species such as steelhead and other salmonids.
- To date, the Program has remediated over 180 road crossings, restoring access to over 800 kilometers of fish (including salmon) habitat.
- Remediating fish stream crossings may be one of the single most important actions to improve fish productivity in British Columbia (BC). This was reiterated in the 2018 Wild Salmon Advisory Council report.
- The Program continues to be a cornerstone to BC delivering on-the-ground improvements.
- This ministry is now initiating the development of a restoration strategy, with a first focus on collaborations with federal and Indigenous governments to align current habitat remediation priorities, programs, and resourcing. The Program is a cornerstone to that strategy.
- This cross-government prioritization will support other funding organizations better optimize their investments.

***Key Facts***

- LWRS is the lead on strategic planning and implementation of the fish passage program. MOF will lead operational implementation and support the strategic planning process.
- It is estimated that 10-25% of salmon habitat in BC may be compromised due to fish passage issues.

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- To date, the Fish Passage Remediation Program has remediated over 180 road stream crossings, restoring access to over 800 kilometers of fish habitat.
  - It is estimated that there are 322,000 stream crossing structures on 557,000 km of roads in BC.
  - Of those 322,000 crossings, 225,000 (70 %) are expected to be closed-bottom culverts. Closed bottom culvert have the highest likelihood to fail over time resulting in fish passage issues.
  - Individual projects can range from \$30,000 - \$1,000,000.
- Stream crossings constructed after 1995 are regulated under the Forest and Range Practices Act (FRPA), which specifies that crossings do not have a material adverse effect on fish passage.
  - The existing fish passage program focuses on crossings installed pre-1995.
  - Most projects are on culverts, as they were installed at a time before there were clear fish passage requirements, or over time, have become barriers due to changes resulting from development, decay, or natural disturbances.
- The program was established in 2008, in collaboration between the then Ministry of Forests and Range, the Ministry of Environment and the Department of Fisheries and Oceans Canada (DFO).
  - The work is overseen by an inter-agency Fish Passage Technical Working Group (FPTWG). Funding for the program is primarily provided through the Land Based Investment Strategy (LBIS).
- LBIS funds are used to leverage partnership funding from DFO and other sources.
  - Implementation is primarily led through BC Timber Sales.
- LBIS Funding for Fish Passage over the years:

2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
\$4m	\$0.8m	\$2m	\$0.5m	\$1m	\$1m	\$1m	\$1m	\$1m	\$1m	\$1m	\$0.77m

- Reductions in 2013/14 were due to reductions in the LBIS program.
- Reductions in 2021/22 were attributed to the availability of BC Salmon Restoration and Innovation Fund (BCSRIF) funding – although that funding is not available to government agencies.
- \$4M in the first round of BCSRIF funding was given to the Canadian Wildlife Service (CWS) for fish passage projects. This work is now better aligned with provincial prioritization methods rather than CWS determined priorities.
- If one quarter of the estimated 225,000 (Approx. 56 thousand) crossings were targeted for remediation, with an annual budget of \$100M it would take approximately 95 years. The scale of work highlights the need for increased funding and also a strategic approach to address high priority works with the greatest benefits to salmon.

**Date Prepared/Revised: April 4, 2022**

**Ministry Executive Sponsor:**

Name: ADM James Mack

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**Prepared for 2022/23 Estimates Debate**

## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Alternate Contact for Issue:**

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Fish Habitat Restoration

**Recommend Response:**

- Government has established LWRS as the clear lead to develop new approaches that will ensure our aquatic ecosystems are healthy and sustainably managed.
- This mandate will be delivered through the combination of provincial strategies such as the Watershed Security Strategy, and on-the-ground restoration actions such as our Fish Passage Remediation Program and investments under the British Columbia (BC) Salmon Restoration and Innovation Fund (BCSRIF).
- Habitat loss has occurred from development, fragmentation, and cumulative impacts. This loss has accelerated due to natural disasters such as drought, flood, and wildfires.
- Aquatic habitat restoration:
  - is critical to maintain and recover fish populations.
  - improves water for human consumption.
  - can mitigate climate change impacts, such as keeping streams cooler during drought, increasing bank stability in floods, and provide fire breaks.

**Additional Response points:**

- BC is developing an Aquatic Habitat Restoration Strategy to track and coordinate projects, as well as improve the alignment of new investments.
- The Fish Passage Remediation Program fixes road construction that is blocking fish access to upstream habitat. To date, it has remediated over 180 road crossings, restoring access to over 800 kilometers of fish, including salmon, habitat.

**Key Facts:**

LWRS is the lead on developing the restoration strategy and continuing to deliver key components in the interim. LWRS is also leading collaborations with DFO and First

## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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Nations. LWRS is also responsible for long term ecosystems recovery through the Watershed Security Strategy.

MOF will play a support role in developing and implementing the strategy. Aquatic habitat is protected through a regulatory framework including the Land Act, Water Sustainability Act, and the Riparian Areas Protection Regulation. Damage is a chargeable offense under the Federal Fisheries Act.

#### Aquatic Habitat Restoration Strategy

The current phase focuses on building and delivering the emergency flood response in partnership with DFO and First Nations, as well as the ongoing delivery of the Fish Passage Remediation Program and BCSRIF. The next phase will focus on aligning the existing programs (e.g. SEP- Salmon Enhancement Program) and target December 2022 for a draft provincial aquatic habitat restoration strategy document.

- LWRS leads the development.

Additional examples of activities underway:

- BCSRIF is a joint Federal (70%) and Provincial (30%) funding source that is aimed to support BC's fish and seafood sector.
- Streamlining permitting requirements for habitat remediation activities under the Water Sustainability Act.
- In partnership with First Nations and the Federal Government, BC is assessing the impacts, identifying priority actions, and building an action plan for the November atmospheric river event.
- BC and the Federal Government have increased collaboration at the senior management level to improve alignment between the two government's programs, priorities, and investment in remediation.

**Date Prepared/Revised: April 5, 2022**

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Natural Resource Stewardship

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**Issue:** Riparian Areas Protection Regulation

**Recommend Response:**

- The Riparian Areas Protection Act (Act) provides the Minister with authority to enact regulations to protect riparian (streamside) fish habitat.
- The Act currently has one regulation, the Riparian Areas Protection Regulation (RAPR).
- RAPR integrates fish habitat protection requirements into local government permitting for development (residential, commercial, and industrial).
- RAPR relies on Qualified Environmental Professionals (QEPs) to ensure proposed development meets both regulatory requirements and site-specific conditions.
- 2019 improvements to the RAPR provide greater certainty and clarity to proponents, QEPs and local governments.
- Inclusion of a provincial authority to approve or reject proposals met the commitment to greater oversight and effectiveness of the professional reliance model.
- FLNRO staff (now LWRS) handled approximately 1100 assessment reports in 2020/21.

**Additional Response points:**

- British Columbia's (BC)'s target for compliance of 90% is not yet being achieved. There are actions underway to improve compliance, including training for QEPs on the requirements.

