

# 2019/20 Coast Area Integrated Investment Plan

## Introduction and Purpose

The Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) has undertaken a Provincial initiative to better coordinate investments across the land base. Investment is focused on carbon sequestration and reducing greenhouse gases, improving timber supply, rehabilitating forests, enhancing habitat (and populations), managing fuel, and providing community benefits. Each region in the Province has an Integrated Investment Specialist who helps articulate the Region's land management priorities and thereby facilitate better cost/benefits ratios, ideally by leveraging funding and/or addressing multiple purposes in any given project.

The purpose of this plan is to inform funders, stakeholders (e.g. industry, conservation groups, and local governments), First Nations, tenure holders including BC Timber Sales and other proponents about these priorities and affect integrated investment within the Coast Area. The plan specifies the categories for potential investment; the priorities provincially and regionally; potential activities likely to be supported by the land manager (see definitions); and finally, the potential funders that may support those activities.

The plan is meant to provide a high-level overview of information to better inform those wishing to propose projects to funders and to help funders align approvals with the land manager's priorities. Each funder has a different process for receiving applications and more information can be found in Appendix D. A best practice for project proponents is to seek support from the land manager before submitting a proposal to a funder. Proponents should contact the Integrated Investment Specialist and the relevant FLNRORD District(s) (see Table 2 below and Appendix A).

## Integrated Investment Specialists (IIS)

The Coast Area is comprised of two Regions, each with an Integrated Investment Specialist:

South Coast (SC) Region: Katherine Lawrence, 772-222-5932 [Katherine.Lawrence@gov.bc.ca](mailto:Katherine.Lawrence@gov.bc.ca)

West Coast (WC) Region: Aaron Smeeth, 778-647-2002 [Aaron.Smeeth@gov.bc.ca](mailto:Aaron.Smeeth@gov.bc.ca)

For the specific process to follow within a different area/ region, please reach out to the local Integrated Investment Specialist (Appendix B).

## In this Plan:

<b>Introduction and Purpose</b>	1
<b>Categories for Investment</b>	1
<b>Part 1: Priorities for Investment</b>	2
<b>Part 2: Opportunities for Investment</b>	3
Table 3: Forest Investment Priorities	3
Table 4: F&W and Habitat Priorities	8
Table 5: Land Conservation Priorities	17
Table 6: Selected Research Priorities	19
<b>Appendices</b>	
A: Region/District Map	22
B: Integrated Investment Specialists	23
C: Category Definitions	23
D: Funder Descriptions	24
E: Definitions	31

## Categories for Investment

The scope of resource management activities considered in regional investment plans; align with one or more of the following categories. See Appendix C for category definitions.

Carbon	Community	Fish, Wildlife and Habitat
Recovery of Species	Fibre Recovery	Forest Rehabilitation & Inventory
Wildfire Protection	Water	Miscellaneous

## Part 1: Investment Priorities

### Provincial Priorities for Investment:

- Restore pest and wildfire impacted areas
- Improve resiliency and prevent future impact from Wildfire
- Improve wildlife habitat and ecosystems
- Improve mid & long-term timber supply
- Increase carbon sequestration

### Coast Area Priorities for Investment:

#### **Table 3: Forest Investment Priorities**

1. Emissions Avoidance/ Fibre Utilization
2. Fish Stream Restoration
3. Incremental Silviculture: Fertilization
4. Incremental Silviculture: Other
5. Low value forest rehabilitation
6. Maintaining Resilient, Healthy Forests
7. Range Improvements
8. Reforestation
9. Resilience to Wildfire: Communities
10. Resilience to Wildfire: Fuel Mgmt
11. Road Rehabilitation
12. Rural Development

#### **Table 4: Fish, Wildlife and Habitat Priorities**

#### **Table 5: Conservation Land Management Priorities**

#### **Table 6: Selected Research Priorities**

### Focus on Forest Carbon

The Forest Carbon Initiative (FCI) is a key part of the Province of B.C.'s commitment to take action on climate change. FCI is about forest activities that will reduce greenhouse gas (GHG) emissions or sequester carbon in the provincial forest. FCI supports forest carbon management activities (projects) that grow and store forest carbon to deliver GHG benefits in the medium term (2030), longer term (2050) and beyond.

In the Coast Area, activities that align with the Forest Carbon Initiative funding include:

- Emissions Avoidance/ Fibre Utilization
- Incremental Silviculture: Fertilization
- Reforestation
- Low value forest rehabilitation

If you have a proposal that may reduce emissions or sequester carbon, please contact the Integrated Investment Specialists (IIS) to discuss the project further.

# 2019/20 Coast Area Integrated Investment Plan

## Part 2: Specific Opportunities for Investment

**Table 1: Funding Source Key**

For more information on the Funding Sources, see Appendix D. Note that funders may open specific calls for proposals that have special themes and requirements, please check with the funders for alignment between land management purpose/activity and funder mandate.

Acronym	Funding Source
CRI	<b>Community Resiliency Investment Program</b> (previously <i>Strategic Wildfire Prevention Initiative [SWPI]</i> )
FWCP	<b>Fish &amp; Wildlife Compensation Program</b>
FESBC	<b>Forest Enhancement Society of BC</b>
FCI/LCEL F	<b>Forest Carbon Initiative / Low Carbon Economy Leadership Fund</b>
FFSBC	<b>Freshwater Fisheries Society of BC</b>
HCTF	<b>Habitat Conservation Trust Foundation</b>
LBIS	<b>Land Base Investment Strategy</b>
RDF	<b>Rural Dividend Fund</b>
<b>WRI/ WRR</b>	<b>Wildfire Resiliency Initiative/ Wildfire Risk Reduction Fund</b>

**Table 2: Coast Area Key**

The Coast Area includes: South Coast and West Coast Regions. Investment Opportunities are prioritized within specific areas. Project proponents should refer to the map in Appendix A when submitting their proposals for funding.

Region	Natural Resource District	
<b>South Coast (SC)</b>	Chilliwack	Project proponents must reference the relevant specific management unit(s) (e.g.; Timber Supply Area (TSA), Timber Forest Licence (TFL), Woodlot (WL), Community Forest Licence (CFL), or First Nation Woodland Licence (FNWL)). Other relevant units should be referenced as appropriate to the project (e.g. watershed or wildlife unit).
	Sea-to-Sky	
	Sunshine Coast	
<b>West Coast (WC)</b>	South Island	
	Campbell River	
	North Island - Central Coast	
	Haida Gwaii	

**Table 3: Forest Investment Priorities**

Purpose & Strategy	Selection Criteria	Potential Treatments/Activities	Geographic Priority Area	Potential Funding Sources	Notes
<b>1. Emissions Avoidance/ Fibre Utilization</b> <ul style="list-style-type: none"> <li>Increase forest tenure fibre utilization rate while not negatively impacting the Softwood Lumber Agreement</li> <li>Reduce carbon emissions from waste wood through</li> </ul>	<ul style="list-style-type: none"> <li>Seek out economic viable options first                             <ul style="list-style-type: none"> <li>Harvest sites close to processing sites and potential markets.</li> <li>Target accessible sites without infrastructure needs.</li> <li>Sites with high wood waste levels</li> </ul> </li> <li>High potential for quantifiable emissions reductions</li> </ul>	<ul style="list-style-type: none"> <li>Increase utilization of wood concurrent with primary and/or secondary harvesting operations                             <ul style="list-style-type: none"> <li>Pilling/sorting for biomass extraction</li> </ul> </li> <li>Load and haul roadside wood waste</li> </ul>	<ul style="list-style-type: none"> <li>Coast Area wide</li> <li>Specific focus areas where known high volumes of wood waste:                             <ul style="list-style-type: none"> <li>North Island/Central Coast</li> <li>South Island (CPFP)</li> <li>Sunshine Coast</li> </ul> </li> </ul>	FCI/LCEL FESBC FFT (potentially)	<ul style="list-style-type: none"> <li>A pilot has been initiated in the South Island District to establish a fibre recovery zone and promote market development and linkages between primary and secondary harvesters.</li> <li>Proponents should contact the IIS to discuss their ideas about initiating an operational pilot or project that would in turn inform future fibre utilization.</li> </ul>

## 2019/20 Coast Area Integrated Investment Plan

Purpose & Strategy	Selection Criteria	Potential Treatments/Activities	Geographic Priority Area	Potential Funding Sources	Notes
<p>burning and biological decay</p> <ul style="list-style-type: none"> <li>• Increase employment and access to residual fibre</li> <li>• Improve forest resource utilization and optics</li> <li>• Decrease health impacts from smoke</li> </ul>	<ul style="list-style-type: none"> <li>• Developed partnerships with stakeholders, established markets and secondary fibre users</li> </ul>	<ul style="list-style-type: none"> <li>• Develop new processes and markets for utilizing marginal logs/wood</li> </ul>			<ul style="list-style-type: none"> <li>• Consideration may be given to identified sites within high/medium smoke sensitivity zones if applicable.</li> <li>• Coast Pulp Fibre Project (CPFP)</li> </ul>
<p><b>2. Fish Stream Restoration</b></p> <ul style="list-style-type: none"> <li>• Improve fish passage</li> <li>• Address impacts from historic logging</li> <li>• Improve forest structure within riparian management area</li> <li>• Improve hydrologic function to promote fish habitat</li> </ul>	<ul style="list-style-type: none"> <li>• Fish-bearing habitat, and high likelihood of fish passage</li> <li>• Typically larger streams (S1, S2 or S3)</li> <li>• Previously harvested riparian areas</li> </ul>	<ul style="list-style-type: none"> <li>• Riparian management near small streams                             <ul style="list-style-type: none"> <li>○ Re-establish natural drainage patterns</li> <li>○ Restore channel-structure</li> <li>○ Restore flora (&amp; fauna) diversity</li> </ul> </li> <li>• Road deactivation / on-going maintenance</li> <li>• Reduce sediment supply</li> <li>• Riparian Area Regulation effectiveness monitoring</li> <li>• Develop riparian restoration plan:                             <ul style="list-style-type: none"> <li>○ Prioritize areas, assign silviculture treatments, implement and monitor</li> </ul> </li> </ul>	<p>Coast Area and specific focus areas in:</p> <ul style="list-style-type: none"> <li>• Community &amp; Fisheries Sensitive watersheds</li> <li>• Sensitive Streams (WSA)</li> <li>• Areas where indicator condition does not meet Cumulative Effects benchmarks.</li> <li>• Haida Gwaii – /+ high value fish streams</li> </ul>	<p>HCTF FFSBC FWCP LBIS</p>	<ul style="list-style-type: none"> <li>• Cumulative Effects Reports (and mapping), where available, may inform priorities.</li> </ul>
<p><b>3. Incremental Silviculture: Fertilization</b></p> <ul style="list-style-type: none"> <li>• Increase fibre growth rate in young forests</li> <li>• Increase carbon sequestration</li> <li>• Improve existing wildlife habitat</li> <li>• Improve stand structure for new wildlife habitat areas (recruitment)</li> <li>• Accelerate old growth characteristics</li> </ul>	<ul style="list-style-type: none"> <li>• Free to grow achieved, (no existing reforestation obligation)</li> <li>• Site with reasonable access opportunities (including consideration for barge transportation)</li> <li>• Sites with minimal forest health hazard</li> <li>• Sites with moderate to high likelihood of responding to treatments</li> </ul> <p>Forest Carbon Initiative Criteria:</p> <ul style="list-style-type: none"> <li>• Aiming for a 26.3 tCO<sub>2</sub>e/ha and a favourable cost/ton ratio</li> <li>• No Harvesting within 10 years of treatment</li> <li>• Species: 1<sup>st</sup> Fdc; 2<sup>nd</sup> Cw; 3<sup>rd</sup> Ss/ Sx (In the transition zone); 4<sup>th</sup> Hw</li> </ul>	<ul style="list-style-type: none"> <li>• Fertilize (aerial or hand application)</li> <li>• Operational Trials/Research to assess the effects of fertilization on WHAs</li> <li>• Operational Trials/Research to assess hemlock response and establish stand criteria for fertilization and appropriate fertilizer blend.</li> <li>• Operational Trials/Research to assess the effect of fertilization and carbon sequestration levels in mixed species stands.</li> <li>• Water sampling and monitoring.</li> </ul>	<p>Coast Area and specific focus areas in:</p> <ul style="list-style-type: none"> <li>• North Coast (e.g. Guilford Island) if access costs acceptable</li> <li>• Arrowsmith, Fraser and Sunshine Coast Integrated Stewardship Strategy (IIS)</li> <li>• Woodlots, Community Forests and First Nation Woodlot Licenses.</li> <li>• As per Management Unit Prioritization Strategy TBD</li> <li>• Recruitment Old Growth Management Areas</li> </ul>	<p>FFT FCI FESBC HCTF(potentially)</p>	<ul style="list-style-type: none"> <li>• FLNRORD intention to commission a pilot project to assess the costs of barge accessed and/or a barge run fertilization program.</li> <li>• Mapped locations for WHAs are available from Regional biologists – contact appropriate IIS and/or Region biologist to review fertilization planning.</li> <li>• Timing of treatment in WHAs for Northern Goshawk and other raptor species should restrict fertilizer application to the fall.</li> </ul>