**Key Facts:**

LWRS is the lead Ministry on the implementation and management of the Riparian Area Protection Regulation.

The Riparian Areas Regulation was amended in November 2019 and is now named the *Riparian Areas Protection Regulation* (RAPR).

The RAPR is a professional reliance model and establishes:

- That site-level protection be developed by a QEPs, who is usually hired by the development proponent. This ensures that local governments do not shoulder the costs of determining site-level protection requirements.

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### Ministry of Land, Water and Natural Resource Stewardship

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- The ability for the province to conduct technical reviews of proposals. This ensures local government does not shoulder the cost of needing specialist staff.
- The ability for the province to approve or reject an application. This provides greater oversight of the professional reliance model for occasions when a self declared QEPS does not actually have the requisite qualifications.
- Updated guidance that includes a standard, transparent methodology for assessing habitat values and determining site-level protection.

Compliance rates for riparian assessments submitted are lower than anticipated, currently between 60-70%. The target is 90%. The province has ongoing training available for QEPs and local government and is looking at other ways to improve QEPs compliance.

In January 2022, the BC Office of the Ombudsperson issued their final report on the ministry's implementation of recommendations from their 2014 review of the RAPR. All 25 recommendations have been incorporated. These included local government implementation, provincial monitoring and QEPs oversight.

The RAPR applies in the following regional districts:

<ul style="list-style-type: none"><li>• Capital Regional District</li><li>• Columbia Shuswap Regional District</li><li>• Comox Valley Regional District</li><li>• Cowichan Valley Regional District</li><li>• Fraser Valley Regional District</li><li>• Metro Vancouver Regional District, other than within the boundaries of the City of Vancouver</li><li>• qathet Regional District</li><li>• Regional District of Central Okanagan</li></ul>	<ul style="list-style-type: none"><li>• Regional District of Nanaimo</li><li>• Regional District of North Okanagan</li><li>• Regional District of Okanagan-Similkameen</li><li>• Squamish-Lillooet Regional District</li><li>• Strathcona Regional District</li><li>• Sunshine Coast Regional District</li><li>• Thompson-Nicola Regional District</li></ul>
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**Date Prepared: March 21, 2022**

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### Ministry of Land, Water and Resource Stewardship

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**Issue:** Wetlands

**Recommend Response:**

- Wetlands are relatively uncommon ecosystems in B.C. but play an integral role for biodiversity and B.C.'s communities.
- Wetlands provide and filter water, mitigate floods, sequester carbon, and support biodiversity
- As part of government's COVID economic stimulus package, over \$37 million has been dedicated to species, ecosystems, and watershed restoration and conservation projects.
- More than \$5 million has been dedicated to wetland restoration, creation, and enhancement projects.
- This directly supports our Clean BC and climate action initiatives.

**Additional Response points (if needed):**

- Work is under way to update existing lists of species at risk under the *Forest and Range Practices Act* and *Oil and Gas Activities Act* which has the potential to protect wetland habitat for some wetland-dependent species.

**Key Facts:**

**Wetlands in B.C.:**

- Wetlands currently comprise about 5.28 million hectares (13.047 million acres) or approximately **five percent of the provincial land base**.
- Wetlands are relatively uncommon ecosystems in B.C. yet they play an **integral role for nature and communities**. Wetlands provide and filter water, mitigate floods, sequester carbon, and support biodiversity.
- **Wetlands have been declining** in B.C. (and elsewhere) since the early 1900s. Regions of notable wetlands loss include the **South Okanagan, Fraser River delta**, and **Greater Victoria**

**Wetland biodiversity and species at risk:**

- **Many provincial red and blue listed species are wetland dependent.** Wetlands provide essential habitat for about 170 species and 61 ecological communities at risk.
  - Example **red listed species that rely on wetlands** are Northern Painted Turtle, Oregon Spotted Frog, Nelson's Sparrow, and Bent Spike-rush. Two example **red listed wetland ecological communities** are Western

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### Ministry of Land, Water and Resource Stewardship

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redcedar—Slough Sedge, and Tufted Hairgrass.

- Work is under way to **update existing lists of species at risk** under the *Forest and Range Practices Act* and *Oil and Gas Activities Act* which has the potential to protect wetland habitat for some wetland-dependent species.
- As part of government's **COVID economic stimulus package**, over \$37 million has been dedicated to species, ecosystems, and watershed restoration and conservation projects.
  - More than **\$5 million** has been dedicated to **wetland restoration, creation, and enhancement** projects.
  - This directly supports our **Clean BC climate action plan**.

#### Wetlands Mapping

- The Ministry of Land, Water and Resource Stewardship (LWRS) manages an **ecosystem mapping database** capable of supporting a comprehensive wetland inventory. Coverage is patchy and encompasses approximately 65% of the land base.
- LWRS in partnership with BC Hydro's Fish and Wildlife Compensation Program (FWCP), NGOs, federal and provincial agencies is expanding **wetland inventory, mapping and modelling** efforts in the **Kootenay Boundary and Peace Regions**.
- LWRS has published all wetland information, scripts, and data to **interactive web mapping applications** and repositories to facilitate transparency, information sharing, and collaboration.

#### Wetlands Monitoring:

- A **Provincial Wetland Protocol** (Field Supplement to Evaluating the Health of Wetlands: Wetland Management Routine Effectiveness Evaluation) was published by the former Ministry of Forests, Lands, Natural Resource Operations and Rural Development's **Forest & Range Effectiveness Program** in February 2019. This is a coarse-level filter for assessing and **monitoring the health of wetlands** in a cost-effective manner.

#### Wetlands under the *Water Sustainability Act (WSA)*:

- The definition of "stream" under the WSA *explicitly* includes wetlands.
- The WSA definition of wetland includes swamp, marsh, fen or a prescribed feature.
- The inclusion of "a prescribed feature" establishes the authority to add an additional feature/landscape type to the definition of wetland by regulation.
- The WSA also enables government to make a temporary protection order during times of scarcity to protect the natural environment of the stream, including wetland, vegetation, fish, wildlife and other living organisms.
- Because a wetland falls within the definition of a "stream" all the powers and authorities to protect streams can also be used to protect wetlands. These include, in general but not exhaustive:
  - s. 6 WSA which requires an authorization to divert water from a wetland;

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- s. 11 WSA which requires change approval to make a change in or about a stream, for example infilling or construction in a wetland;
- s. 46 WSA which prohibits deposit of refuse or waste into a wetland; and,
- s. 93 WSA creates authority for government to order removal / remediation of unauthorized construction or infilling of a wetland.