## 2019/20 Coast Area Integrated Investment Plan

Purpose & Strategy	Selection Criteria	Potential Treatments/Activities	Geographic Priority Area	Potential Funding Sources	Notes
	<ul style="list-style-type: none"> <li>Age: 1<sup>st</sup> 15-39 (Where trees are &gt;2m above competing vegetation) 2<sup>nd</sup> 40-59; 3<sup>rd</sup> 60-80 (where these stands will not be harvested within 10 years of treatment)</li> <li>Site Index: 1<sup>st</sup> SI 24-38; 2<sup>nd</sup> Northern Vancouver Island Cw fertilization SI 17-32</li> </ul> <p>Forest For Tomorrow Criteria:</p> <ul style="list-style-type: none"> <li>Within Timber Harvesting Land Base</li> <li>2% Return on Investment</li> <li>Species: 1<sup>st</sup> Fdc; 2<sup>nd</sup> Cw; 3<sup>rd</sup> Ss/ Sx (in transition zone); 4<sup>th</sup> Hw Only on specific sites as outlined in the Stand Selection guidelines for fertilization and where Hw is the only species that can be treated to address constrained timbers supply</li> <li>Age: 1<sup>st</sup> 40-80 years; 2<sup>nd</sup> 15-39 years</li> </ul> <p>Site Index: 1<sup>st</sup> SI 24-38; 2<sup>nd</sup> Northern Vancouver Island Cw fertilization SI 17-32</p>		<ul style="list-style-type: none"> <li>Coastal Douglas Fir Land Use Order Parcels</li> <li>Recruitment UWRs in WC and in conditional harvest zones in SC UWRs</li> <li>Spotted Owl WHA recruitment habitat areas (stands not meeting SPOW habitat characteristics)</li> <li>Marbled Murrelet recruitment WHAs on East Vancouver Island with a site-by-site assessment. No opportunity South Coast.</li> <li>Northern Goshawk WHA historic sites abandoned by NOGOs and deemed no longer viable; and in the WHAs with foraging habitat management zones. zones (not in breeding area).</li> <li>Prioritise areas adjacent to breeding area WHAs</li> <li>No opportunity for fertilizing in breeding area WHAs</li> </ul>		
<p><b>4. Incremental Silviculture: Other</b></p> <ul style="list-style-type: none"> <li>Reduce rotation length</li> <li>Increase timber value (economic benefit)</li> <li>Increase carbon sequestration (where applicable)</li> </ul>	<ul style="list-style-type: none"> <li>Unconstrained areas within Timber Harvesting Land Base (THLB)</li> <li>No outstanding (reforestation) obligations</li> <li>Medium or higher site productivity</li> <li>Suitable terrain (e.g., suitable for cable or ground based harvesting)</li> <li>Road access</li> </ul>	<ul style="list-style-type: none"> <li>Increase planting density (in-fill planting?) – ensure use of high genetic gain, and consider large planting stock</li> <li>Thinning/spacing to enhance stand value and/or reduce rotation length (e.g., alder, cedar / hemlock stand)</li> </ul>	<p>Coast Area and specific focus areas in:</p> <ul style="list-style-type: none"> <li>North Island</li> <li>TSAs: Fraser, Soo, Arrowsmith, North Island</li> </ul>	<p>FFT FCI/LCELF FESBC</p>	
<p><b>5. Low value forest rehabilitation</b></p> <ul style="list-style-type: none"> <li>Rehabilitate low value forests</li> <li>Increase carbon sequestration</li> </ul>	<ul style="list-style-type: none"> <li>Unconstrained areas within THLB</li> <li>Sites with moderate to high likelihood of responding to treatments</li> <li>Unharvested sites with challenging economic opportunity (e.g. high elevation old growth Hemlock/Balsam stands, root disease (Beaver Lodge Lands), off-site</li> </ul>	<ul style="list-style-type: none"> <li>Rehabilitation logging</li> <li>Site preparation/ plant/ fertilize (if required)</li> </ul>	<p>Coast Area and specific focus areas in:</p> <ul style="list-style-type: none"> <li>Campbell River &amp; Chilliwack</li> <li>Kingcome Valley (cottonwood)</li> </ul>	<p>FFT FCI/LCELF FESBC</p>	<p>Work with IIS and potential funder. Best approach may be an operational pilot or an assessment of a project undertaken in the past to assess cost and carbon benefits achievable for new projects.</p>

## 2019/20 Coast Area Integrated Investment Plan

Purpose & Strategy	Selection Criteria	Potential Treatments/Activities	Geographic Priority Area	Potential Funding Sources	Notes
	<p>species, Kingcome Valley Cottonwood, low value/poorly stocked deciduous, lower density alder stands older than 70 years.</p> <ul style="list-style-type: none"> <li>• FCI considerations, stands with &lt; 20m<sup>2</sup> basal area and densities &lt;200 stems/ha.</li> <li>• Economies of scale and minimum polygon size considerations</li> </ul>				
<p><b>6. Maintaining Resilient Healthy Forests</b></p> <ul style="list-style-type: none"> <li>• Increase species diversity/conservation for threatened species (e.g. Western White Pine, white bark pine)</li> <li>• Climate change mitigations</li> <li>• Reduce impact to timber supply</li> <li>• Carbon sequestration (will be increased where forest health is improved)</li> <li>• Eliminate/ reduce risk from exotic species (e.g., gypsy moth,)</li> <li>• Increase stand value</li> </ul>	<ul style="list-style-type: none"> <li>• High risk biogeoclimatic units (e.g., those affected by root disease, drought, spruce weevil, Swiss Needle Cast, Yellow Cedar decline)</li> <li>• Activities incremental to silviculture obligations only eligible.</li> </ul>	<p>Forest Health Surveys (e.g., aerial overview survey, ground surveys)</p> <ul style="list-style-type: none"> <li>• Use resistant or tolerant species (e.g., cedar, western white pine, red alder) to meet free to grow obligations in areas with known root disease.</li> <li>• Establishment of bark beetle traps adjacent to recent wildfires</li> <li>• Use blister rust resistant western white pine or weevil resistant sitka spruce when planting these species.</li> <li>• Stumping to reduce root disease inoculum in high hazard areas being managed for Douglas-fir.</li> <li>• Use of browse protectors, and/or planting alternative species in areas of high elk/deer use</li> </ul>	<p>Coast Area focus on areas with:</p> <ul style="list-style-type: none"> <li>• High productivity site</li> <li>• High ecological value</li> <li>• Susceptible areas adjacent to recent wildfires (e.g., Douglas-fir bark beetle)</li> <li>• Areas with high populations of elk/ deer pressures (e.g., browse protection, alternative species)</li> <li>•</li> </ul>	<p>LBIS</p>	
<p><b>7. Range Improvements</b></p>	<ul style="list-style-type: none"> <li>• Strong rationale that provides multiple benefits and represents good value for cost</li> </ul>	<ul style="list-style-type: none"> <li>• Range improvement/elk wildlife habitat enhancement</li> <li>• Licensee obligations include maintenance of existing fencing and tree protection structures - required ASAP.</li> </ul>	<p>Sayward Grazing Licence</p>	<p>LBIS FESBC HCTF</p>	<p>District (and Region) support of plan will be required.</p>
<p><b>8. Reforestation</b></p> <ul style="list-style-type: none"> <li>• Reforest disturbed areas (e.g. wildfire) Not sufficiently restocked (NSR) with no regeneration obligation.</li> <li>• Increase carbon sequestration</li> </ul>	<ul style="list-style-type: none"> <li>• Unconstrained areas for future harvest</li> <li>• Currently not sufficiently restocked, e.g. fire damage, landslide runout zones, mine tailing, elk damage, brush sites, etc.</li> <li>• No existing reforestation obligation</li> <li>• No economic harvest or salvage opportunity</li> </ul>	<ul style="list-style-type: none"> <li>• Site preparation</li> <li>• Plant NSR lands</li> <li>• Use high genetic gain, and/or large planting stock.</li> <li>• Fertilize at time of planting</li> </ul>	<p>Wildfire affected crown lands in the Coast Area</p>	<p>FFT FCI/LCELF FESBC(potentially)</p>	<p>Currently FLNRORD undertaking a research project specific to reforestation of burned WHA and OGMAs</p>