#### **Responsibilities:**

- Ministry of Forests
  - Wetlands classification, inventory, and modeling
  - Wetlands monitoring under the Forest & Range Effectiveness Program
  - Water authorizations under the WSA
- Land, Water and Resource Stewardship
  - Identification of wetland species and ecosystems at risk
  - Wetlands inventory, modeling, data and information management
  - Wetlands policy lead on WSA provisions
  - Wetlands enhancement and restoration
- Oil and Gas Commission
  - Water authorizations relating to oil and gas activities under the WSA

**Date Prepared/Revised: March 22, 2022**

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Provincial LiDAR Program

**Recommend Response:**

- It is recognized that LiDAR inventories are important to multiple stakeholders including government, communities, First Nations and industry and are necessary for informed decision-making regarding activities on B.C.'s land base and management of its forests.
- The Natural Resource Ministries are establishing plans for a LiDAR Program to coordinate the acquisition and application of LiDAR across the sector.
- The LiDAR Program will deliver high quality geospatial information that greatly supports effectively managing the Province's Crown land and resources.
- Centrally coordinated acquisition and distribution of LiDAR will significantly reduce operational costs while supporting better decisions.

**Additional Response points (if needed):**

- Much of the current LiDAR data collection will be provided as a free, public-funded resource for British Columbians. This currently represents approximately 105,000km<sup>2</sup> (approx. 11% of the province) and will grow with future acquisitions.

**Key Facts:**

- The LiDAR (Light Detection and Ranging) Program creates a framework to ensure LiDAR collected by the Natural Resource Ministries (NRM) is coordinated, consistent, of high quality, broadly applicable and cost effective.
- Through a centralized acquisition and distribution model, the program will enable smaller business areas to access high quality LiDAR data which otherwise would be cost-prohibitive.
- This program would allow the NRM to attain full provincial LiDAR coverage for about \$30M, as opposed to an estimated \$100M-\$175M continuing to use current acquisition contracting practices. Estimates based on 2020 fuel prices.
- The LiDAR program would initially be funded through existing annual operating budgets for the current project-by-project acquisition of LiDAR (about \$3M/year combined). In the future a centralized funding model will be assessed.
- A cross-agency team have worked together to create a sustainable storage and distribution solution for LiDAR data at a significant savings for Government of \$0.07/GB (from \$0.57/GB) which corresponds financially as follows:

Total Data Amount (Gb)	Cost \$0.07/Gb/month	Cost \$0.56/Gb/month
Current collection: 24,607 Gb	\$1,722	\$13,780

- The following examples describe how LiDAR is currently in use supporting government business:

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### Ministry of Land, Water and Resource Stewardship

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- FOR FORESTRY: LIDAR is used in the modeling of predictive forest inventories, enhanced Predictive Ecosystem Mapping, and provides operational tools for precision forestry, including:
  - identification of mature species of interest;
  - tools for forest structure and volume analysis, (trees, canopy, and understory);
  - means for surveying and environmental assessment; and;
  - means for identifying culturally and ecologically sensitive sites (karst features and pit house locations)
- FOR BIODIVERSITY/WILDLIFE MANAGEMENT: LiDAR is used to create maps to quantify disturbances and assess vegetation re-growth after disturbance. Land managers use these measurements for biodiversity conservation and management applications,
  - reclamation planning of habitat restoration efforts to support protection and recovery of caribou and other listed species at risk
- FOR NATURAL EMERGENCY RESPONSE AND MANAGEMENT: LiDAR data offers powerful tools to:
  - create maps for soil erosion and landslide potential;
  - risk analysis applications in flood modeling and vulnerability assessments; and;
  - support predictive modelling of wildfire behavior that then informs allocation of fire fighting resources.

**Date Prepared/Revised: Updated April 27, 2022**

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Provincial Adoption of ParcelMap BC

**Recommend Response:**

- The Land Title and Survey Authority (LTSA) has developed ParcelMap BC (PMBC) to replace the Integrated Cadastral Fabric (ICF) as the spatial representation (cadastre) of British Columbia's surveyed Crown and private land parcels, depicting the extent of ownership rights and interests.
- LTSA fully administers, updates and maintains PMBC through a program that is entirely funded by land title and survey fees.
- Government is adopting PMBC incrementally while working with the LTSA and business areas to ensure suitable attribute information is provided (for resource authorizations and treaty support) and technical issues are resolved.
- GeoBC is enhancing the PMBC product and has implemented a consultation strategy with DataBC to minimize business impacts for Government.
- Upon PMBC's adoption the Integrated Cadastral Fabric (ICF) will be retired.

**Key Facts:**

- Government relies upon the ICF as the provincial cadastre to determine parcel rights, reservations and interests which are imperative for private sector investment and Government decision-making.
- The ICF was created in 2000 and has been produced and maintained by GeoBC on behalf of the Integrated Cadastral Information Society (ICI Society). ICI Society is a non-profit organization providing geospatial data products to its membership such as Government (including Crown corporations), First Nations, local governments, and utilities.
- With the support of Government, the ICI Society and other stakeholders, the LTSA developed PMBC to replace the ICF as the provincial cadastre. Since 2012, the LTSA has invested significant funds to develop PMBC.
- GeoBC stopped maintaining the ICF in early 2019 owing to the widespread availability of PMBC and its inherent benefits, as well as retirements of staff responsible for ICF's maintenance. While the ICF is no longer actively maintained by GeoBC, Government continues to use it extensively for emergency services, treaty negotiations, administrative boundaries, land use planning and various natural resource sector permitting and authorizations.
- The LTSA and ICI Society are actively promoting province-wide adoption of PMBC as B.C.'s cadastre. However, adoption of PMBC (and retirement of the ICF) presents uncertainty for various provincial agencies, as to the adequacy of spatial or attribution data, implications for business systems and processes, and budgetary impacts. Agencies use unique platforms that are configured to use ICF data to support their independent business areas.
- GeoBC has encouraged a phased approach to PMBC adoption in order to accommodate Government's complex business needs. GeoBC is contributing technical support and attribute data to enhance PMBC and enable its province-wide adoption.

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- GeoBC and DataBC have developed a consultation strategy to identify and address key issues arising from ICF retirement and PMBC adoption. DataBC is providing provincial agencies with technical support to manage required changes to business applications.
- Retirement of the ICF is targeted to be completed by late 2022 but may be delayed due to business dependencies.

**Date Prepared/Revised: March 30, 2022**

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### Ministry of Land, Water and Resource Stewardship

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**Issue Name:** IT Support for COVID-19 economic recovery activities in the Natural Resource Ministries

**Recommended Response:**

- The Natural Resource Ministries have provided innovative digital tools to support communities and industries as they navigated the COVID-19 pandemic.
- Examples include tracking and inspecting PHO requirements in workcamps across the province and supporting distribution of federal grants to rehabilitate dormant gas well restoration and rehabilitation.

**Key Facts:**

**Support for Industrial Activity:**

- A Public Health order (PHO) was issued for natural resource industrial camps to inform commercial operators of mandatory COVID-19 infection prevention and control protocols.
- The requirements and guidance of the PHO also provided reassurance to rural and remote municipalities around the perceived risks of non-resident workers entering their communities.
- The Information, Innovation and Technology Division (IIT) partnered with Ministry of Forests, Lands, Natural Resource Operations, and Rural Development (FLNRORD), the Ministry of Citizen Services, and the Ministry of Health to develop an online system to support the tracking, inspection, and authorization of industrial operators under the requirements of the PHO.
- The activities authorized under this work were important to economic recovery efforts of rural communities and are directly linked to:
- The planting of 310M trees from March through July 2020 and a similar number for the 2021 plant;
- Direct employment of ~5,000 people as treeplanters or in roles supporting treeplanting camps, approximately half of those are estimated to be permanent BC residents;
  - Industrial activities supporting thousands of jobs, both directly employed by silviculture contractors and indirectly through services which support the seasonal plant and their employees; and
- Approximately \$300M in value into BC's economy for the 2020 plant and for the 2021 planting season.
- Beyond this initial effort with a silviculture focus, IIT also partnered with NR Ministries on developing online systems to support the responsible restarting of other industries, including:

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### Ministry of Land, Water and Resource Stewardship

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- Partnership with Ministry of Agriculture, Food and Fisheries to support domestic farm work (i.e. non-resident fruit picking) and aquaculture industries;
- Partnership with Ministry of Energy, Mines and Low Carbon Innovation (EMLI) for Mineral exploration camps; and
- Expanded partnership with FLNRORD to capture various forestry-related industrial camps – wildfire, pruning, spacing, brushing, logging, surveying, timber cruising, engineering, cone picking, and vegetation management.
- These online systems will remain in place to support the economic recovery activities of industrial camps until such time as the PHO removes the requirements for COVID-19 infection prevention and control protocols (most recently updated July 7, 2021).

#### **Direct Financial Assistance Support:**

- The Federal Government has dedicated \$100M to support restoration and rehabilitation of dormant wells and sites by oil and gas services companies in BC and these funds are being administered and managed by EMPR.
- IIT partnered with EMLI to very quickly develop an online system to receive applications from companies and to provide the funding in a timely and efficient manner.
  - Given the difficult financial conditions for all British Columbians, EMLI made a priority of getting the financial assistance in the hands of these hard-hit companies and employees as quickly as possible.
  - Within two weeks EMLI was able to develop this brand-new program of grant administration and an online system was developed and made available to companies.
  - The system made it simple for companies to apply for grants to support site restoration work and allows EMLI to easily manage and audit the funding program.

**Date Prepared/Revised: 2022-04-27**

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** DRIPA Action Plan Items

**Recommend Response:**

- The Government of B.C. is committed to reconciliation with Indigenous Peoples.
- The first Declaration Act Action Plan is the next step in delivering transformative change in government's relationship with Indigenous Peoples in B.C.
- Complementing this step, is the creation of the Ministry of Land, Water and Resource Stewardship, which was founded on government's three goals of reconciliation with Indigenous Peoples, environmental sustainability and economic activity.
- Now we get to collectively turn to continuing to build the implementation of the four actions that my ministry has responsible for delivering, and support my colleague Minister Rankin in one of his.
- The Action Plan Items that my ministry is responsible for are actively reviewing the preliminary work that's been done to date in light of the restructuring and the new Land, Water and Resource Stewardship mandate.
- **Specifically on Action 2.4** (new joint decision-making and consent agreements under section 7 of the Declaration Act):
  - I am looking forward to building the partnership with Minister Rankin and having our Ministry staff work in cooperation with First Nations on new joint decision-making and consent agreements under section 7 of the Declaration Act
- **Specifically on Action 2.6** (advance collaborative stewardship of the environment, land and resources, that address cumulative effects and respects Indigenous Knowledge):
  - The Ministry of Land, Water and Resource Stewardship will continue to advance the Modernized Land Use

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### Ministry of Land, Water and Resource Stewardship

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Planning (MLUP) program in partnership with Indigenous Nations, implementing the intent of the Declaration Act, advancing nine priority planning projects, improving alignment with other planning and stewardship initiatives (e.g. Old Growth, Forest Landscape Planning, Water Sustainability Planning, Together for Wildlife etc.) and collaborating on the co-development of MLUP principles, framework and program guidance.

- The MLUP program has undertaken engagement with over 65 Indigenous Nations over 3 years and consulted with indigenous advisors, FNLC and other Indigenous organizations to seek advice and participation in the development MLUP principles and program direction.
- Regional project teams and partner Indigenous Nations will continue to work together to determine future planning priorities
- **Specifically on Action 2.7** (Water management and Water Security Strategy):
  - The Watershed Security Strategy and Fund are a ministerial mandate commitment that will address watershed security through action in several key areas: watershed governance, drinking water, ecosystems, education and knowledge, and coordinating these efforts through new local watershed governance approaches that integrate local values in decision making.
  - Developing the Watershed Security Strategy and Fund is of significant interest to many First Nations because of their relationships with water. It is an opportunity to advance reconciliation through new partnerships with First Nations that support and build on shared interests and goals for water.

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- We are jointly developing a BC-First Nations Water Table to discuss ongoing provincial-level water policy. Through this Water Table and ongoing relationships with First Nations leadership, treaty nations, Métis nations, and existing government-to-government tables, we will strive towards co-development of the Watershed Security Strategy.
- Building on past engagement with First Nations on water-related issues, multiple pathways to participate in the development of the Strategy have been developed, with the goal of building enduring, collaborative relationships. This work is funded through the Indigenous Funding Program:
- \$285,000 was spent in FY2021/22 to initiate the BC Water Table and engage directly with Indigenous Peoples about opportunities under a Strategy.
- Funding in FY202/23 is expected to support the First Nations Fisheries Council in its work with the province on the BC Water Table.
- Additional funds are expected to support our work with Indigenous Peoples through informational webinars, government to government discussions, and capacity funding.
- Determining long term sustainable funding for Indigenous Peoples work on watershed security will be part of our work together under the Strategy and Fund.
- **Specifically on Action 2.8** (Conservation, biodiversity, species at risk):
  - The B.C. government is committed to reconciliation with Indigenous Peoples, and reconciliation can be advanced through Indigenous leadership in wildlife conservation efforts.

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### Ministry of Land, Water and Resource Stewardship

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- Healthy ecosystems are critically important for biodiversity conservation and climate adaptation since they can reduce the impacts and costs from increased floods, droughts and wildfires.
- Collaborating with Indigenous partners on new wildlife stewardship policies, including considering Indigenous Knowledge in wildlife and habitat decision-making, wildlife stewardship planning and objective-setting, and shared decision-making for non-statutory decisions
- We are including Indigenous values and knowledge in policy and procedures that we develop in various ways, including through the First Nations-BC Wildlife Stewardship and Habitat Conservation Forum, working with First Nations through regional Collaborative Stewardship Forums, partnerships through government-to-government agreements, and contracting Indigenous experts to bring Indigenous perspectives into the development of specific policy and procedures (e.g., to identify and list species-at-risk).
- The B.C. government is collaborating, partnering, and supporting Indigenous-led actions throughout the province; for example, wildlife monitoring, inventory, research, on-the-ground stewardship projects and species at risk recovery.
- Various advisory bodies and councils include indigenous members, for example the five of 18 Minister's Wildlife Advisory Council and three representatives of an 11-person committee providing advice and recommendations as we develop new policy and procedures for the legal listing of species at risk are indigenous or work for Indigenous Governing bodies.