## 2019/20 Coast Area Integrated Investment Plan

Purpose & Strategy	Selection Criteria	Potential Treatments/Activities	Geographic Priority Area	Potential Funding Sources	Notes
	<ul style="list-style-type: none"> <li>Constrained areas (long term carbon retention)</li> </ul>				
<b>9. Resilience to Wildfire: Communities</b>	<ul style="list-style-type: none"> <li>Funding available to local governments and First Nations communities.</li> <li>Private land is eligible – must have landowner cooperation</li> <li>Project selection will weigh wildfire risk, the amount and quality of planning undertaken, and the degree of partnerships forged with adjacent jurisdictions and/or First Nations.</li> <li>Administrative criteria may be established by UBCM</li> </ul>	7 FireSmart Disciplines: <ul style="list-style-type: none"> <li>Education</li> <li>Fuel &amp; vegetation management</li> <li>Legislation and planning</li> <li>Development considerations</li> <li>Interagency cooperation</li> <li>Emergency planning</li> <li>Cross-training</li> </ul>	<ul style="list-style-type: none"> <li>High wildfire risk communities</li> </ul>	CRI – UBCM CRI - FNESS	<p>The local Wildfire Prevention Officer will be a key conduit for information resources in proponent’s proposal development.</p> <p>Assessment tools include the Provincial Strategic Threat Analysis (PSTA) and the Wildland Urban Interface Wildfire Risk Mapping</p>
<b>10. Resilience to Wildfire: Fuel Management</b> <ul style="list-style-type: none"> <li>Modify stand structure to reduce wildfire risk rating.</li> <li>Mitigate wildfire risk from unburnt waste</li> <li>Mitigate and/or reduce carbon emissions</li> </ul>	<ul style="list-style-type: none"> <li>Primarily Crown land only</li> <li>Weighted towards high value asset protection (i.e. human life and safety, critical infrastructure, environmental / cultural values, other resource values).</li> <li>Needs to provide multiple benefits and/or resource values</li> <li>High wildfire threat class and risk – contact local Wildfire Protection Officer.</li> <li>No licensee obligation (i.e. abatement).</li> <li>Incremental activities if it meets multiple objectives (e.g. wildlife objectives)</li> </ul>	<ul style="list-style-type: none"> <li>Commercial thinning, partial harvest, pre-commercial thinning</li> <li>Pruning (reduction of ladder fuels)</li> <li>Fuel reduction (i.e. broadcast burning, onsite chipping)</li> <li>Reduce/mitigate burn piles</li> <li>Development / implementation of modified stocking standards (e.g., management for lower density, planting of fire resistant species)</li> </ul>	<ul style="list-style-type: none"> <li>Critical infrastructure</li> <li>Project aligns with existing Plans:               <ul style="list-style-type: none"> <li>Strategically supports approved plans/projects within Wildfire Urban Interface (WUI)</li> <li>Community Wildfire Protection Plan</li> <li>Landscape level fire management plan (e.g., Sea to sky)</li> <li>District Fire Management Plan</li> <li>Fuel Modification Areas in a Forest Stewardship Plan</li> <li>Integrated silviculture/ stewardship strategy</li> </ul> </li> </ul>	FESBC FCI/LCELF CRI(potentially) WRR	<p>The local Wildfire Prevention Officer will be a key conduit for information resources in proponent’s proposal development.</p> <p>Some selected areas of private land may be considered where necessary (e.g. southern Vancouver Island)</p> <p>Crown Land fuel management projects – transition from CRI and FESBC to WRR funding for 2019-20.</p> <p>Assessment tools include the Provincial Strategic Threat Analysis (PSTA)</p>
<b>11. Road Rehabilitation</b> <ul style="list-style-type: none"> <li>Increase productive forest land base</li> <li>Increase carbon sequestration</li> <li>Reduce impact on wildlife (access management)</li> <li>Improve wildlife habitat (ecosystem benefit)</li> </ul>	<ul style="list-style-type: none"> <li>Non-status roads, wilderness or other roads with ongoing erosion and sediment production issues</li> <li>Roads with no future use (within next rotation)</li> <li>Non status roads with no outstanding obligations or agreements in place</li> <li>Road not overtopped by adjacent stand</li> </ul>	<ul style="list-style-type: none"> <li>Harvest or knock down uneconomic vegetation</li> <li>Revegetate productive roads, landings and underutilized sites with (fast growing) tree species</li> <li>Site preparation, planting, fertilization</li> <li>Operational Pilot</li> </ul>	<ul style="list-style-type: none"> <li>Coast Area wide applicability</li> <li>Sea-to-Sky Upper Lillooet River Area (Access Management Plan)</li> </ul>	FFT FCI/LCELF FESBC/ HCTF(potentially)	<p>Note to proponents, road rehabilitation requires a primary benefit other than road rehabilitation. Contact Integrated Investment Specialist to discuss road rehabilitation prior to developing project proposal.</p> <p>FLNRORD is seeking a partner to undertake a pilot to gain figures on the additive cost</p>

## 2019/20 Coast Area Integrated Investment Plan

Purpose & Strategy	Selection Criteria	Potential Treatments/Activities	Geographic Priority Area	Potential Funding Sources	Notes
	<ul style="list-style-type: none"> <li>Addressing a cumulative impact related to increased access (e.g. roads within a WHA or UWR)</li> </ul>				of rehabilitating roads concurrent with harvesting operations.
<b>12. Rural Development</b>	<ul style="list-style-type: none"> <li>Projects that maintain or grow job opportunities</li> </ul>	<ul style="list-style-type: none"> <li>Use of residual fibre for local manufacturing or energy</li> <li>Recreation/Tourism planning and infrastructure management</li> <li>Workforce development in fibre utilization and/or forest management skills</li> <li>Projects that support First Nation economic opportunities</li> </ul>	Coast Area and specific focus areas in: <ul style="list-style-type: none"> <li>North Island,</li> <li>Campbell River</li> <li>Sunshine Coast,</li> <li>Sea-to-Sky</li> </ul>	RDF	<b>This funding program is on hold for 2019-20.</b>
<b>Fish, Wildlife and Habitat Priorities</b>	See <b>Table 4</b> for Fish, Wildlife and Habitat priorities				
<b>Conservation Land Management Priorities</b>	See <b>Table 5</b> for Conservation Land Management				
<b>Selected Research Priorities</b>	See <b>Table 6</b> for Selected Research Priorities				

**Table 4: Fish, Wildlife and Habitat Priorities**

Target Species	Strategy	Potential Treatments/Activities	Geographic Priority Area	Potential Funding Sources	Notes
<b>1. Various: Wildlife Distribution and Abundance</b>	<p>Develop study design and monitoring plan for priority wildlife populations in priority areas.</p> <p>to inform allocation decisions, co-location of habitat protection, and review of major projects</p>	<ul style="list-style-type: none"> <li>Inventory and Monitoring of wildlife populations with remote cameras</li> <li>Development of project charter to identify location of future sites and management applications</li> </ul>	Priority Management Units: <ul style="list-style-type: none"> <li>MU 2-9</li> <li>MU 2-10</li> <li>Strathcona</li> <li>Zeballos</li> <li>Maa-nulth Important Harvest Areas</li> </ul>	LBIS HCTF	Linkages to: <ul style="list-style-type: none"> <li>Allocation decisions</li> <li>Habitat management (UWRs)</li> <li>Habitat management: Forage planning (xref: Maa-Nulth ROA and other FNs)</li> <li>First Nations engagement</li> <li>Maa-nulth Reasonable Opportunity Agreement (ROA)</li> <li>Predator-prey dynamics</li> <li>Citizen science</li> </ul> <p>At large scale, similar to Alberta's biodiversity monitoring project</p>