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### Ministry of Land, Water and Resource Stewardship

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- **Specifically on Action 2.9** (protect and revitalize wild salmon):
  - Wild salmon is part of B.C.'s identity and a key species in its coastal ecosystems, and have sustained Indigenous Peoples and their cultures for millennia.
  - As part of our Action Plan, our government has been working with the federal government, First Nations, conservation organizations, and industry to support the conservation and revitalization of wild salmon in the province, including the development of a cohesive Wild Salmon Strategy.
  - With the federal government, we jointly established the B.C. Salmon Restoration and Innovation Fund (BCSRIF) in 2019. BCSRIF is a 5-year, \$143 million program funded jointly by the federal (70%) and provincial government (30%), and we have both committed to doubling the original investment in BCSRIF.
  - To-date, BCSRIF has supported over 80 projects totaling approximately \$112 million. The fund supports innovation, infrastructure and science partnerships that will help protect and restore wild BC fish stocks, including Pacific salmon and steelhead.
  - We are aware of the significant commitment from the federal government through their \$647M Pacific Salmon Strategy Initiative, and are expecting to work closely to ensure there is a coordinated strategy to recover wild salmon in partnership with First Nations in B.C.
  - This government has pledged to invest an additional \$42.85M in the B.C. Salmon Restoration and Innovation Fund, doubling the largest provincial financial commitment to protect wild salmon in the past 20 years.

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### Ministry of Land, Water and Resource Stewardship

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#### **Key Facts:**

- Full text of DRIPA Action Plan Items:
- **2.4** Negotiate new joint decision-making and consent agreements under section 7 of the Declaration Act that include clear accountabilities, transparency and administrative fairness between the Province and Indigenous governing bodies. Seek all necessary legislative amendments to enable the implementation of any section 7 agreements. (Ministry of Indigenous Relations and Reconciliation, Ministry of Land, Water and Resource Stewardship)
- **2.6** Co-develop strategic-level policies, programs and initiatives to advance collaborative stewardship of the environment, land and resources, that address cumulative effects and respects Indigenous Knowledge. This will be achieved through collaborative stewardship forums, guardian programs, land use planning initiatives, and other innovative and evolving partnerships that support integrated land and resource management. (Ministry of Land, Water and Resource Stewardship, Ministry of Indigenous Relations and Reconciliation, Ministry of Environment and Climate Change Strategy, Ministry of Forests, Ministry of Energy, Mines and Low Carbon Innovation, BC Oil and Gas Commission)
- **2.7** Collaborate with First Nations to develop and implement strategies, plans and initiatives for sustainable water management, and to identify policy or legislative reforms supporting Indigenous water stewardship, including shared decision-making. Co-develop the Watershed Security Strategy with First Nations and initiate implementation of the Strategy at a local watershed scale. (Ministry of Land, Water and Resource Stewardship)
- **2.8** Collaborate with Indigenous partners on issues related to conservation and biodiversity in B.C., including the protection of species at risk. (Ministry of Land, Water and Resource Stewardship)
- **2.9** Develop new strategies to protect and revitalize wild salmon populations in B.C. with First Nations and the federal government, including the development and implementation of a cohesive B.C. Wild Pacific Salmon Strategy. (Ministry of Land, Water and Resource Stewardship)

**Date Prepared/Revised:** April 8, 2022

**Ministry Executive Sponsor:**

Name: Lori Halls

Phone: 250-217-5246

**Alternate Contact for Issue:**

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Reconciliation and Natural Resource Sector Policy

**Recommend Response:**

- The Reconciliation and Natural Resource Sector Policy Division in the Ministry of Land, Water and Resource Stewardship represents a net new increase in capacity of twenty-two (22) FTEs.
- One of the most important responsibilities of government is the management of our natural resources. This new capacity in the division will allow us to develop with First Nations a co-management regime for those natural resources. This foundation of co-management will include shared decision-making with Indigenous governments.
- In past integrated land and resource management efforts the focus was often on improving business/systems processes. As the context in which we work today has changed, government needs to evolve and we recognize there is a need for greater integration in natural resource sector governance, strategies, legislation, and policy.
- This Division is responsible for developing a “roadmap” for the natural resource sector to support the effective operationalization and implementation of the *Declaration on the Rights of Indigenous Peoples Act*, including working closely with the Declaration Act Secretariat to ensure alignment of natural resource sector laws and development of sector-specific tools and supports to advance reconciliation more effectively (e.g., policy, legislation, processes, etc.).

**Key Facts:**

- LWRS will ensure that marine, land and resource management policies are grounded in reconciliation, both in terms of their approach and outcomes. To do this successfully LWRS will be responsible for designing with First Nations:
  - A co-management/shared decision making regime for the marine and land base.

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- This co-management regime will develop the necessary policy, process and tools needed to operationalize DRIPA on the ground and will include:
  - Development of effective consultation/engagement on land and marine use policies/practices and objective setting within these environments
  - Development of operational governance structures to co-manage land and marine environments in a wholistic way and in alignment with MIRR's Indigenous Governing Body policy.
  - Building out the number and scope of indigenous regional forums to effectively address resource management and cumulative effects.
  - Designing and building a sector-wide monitoring, compliance and enforcement regime with First Nations that builds on the success of Guardian Programs
  - Ensuring legislative changes required to support the co-management regime are in accordance with policy/direction set out by the Declaration Act Secretariat.
- The Ministry of Indigenous Relations and Reconciliation is responsible for the corporate reconciliation framework across government, DRIPA and the Action Plan, Treaty, fiscal framework, negotiations and strategic issues management.
- LWRS will take the corporate reconciliation framework and translate it/apply it into necessary policy and practice in the NR sector, effectively operationalizing DRIPA.

#### Legislation and Policy:

- There are approximately 129 pieces of Legislation across the natural resource sector ministries.
- Legislation and regulations are key policy tools that government uses to achieve policy outcomes.
- LWRS will be responsible for sector-wide integrated policy (eg. collaborative wildlife management policy, modernization of consultation) for work that is focussed on strategic land, waer and marine objectives and the trade-off decisions that need to be made when considering the use of natural resources.
- The division will be working across all natural resource ministries and with First Nations. It is a highly collaborative division, with an estimated budget of \$1.835M in FY 22/23.

**Date Prepared/Revised:** «add date»

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Negotiations with Blueberry River First Nations

**Recommend Response:**

- BC and Blueberry River are actively negotiating a path forward following the BC Supreme Court decision last June.
- The situation in the northeast, and the infringement of Blueberry River's treaty rights, was many years in the making.
- So, it is reasonable that addressing this situation, and developing a new path forward with the Nation, it takes some time.
- Our negotiating team is optimistic we will have further details to share about an agreement, and next steps, later this spring.

**Additional Response points (if needed):**

- BC chose not to appeal the court decision, as we believe reconciliation is best addressed through negotiations and building partnerships.
- The court ruled that further statutory decisions cannot be made in Blueberry River's claim area that unjustifiably infringe their treaty rights. We are following the court's direction and negotiating with Blueberry River.
- I will not be sharing further details about confidential negotiations with Blueberry River at this time. It could jeopardize the work we are doing with Blueberry River, and it would be inconsistent with our shared communications protocol.

**Key Facts:**

- BC and Blueberry River completed an initial agreement in October 2021. It included \$35M for restoration activities and \$30M for cultural, wildlife and capacity building activities.
- Negotiations paused through January/February with Chief and Council elections. Chief Judy Desjarlais started February 14. Negotiations resumed March 3.

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- As of April 14, more than <sup>Advic</sup> existing development applications across the natural resource sector are awaiting decision in Treaty 8 territory. Many of these are within Blueberry River's Claim Area <sup>Advice/</sup> of oil and gas applications, <sup>Advice/</sup> of other applications). The court decision binds statutory decision makers so that they cannot continue to make decisions that unjustifiably infringe Blueberry River's treaty rights.
- Intergovernmental Communications

**Date Prepared/Revised: April 14, 2022**

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Negotiations with Treaty 8 Nations following *Yahey* decision

***Recommend Response:***

- BC is actively negotiating a path forward with Treaty 8 First Nations, following the BC Supreme Court decision last June.
- The court determined the Province has infringed Blueberry River First Nations' treaty rights within their Claim Area.
- We do not seek to repeat this experience with other Treaty 8 First Nations; thus we are working with them on how land and resource management decisions can change going forward, and how to evolve the decision-making framework in the territory in response to cumulative effects.
- Our negotiating team is optimistic we will have further details to share about an agreement, and next steps, later this spring.

***Additional Response points (if needed):***

- This ministry is charged with advancing a co-management approach with First Nations, and this is exactly what we are doing right now in northeast B.C.
- The Province chose to pause application decision activities across most of its business lines last year, in response to the BC Supreme Court decision.
- Some application decisions have moved forward, such as activities related to health and safety, environment, and restoration activities.
- The Province expects application decisions to restart in a greater way through this spring, concurrent with our negotiations.
- The court decision does require us to work on a path forward with Blueberry River, and it is the Province's decision, to work collectively with all BC Treaty 8 First Nations on a regional response to cumulative effects.

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#### **Key Facts:**

- Initial funding has been provided to the seven BC Treaty 8 Nations (excluding Blueberry River) at the end of March 2022 ahead of an agreement, as follows (not publicly announced yet):
  - Intergovernmental Communications

Intergovernmental Communications

**Date Prepared/Revised: April 14, 2022**

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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#### **Issue: Inclusion and anti-racism in Northeast BC**

#### **Recommend Response:**

- This ministry has a primary mandate to advance measures and processes to manage the land and resources between the Province and rights and title holders – the First Nations of this province.

#### **Battling Racism**

- Change can be challenging, and uncomfortable. I recognize we all, and especially residents in the Northeast, are facing change.
- We must insist on dialogue that is respectful for everyone. We must focus on our shared interests and what brings us together. We share a care for the land and its resources, sustainable resource development activities, and to uphold our promise as treaty people – we are all treaty people.
- All of us have a role and a responsibility to learn about our shared history and find ways to move toward a more just society. One that acknowledges the truth in our past and commits to a better future for ourselves and future generations.
- Reconciliation means bringing communities together, not dividing them, and finding pathways to move forward collectively.

#### ***Additional Response points (if needed):***

- The racism being directed at Indigenous peoples resulting from provincial decisions is intolerable.
- The BC Supreme Court has determined provincial decisions have led to an unjustified infringement of Blueberry River First Nations' treaty rights. These are constitutionally protected rights.
- It is the Province that must, and is, changing to address this decision and develop a path forward with Treaty 8 First Nations and other Nations, on the truths that we need to discuss, and the reconciliation action that is warranted.

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- Any frustration should be directed at the Province, and not Indigenous peoples.
- Treaty 8 was signed over 100 years ago and provides rights to the first peoples of this land. In signing that treaty, we all became, and now all are, treaty people. I hope we can embrace this.

#### **Key Facts:**

- Chief Judy Desjarlais of Blueberry River First Nations received a death threat during the provincially led public consultation process on hunting regulatory changes. Ministers Rankin and Conroy responded publicly to the threat, as did the Chief herself.
- In response to the threat, a BC and Blueberry River communications team was formed to co-develop a public education based on a successful model deployed in Nova Scotia related to the lobster fishery. A \$60K contract has been issued to accomplish this work, and materials are expected in late spring or summer.
- “Honoring the treaty” has been a theme at the negotiation tables with Blueberry River First Nations, and other Treaty 8 First Nations. Intergovernmental Intergovernmental Communications
- In March 2022, BC provided \$7500 to two of the Anti-Racism Resilience Network “spokes” (the local delivery agents) to advance their program work. The spokes in Northeast BC are Saulteau First Nations and the Dawson Creek Literary Society.
- In March 2022, BC provided \$20K to the City of Fort St. John to expand a ‘Diversity and Inclusion’ micro-granting program they started, funding ≤\$2K per project to organizations with ideas to advance diversity, inclusion and Indigenous reconciliation.
- As part of the 2020 Caribou Partnership Agreement, BC agreed to work with Saulteau and West Moberly First Nations on reviewing what we could learn from racism projected at Indigenous peoples in Treaty 8 territory following caribou recovery decisions made in the region that impacted forestry, mining, and recreational access. This work is being led by LWRS (David Muter) in concert with the Anti-Racism Resilience Network team with the Ministry of Attorney General.

**Date Prepared/Revised:** May 9, 2022

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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#### **Issue: Restoration in northeast BC**

#### **Recommend Response:**

- “Healing the land” through restoration initiatives is a shared interest to BC and Treaty 8 First Nations, to reduce the cumulative impacts of industrial development in Treaty 8 territory.
- Restoration is a critical element to ongoing negotiations with Treaty 8 Nations.
- \$35M was provided to Blueberry River First Nations in October 2021 for restoration efforts in their territory.
- Activities that restore ecosystems and habitat can reduce the ongoing effect of legacy disturbances and can be used to improve the condition of specific values, such as wildlife populations, in specific areas in the future.

#### **Additional Response points (if needed):**

- Restoration is a topic in our discussions with Blueberry River and with other Treaty 8 Nations. Given the state of negotiations, I can’t share further details right now.
- In conversation with provincial negotiators, I am optimistic that we will have more to say on this topic and other related topics soon.