## 2019/20 Coast Area Integrated Investment Plan

Target Species	Strategy	Potential Treatments/Activities	Geographic Priority Area	Potential Funding Sources	Notes
<b>2. Bat Species</b>	Population monitoring (distribution and abundance)  White-Nose Syndrome monitoring  Inform habitat management	<ul style="list-style-type: none"> <li>Bat surveys and roost research in old growth and 2<sup>nd</sup> growth (HG)</li> <li>Habitat restoration</li> <li>Collaborate to protect habitat on non-Crown land</li> <li>Support provincial initiatives to monitor for White-Nose Syndrome</li> </ul>	<ul style="list-style-type: none"> <li>Vancouver Island</li> <li>Haida Gwaii (Graham &amp; Moresby)</li> </ul>	HCTF LBIS PCAF	Expand on Gwaii Haanas bat monitoring
<b>3. Black Bear</b>	Monitor age class distribution to ensure proper management.  Inform black bear den management.	<ul style="list-style-type: none"> <li>Tooth Aging</li> <li>Assess current black bear den management effectiveness and den supply.</li> <li>Develop den inventory and identification program.</li> </ul>	Priority Areas: <ul style="list-style-type: none"> <li>Vancouver Island</li> <li>Haida Gwaii</li> </ul>	LBIS HCTF FESBC	Develop science-based black bear den management recommendations.  Develop black bear den ID material.
<b>4. Black-tailed Deer</b>	Inform future harvest regulation decisions.  Develop Coast Area Management Plan.  Inform habitat management.  Develop linkages between habitats and populations	<ul style="list-style-type: none"> <li>Population Monitoring (relative abundance)</li> <li>Conduct ungulate winter range effectiveness monitoring</li> <li>Promote Spring Forage Management</li> <li>2<sup>nd</sup> growth habitat restoration through silviculture</li> <li>Refine existing habitat models with emerging technology (LIDAR) and validate</li> </ul>	Priority Areas: (SC) <ul style="list-style-type: none"> <li>Sechelt Peninsula</li> <li>Texada Island</li> <li>Pemberton</li> </ul> Priority Areas (WC): <ul style="list-style-type: none"> <li>Depends on Activity</li> </ul>	LBIS HCTF FESBC	WC: UWR effectiveness monitoring and UWR Silviculture project highest habitat-related priorities, update previous UWR enhancement research to monitor stand development of previous stands Locate areas of capable 2 <sup>nd</sup> growth to restore UWR where no currently suitable present.
<b>5. Coastal Tailed Frog</b>	Identify occurrences, monitor populations and mitigate threats to improve conservation status.	<ul style="list-style-type: none"> <li>Effectiveness Monitoring of current management</li> <li>WHA establishment as needed</li> <li>eDNA surveys to identify distribution</li> </ul>	Priority Areas (SC): <ul style="list-style-type: none"> <li>Sakwi Creek</li> <li>Hunter Creek</li> <li>Upper Harrison</li> </ul> Priority Areas (WC): <ul style="list-style-type: none"> <li>DNI, DCR (GBR)</li> </ul>	FLNRO Research Funds, LBIS HCTF	
<b>6. Cougar</b>	Monitor to ensure proper management and to understand more about population size	<ul style="list-style-type: none"> <li>Genetic collection</li> <li>Mark and recapture surveys</li> </ul>	Priority Areas: Northern Vancouver Island	HCTF	
<b>7. Climate Change - Biodiversity Resiliency</b>	Develop a Climate Change Biodiversity Mitigation/Resilience Strategy	<ul style="list-style-type: none"> <li>Integrate existing tools and predictive maps for WC.</li> <li>Map near future threats (30yr) to biodiversity using climate velocity prediction tools (AdaptWest)</li> </ul>	WC: TBD by assessment	FESBC HCTF	Other climate change mitigation funding sources?

## 2019/20 Coast Area Integrated Investment Plan

Target Species	Strategy	Potential Treatments/Activities	Geographic Priority Area	Potential Funding Sources	Notes
		<ul style="list-style-type: none"> <li>• Identify Species &amp; Ecosystems (most) At Risk (SEAR)</li> <li>• Identify predicted refugia and determine conservation and connectivity objectives</li> <li>• Develop and implement mitigation strategy for focal species and ecosystems</li> </ul>			
<b>8. Environmental Flow Needs</b>	Monitor to input into water use potential restrictions and regulation changes	<ul style="list-style-type: none"> <li>• Water Flow Monitoring</li> <li>• Water Flow Planning (i.e. develop thresholds, priorities)</li> <li>• Link fish values to water usage</li> <li>• Develop protocols for increased water storage on critically chronically low-flow streams</li> </ul>	Chemainus, Koksilah and other priority Streams will be identified through this work.	HCTF LBIS	<p>Currently funded internally; results may trigger project work supported by external funds.</p> <p>Increased water storage requires external funding – consider other partners (Agriculture?)</p>
<b>9. Great Blue Heron</b>	<p>Monitor population distribution, abundance and productivity.</p> <p>Inform habitat management</p>	<ul style="list-style-type: none"> <li>• Monitor and inventory heron colonies</li> <li>• Engage and enlist local stewardship groups; develop citizen science program</li> <li>• Collaborate with local governments and land owners to protect habitat on non-Crown land</li> <li>• Explore crown land protection opportunities</li> <li>• Test and assess UAV as potential tool for nest productivity inventory</li> <li>• Identify and assess forage sites</li> </ul>	Eastern Vancouver Island and Gulf islands	LBIS HCTF	Influenced by Wildlife Act and Federal Management Plan
<b>10. Grizzly Bear</b>	<p>Monitor population occupancy and individual movements to inform review of development proposals and recreation management</p> <p>Inform Silviculture strategies to maintain GB forage.</p>	<ul style="list-style-type: none"> <li>• Population Monitoring</li> <li>• Effectiveness Monitoring of Waterpower development</li> <li>• Commercial Viewing Policy development</li> <li>• Assess effectiveness of Grizzly Bear silviculture treatments /stocking standards</li> </ul>	<p>Priority Areas (SC):</p> <ul style="list-style-type: none"> <li>• Mainland Coast</li> <li>• Upper Lillooet</li> <li>• Toba Inlet</li> <li>• Stein-Nahatlatch</li> <li>• Squamish/Elaho?</li> </ul> <p>Priority Areas (WC):</p> <ul style="list-style-type: none"> <li>• Mid-coast</li> </ul>	Mitigation Funds LBIS HCTF FESBC	WC: Links to Great Bear Rainforest Implementation