#### **Key Facts:**

- Restoration and enhancement activities (e.g., reforestation, river, stream, and wetland restoration; habitat, ecosystem connectivity; native seed and nursery projects; and training for restoration activities) are carried out across the province and are funded and carried out by multiple ministries and organizations.
- Current coordinated investment in this region includes efforts led by the Provincial Caribou Recovery program, the Habitat Conservation Trust Fund, the BC Oil and Gas Research and Innovation Society and others.
- Analysis shows that the existing funds are not well aligned or sufficient to address the restoration activities identified by Treaty 8 Nations, and coordination could be improved amongst all those involved.
- Some initial restoration planning and implementation activities, and learnings have occurred via the Provincial Caribou Recovery Program, and working with First Nations.

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- Going forward, joint effort will be needed between BC, Blueberry River, other Treaty 8 Nations, the Federal government and industry to fund, plan, implement, and monitor restoration activities that will demonstrate to all parties, measurable success in healing the land.
- Intergovernmental Communications
- 
- BC intends to seek funding from Canada, industry and non-government organizations to contribute to the envisioned restoration fund.
- Intergovernmental Communications
- 
- Canada has provided notional allocations of restoration funding to BC as part of its climate change programming, including the 2 billion tree planting initiative and Nature Smart Climate Solutions initiative. Further negotiations with Canada are required to confirm the timing and magnitude of their commitment.
- As it takes several years for restoration programs to get up and running (growing plants, etc.) there is a compelling reason to resolve the restoration fund model soon.
- Restoration work is a tangible way to shift decision-making to address cumulative effects and integrate treaty rights in a consent-based framework - restoration is an effective way to advance co-management on the land base.

**Date Prepared/Revised: May 9, 2022**

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Proposed hunting regulation changes for moose and caribou in the Peace Region

**Recommend Response:**

- The Province is working on a suite of management actions in response to the Yahey vs. BC decision. These include changes to wildlife management and hunting regulations.
- Changes to hunting regulations are expected to be announced shortly.
- They are aimed at addressing the ability of Treaty 8 First Nations to continue their way of life and begin to address the impacts of industrial development on these treaty rights.
- The regulation changes are an interim measure and will be reviewed after one year.
- Over the next two years, we will engage more deeply with Treaty 8 communities, industry, stakeholders, local governments, and the public will support this work to ensure a collaborative path going forward.
- The Province has a duty to live up to its treaty obligations. Honouring this duty can also help create a pathway to improving wildlife management and establish certainty for the benefit of all British Columbians.

**Additional Response points (if needed):**

- I appreciate hunting is a way of life for many British Columbians and is important for food security.
- The racism being directed at Indigenous peoples resulting from provincial decisions is intolerable.
- Science based decisions need to incorporate indigenous knowledge which includes information on how hunting and hunting pressure impacts the Treaty 8 Nations way of life.
- We hope that substantive new investments in monitoring, research and inventories will build a shared understanding of the status of these wildlife populations.

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#### **Key Facts:**

- The proposal is an immediate measure addressing the infringement of treaty rights by reducing hunting pressure by 50% and investing in inclusive wildlife co-management.
  - Proposed hunting regulation changes include:
    - closing all licensed caribou hunting in the Peace Region as precautionary measure
    - reducing moose hunting pressure by 50% across the region and by closing moose hunting in two culturally important areas to First Nations: the Peace Moberly Tract and Moose Lake
    - replacing previous moose general open seasons in the region with Limited Entry Hunting, and a local resident focused open season; and,
    - requiring licensed hunters to report each moose harvested in the region.
  - The original proposal developed in negotiations with Nations was posted for public engagement from March 9-23, 2022. 3,310 comments received, and 99% were opposed to that set of proposed changes.
  - Intergovernmental Communications
- 
- The recommended option priorities reduced hunting pressure on moose and caribou in support of Treaty 8 rights, with considerations for the interests and investments of locals and guide outfitters to whom hunting is part of their way of life.
  - Minister Conroy is responsible for this statutory decision, and MOF implements hunting regulations. The decision is expected to be made public the week of May 16.
  - LWRS is responsible for advancing the co-management approach on the wildlife and habitat with First Nations and negotiations of the approach and will work with other ministries like FOR to implement the broader array of wildlife related areas of agreement.
  - Management recommendations arising out of the Regional Strategic Environmental Assessment (RSEA) initiative developed over the last several years with seven of the eight Treaty 8 Nations align with this direction, to reduce licenced hunter pressure on moose to improve opportunities to exercise treaty rights.

**Date Prepared/Revised: April 27, 2022**

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### Ministry of Land, Water and Resource Stewardship

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**Issue:** Land and Natural Resource Operations - Secretariat  
Organizational Review

**Recommend Response:**

- The process that led to the restructuring was initiated as a mandate letter item for then Minister of State Nathan Cullen, to bring forward a plan to create a new Ministry for Lands and Natural Resource Operations.
- In October 2021, the Lands and Natural Resource Operations Secretariat was established to develop restructuring options to better achieve government's three goals of economic activity, environmental sustainability, and reconciliation with Indigenous Peoples.
- A structured, principled, and transparent approach based on the Queen's University's methodology for Organizational Design was applied by the Lands and Natural Resource Operations Secretariat to undertake an organizational effectiveness review of the natural resource sector.
- The mandate concluded with the announcement of the new ministry as part of Budget 2022 and my appointment on February 25, 2022 as the Minister of Land, Water and Resource Stewardship and Minister responsible for Fisheries.
- On April 1, 2022 the Ministry of Land, Water and Resource Stewardship was officially established with all of its duties and accountabilities.

**Key Facts:**

- Over the course of the 16 months, 15 FTEs made up the the Land and Natural Resource Operations Secretariat (the Secretariat), including the Deputy Minister, from across the BC Public Service.
- The budget for the Secretariat was \$2.3 M, which was approved from General Programs Contingencies in FY 21/22. Additional access of up to \$1.500M from General Programs Contingencies in 2021/22 was also provided for the hiring of 50 priority FTEs by fiscal 2021/2022 year-end.

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- The LNRO Secretariat undertook the work in 3 phases: Phase I – Assessment (to understand the program we are solving for), Phase II – Design (fully explore alternatives and impacts of possible change, Phase III – Implementation (Plan for implementation with business areas to minimize impacts of change and ensure full value of the transformation is achieved).
- As part of the Assessment Phase an extensive engagement was undertaken that included First Nations, industry stakeholders, NGOs, local governments and crown agencies, professional associations, and staff. As part of that Assessment Phase participants were not asked how we should organize ourselves, but rather, what was working well, what was not working well and what ideas for improvements did they have.
- Key Findings from the Assessment Phase informed the Design Phase.
- Relying on the knowledge, skills and abilities of the professional public service, only one contract was let to facilitate an engagement with First Nations in the Assessment Phase of the project. The contract lasted 3 months and cost \$ \$62,100.
- All Deputy Ministers in the natural resource sector (FOR, ENV, IRR, AFF, EMLI) participated in bi-weekly sessions to iterate and validate design recommendations put forward to the Premier.
- In addition to the structural changes recommended, Natural Resource Sector Deputy Ministers recognized and are committed to addressing other organizational effectiveness elements including: governance/strategy/policy, people and resourcing and business process and technology improvements.

**Date Prepared/Revised: April 8, 2022**

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Overview of the Natural Resource Sector Restructuring

**Recommend Response:**

- Led by the Lands and Natural Resource Operations Secretariat the restructuring of the Natural Resource Sector ministries will better support government's three goals of reconciliation with indigenous peoples, environmental sustainability and economic prosperity.
- Understanding why a new Ministry was created is important:
  - First and foremost, the creation of the Ministry of Land, Water and Resource Stewardship is a natural evolution of land and resource management, that builds on the strengths and progress already made.
  - However, in the absence of effective land use policy, complex social trade-off decisions are being made on a permit-by-permit basis rather than at the landscape level by appropriate decision makers.
  - With rising demands on the land base, increased resource and recreational activity and impacts of climate change, there is a need to better understand and address cumulative impacts and strengthen our integration across the sector to mitigate, plan, respond and adapt.
  - The Natural Resource Sector was not set up to implement the Declaration Act and advance reconciliation in a meaningful way in which we will seek to build a new vision for co-management on the land base that embraces shared decision making.
  - While past integrated land and resource management efforts have focussed almost entirely on business processes/technology systems such as the Natural Resource Permitting Project, it is recognized that greater integration is needed in the sector's governance, our strategies, legislation and policy.

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Further progress on permitting is impeded by a lack of focus in these areas.

- Rebalancing of portfolios in the natural resource sector better supports focussed efforts necessary to transform the forestry sector, prioritize land use policy and planning and bring alignment to key strategic water responsibilities, ensuring a more holistic approach to resource management.
- Lastly, without increased focus in monitoring, compliance and enforcement, including cumulative effects, there is continued risk to the sector's effective management of our natural resources.

The Ministry of Land, Water and Resource Stewardship is responsible for:

- a) Developing a path forward with First Nations to build a co-managed land and resource management system that will ensure our natural resources are managed effectively now and in the future.
- b) Strengthening government's commitment to modernized land use policy and planning and bring more certainty and predictability to investors, communities and First Nations. As we undertaken this modernized land use planning with First Nations, we will need to apply a climate lens and ensure land use plans reflect regional economic strategies
- c) Provincial leadership on water policy and strategies including the coordination of government's "source to tap" strategy to protect drinking water, coastal marine strategy, watershed security strategy and salmon strategy.

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- d) As part of that water portfolio, the Ministry will be responsible for Fisheries and the primary relationship with the Department of Fisheries and Oceans.
- e) It will have a strong focus on Biodiversity and ecosystem health, including provincial species at risk policy and program management.
- f) Developing a provincial cumulative effects system tailored to regional circumstances.
- g) Modernizing the natural resource sector statutory framework and permitting processes to ensure land-based permitting processes are transparent, timely and fair.
- h) In addition, the Ministry is responsible for core enabling services such as information management and technology and corporate support services (finance, human resources and facilities) for the entire sector.

#### **Key Facts:**

- The new ministry added 90 new positions to the public service, with an additional 9 FTEs for the minister's office and Government Communications and Public Engagement.
- The ministry budget \$92 million annually is the result of transfers from existing ministries of \$82 million and Budget 2022 net new funding of \$10 million to increase capacity to achieve the new ministry's mandate. In subsequent years that increase is \$17 million for a total of \$44 million in increased capacity over 3 years.
- The restructuring means the Ministry of Forests is now aligned to a renewed focus on modernizing forest policy and forest sector renewal, that recognizes the inter-connected nature of range lands to forests and elevates range work to a new Forest and Range Sector Policy portfolio.
- It also includes an enhanced focus for year-long BC Wildfire Service, flood and dike management, and the River Forecast Centre and maintains responsibility for integrated decision making related to Crown Land, water, fish and wildlife, archaeology permits and authorizations and natural resource compliance and enforcement
- To make that renewed focus happen, Rural and Regional Development moved to JERI, Mountain Resorts and Heritage moved to TACS, and recreation sites and

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trails moved to ENV to align management of recreational land, and showcase operational recreational excellence throughout the province.

**Date Prepared/Revised:** «add date»

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## 2022/23 Estimates Debate

### Ministry of Land, Water and Resource Stewardship

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**Issue:** Permitting and Authorizations Overview

**Recommend Response:**

- Permitting and authorizing activities and statutory decision making on the land base are primary functions of effective land and resource management.
- Efficient and effective delivery of permitting and authorizations services are key to achieving government's goals of reconciliation with Indigenous peoples, economic activity, and environmental sustainability
- The Ministry of Forests, Ministry of Environment and Climate Change Strategy and Ministry of Energy Mines and Low Carbon Innovation are responsible for most of the operational delivery aspects of permitting and authorizations and statutory decision making.
- Approaches to fixing the system of activities needed to manage an increasingly large workload and complex operating environment are needed.
- The Ministry of Land, Water and Resource Stewardship, will be responsible for developing solutions to remove or reduce the current barriers that are hindering this function.
- It is also responsible for considering new options for implementing an efficient and effective delivery system for permitting and authorizations services across the natural resource sector.

**Additional Response points (if needed):**

- Cross-sector solutions will provide sustained and deliberate attention to the biggest problems facing the natural resource sector.

**Key Facts:**

- Ministry of Forests (FOR) delivers 70% (approximately 15,000 permits annually) of permits/authorizations in the sector, primarily through Front Counter BC's (FCBC's) "one window" service model.

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- The remaining 30% of permits/authorizations includes major mines permits/authorizations (Energy, Mines and Low Carbon Innovation), waste discharge permits/authorizations (Environment and Climate Change Strategy), highway access permits/authorizations (Ministry of Transportation and Infrastructure), and permits/authorizations relating to oil and gas and geothermal activity (Oil and Gas Commission).
- Internal metrics indicate that for a majority of these permits/authorizations, clients are satisfied with the service they are receiving (76% approval rating).
- The Lands and Natural Resource Operations Secretariat restructuring project uncovered several challenges, including a lack of trust from First Nations in the Province's regulatory regime, bottlenecks and delays in decision making, and gaps in statutory decision maker (SDM) capacity and capability. These challenges are frustrating both First Nations and clients, and are resulting in economic impacts across the province.
- Other barriers include:
  - Lack of strategic direction and tools to operationalize the Province's commitment to reconciliation
  - Lack of a strategic framework for land use and a landscape-based understanding of permitted/authorized activities on the land base
  - Legislative barriers
  - Lack of SDM expertise, supports and capacity
  - Inconsistent service delivery and lack of sufficient information sharing
- The FCBC Provincial Team that was in FOR has moved to the Ministry of Land, Water and Resource Stewardship to provide dedicated subject matter expertise on system improvements based on their long history and experience.
- A new dedicated Executive Lead is approved to lead this project along with new shared project management and project assistants.
- The work will be governed by the Natural Resource Sector Deputy Ministers, and will involve other subject matter experts from all impacted ministries.

**Date Prepared/Revised:** «add date»

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