## 2019/20 Coast Area Integrated Investment Plan

Target Species	Strategy	Potential Treatments/Activities	Geographic Priority Area	Potential Funding Sources	Notes
<b>11. Hairy Woodpecker</b>	Population monitoring (distribution and abundance)  Inform habitat management	<ul style="list-style-type: none"> <li>Develop habitat model from occurrences</li> <li>Population monitoring across stand types</li> </ul>	Haida Gwaii (Graham and Moresby)	HCTF LBIS	Important primary cavity nester. Work required to assess habitat management effectiveness.
<b>12. Large Lakes</b>	Monitor to provide input into management and regulations	<ul style="list-style-type: none"> <li>Wild stock evaluations</li> <li>Spawning rivers evaluations</li> <li>Stock composition assessments</li> <li>Angler Use (Catch and Effort Evaluation)</li> <li>Invasive species management</li> </ul>	Priority Lakes: <ul style="list-style-type: none"> <li>Comox Lake</li> <li>Cowichan Lake</li> <li>Sproat Lake</li> <li>Buttle (?)</li> </ul>	FFSBC LBIS HCTF	Management Plans exist for some large lakes.
<b>13. Marbled Murrelet</b>	Provincial management approach (Actions and Timelines) identified in provincial Implementation Plan.	<ul style="list-style-type: none"> <li>Implement Land Use Objective Regulation Order to set Habitat protection objectives by Landscape Unit</li> <li>Map and legalize priority Old Growth Management Areas</li> <li>Establishment of WHAs</li> <li>Map and refine nesting habitat availability with low level aerial surveys</li> <li>Develop and implement population monitoring plan</li> </ul>	Priority Landscape Units (SC): <ul style="list-style-type: none"> <li>Powell Daniels</li> <li>Powell Lake</li> <li>Chilliwack NRD</li> </ul> Priority Areas (WC): <ul style="list-style-type: none"> <li>Depends on Activity</li> </ul>	Implementation Plan (LBIS) Funding, Industry collaboration, Federal (ECCC) partnership	Priorities identified in Implementation Plan.  Contact Provincial Implementation Coordinator and Regional Biologists.
<b>14. Marmot</b>	As outlined in the Recovery Strategy.	<ul style="list-style-type: none"> <li>Monitoring &amp; Inventory</li> <li>Health Assessments</li> <li>Rearing and Introductions</li> </ul>	Priority Populations: <ul style="list-style-type: none"> <li>Green Mountain</li> <li>Mount Washington</li> <li>Strathcona</li> </ul>	Marmot Foundation (HCTF, LBIS, industry)	Recovery Strategy
<b>15. Mature Forests</b>	Planning assessing and managing for multiple values that depend on mature and old forests (Marbled Murrelet, Northern Goshawk, Roosevelt Elk, and Seral Stage Distribution).	<ul style="list-style-type: none"> <li>Clarify objectives for each value (habitat protection)</li> <li>Determine additional protection required</li> <li>Assess co-location opportunities</li> </ul>	Priority Districts in SC Region: <ul style="list-style-type: none"> <li>Sunshine Coast</li> <li>Sea to Sky</li> <li>Chilliwack</li> </ul>	MAMU Funding	
<b>16. Moose</b>	Monitoring to inform regulations and understand dispersal/range.	<ul style="list-style-type: none"> <li>Population Monitoring</li> </ul>	Priority Areas: <ul style="list-style-type: none"> <li>Upper Lillooet</li> <li>Portions of North Island Central Coast District</li> <li>5-10, 5-11</li> </ul>	LBIS	

## 2019/20 Coast Area Integrated Investment Plan

Target Species	Strategy	Potential Treatments/Activities	Geographic Priority Area	Potential Funding Sources	Notes
<b>17. Mountain Goats</b>	<p>Minimize disturbance.</p> <p>Allocate sustainable harvest to maintain viable populations.</p> <p>Inform habitat management.</p>	<ul style="list-style-type: none"> <li>• Population Monitoring &amp; Inventories – including summer surveys</li> <li>• Habitat Effectiveness Monitoring (Collaring Studies)</li> <li>• Compliance and Monitoring</li> <li>• UWR Occupancy Assessments</li> <li>• UWR Effectiveness monitoring</li> <li>• Wildfire Impact monitoring</li> <li>• Identification and mapping of natal areas</li> </ul>	<p>Priority Areas:</p> <ul style="list-style-type: none"> <li>• Sea to Sky NRD (for recreation pressure management)</li> <li>• MU 2-11 (Mount Meager)</li> <li>• Boulder &amp; Elaho</li> <li>• Mid-Coast (DCR and NICC Districts)</li> </ul>	<p>LBIS</p> <p>HCTF</p>	
<b>18. Northern Goshawk</b>	<p>Provincial management approach (Actions and Timelines) identified in provincial Implementation Plan.</p>	<p>Population inventory and monitoring and habitat assessments to inform establishment of WHAs</p> <ul style="list-style-type: none"> <li>• Work to inform provincial decision on foraging habitat management</li> <li>• Research (telemetry, prey, and/or habitat assessments) to characterize seasonal movement, space use and foraging habitat requirements</li> </ul>	<p>Priority Areas in SC:</p> <ul style="list-style-type: none"> <li>• Sunshine Coast NRD</li> <li>• Chilliwack NRD</li> <li>• Sea to Sky NRD</li> </ul> <p>Priority Areas in WC:</p> <ul style="list-style-type: none"> <li>• Depends on Activity</li> </ul>	<p>Implementation Plan (LBIS) Funding, HCTF, FESBC</p>	<p>Priorities identified in Implementation Plan.</p> <p>Contact Provincial Implementation Coordinator and Regional Biologists.</p>
<b>19. Oregon Spotted Frog</b>	<p>Restore, maintain and where feasible expand extant Oregon Spotted Frog populations, and establish six or more additional self-sustaining populations in B.C.</p>	<ul style="list-style-type: none"> <li>• Population Monitoring (e.g. egg mass surveys)</li> <li>• Population Translocations (population augmentation)</li> <li>• Head-starting programs</li> <li>• Habitat Mapping</li> <li>• Habitat Restoration</li> <li>• Outreach &amp; Education on mitigating threats</li> <li>• eDNA inventory</li> </ul>	<p>Priority Sites:</p> <ul style="list-style-type: none"> <li>• Mountain Slough</li> <li>• Morris Valley</li> <li>• Maria Slough</li> <li>• Chilliwack and Abbotsford sites</li> </ul>		
<b>20. Peregrine Falcons</b>	<p>Complete survey and contribute to federal government efforts.</p>	<ul style="list-style-type: none"> <li>• Canadian Surveys</li> </ul>	<p>Priority Areas:</p> <ul style="list-style-type: none"> <li>• Lower Mainland</li> <li>• Vancouver Island</li> <li>• Haida Gwaii</li> </ul>	<p>HCTF</p>	<p>5-year cycle</p>
<b>21. Rare Plants and Ecosystems</b>	<p>To maintain representation of rare plants and ecosystems and the species that depend on them.</p>	<ul style="list-style-type: none"> <li>• Coarse Assessment including gap analysis for protection</li> <li>• Ground based inventory</li> <li>• Population Translocations</li> </ul>	<p>Priority Areas:</p> <ul style="list-style-type: none"> <li>• Fraser Valley</li> <li>• Chapman Landscape Unit</li> </ul>		

## 2019/20 Coast Area Integrated Investment Plan

Target Species	Strategy	Potential Treatments/Activities	Geographic Priority Area	Potential Funding Sources	Notes
		<ul style="list-style-type: none"> <li>• WHA amendments</li> </ul>	<ul style="list-style-type: none"> <li>• Coastal Douglas Fir Ecosystem</li> <li>• Denman Island</li> </ul>		
<b>22. Rocky Mountain Elk</b>	Work with local First Nations to determine whether this species will be managed for sustainable use or managed for reduction.	<ul style="list-style-type: none"> <li>• Inventory</li> <li>• Regulation change</li> </ul>	Priority Area: <ul style="list-style-type: none"> <li>• Haida Gwaii</li> </ul>	LBIS HCTF	
<b>23. Roosevelt Elk</b>	Maintain self-sustaining populations of Roosevelt elk throughout the Coast Area; Re-establish Roosevelt elk in historic but unoccupied ranges; Provide sustainable opportunities for consumptive and non-consumptive use; Mitigate public safety risk of vehicle collisions; Set objectives to maintain sufficient habitat amounts to support population objectives.  Roosevelt Elk Management Plan.  Inform habitat management.  Develop linkages between habitat and populations	<ul style="list-style-type: none"> <li>• Population Inventory to inform allocation to First Nations, B.C. Residents, and Guides</li> <li>• Population Monitoring (e.g. Recruitment assessments)</li> <li>• Mortality Studies</li> <li>• Compulsory inspections</li> <li>• Population Translocations</li> <li>• Habitat Modelling                             <ul style="list-style-type: none"> <li>○ Validate existing model;</li> <li>○ DevelopRSF model using GPS collar data</li> </ul> </li> <li>• Update management plan</li> <li>• Habitat objective-setting and determination of UWR protection gaps</li> <li>• UWR effectiveness monitoring at the stand (individual UWR) and landscape level:                             <ul style="list-style-type: none"> <li>○ Quantify habitat and population linkages</li> <li>○ 'Benchmarking' approach for landscape scale sufficiency</li> </ul> </li> </ul>	Priority Population Units (SC): <ul style="list-style-type: none"> <li>• Upper Pitt</li> <li>• Rainy-Gray</li> <li>• Vancouver Island Core Areas (for annual monitoring)</li> <li>• Vancouver Island (with model coverage)</li> </ul>	LBIS HCTF Ministry of Transportation and Infrastructure	WC: UWR effectiveness monitoring highest habitat-related priority.  Management Plan and <i>draft</i> Cumulative Effects results inform priority EPU.
<b>24. Small Lakes</b>	Monitor subset of the lakes to provide input to Freshwater Fisheries Society to inform stocking practices and to create or maintain fishing opportunities.	<ul style="list-style-type: none"> <li>• Small Lakes Management</li> <li>• Aeration</li> <li>• Fertilization</li> <li>• Monitoring of wild-stocked lakes</li> <li>• Fishing Infrastructure (i.e. boat launch)</li> <li>• Vancouver Island Lakes Questionnaire</li> </ul>	Priority Areas: <ul style="list-style-type: none"> <li>• South Coast</li> <li>• Vancouver Island</li> </ul>	FWFS HCTF LBIS	

## 2019/20 Coast Area Integrated Investment Plan

Target Species	Strategy	Potential Treatments/Activities	Geographic Priority Area	Potential Funding Sources	Notes
		<ul style="list-style-type: none"> <li>Invasive species management</li> </ul>			
<b>25. Spotted Owl</b>	As per the Spotted Owl Recovery Action Plan and the BC Spotted Owl Management Plan	<ul style="list-style-type: none"> <li>Habitat Restoration</li> <li>Captive Breeding</li> <li>Population Inventory &amp; Monitoring (new / existing territories)</li> <li>Population Relocation</li> </ul>	Priority Areas: <ul style="list-style-type: none"> <li>Chilliwack and Sea-to-Sky Districts</li> </ul>	HCTF LBIS	
<b>26. Steelhead</b>	Conserve wild stocks and their habitats; Maintain a diversity of sustainable recreational angling opportunities for steelhead in British Columbia; Maintain, protect and restore the productive capacity of the freshwater environment to produce steelhead.	<ul style="list-style-type: none"> <li>Population Monitoring</li> <li>Habitat Restoration and effectiveness monitoring</li> <li>Hatchery Programs: Stamps, Somas, Stave Lake</li> <li>Guardian Programs: Chilliwack River Steelhead, Dean River</li> <li>Regional steelhead management plan</li> <li>Anadromous hatchery program review</li> </ul>	Priority Rivers : <ul style="list-style-type: none"> <li>Coquihalla River</li> <li>Chilliwack River</li> <li>Alouette River</li> <li>Squamish River and tributaries</li> <li>Chapman Creek</li> <li>Chehalis River</li> <li>Little Campbell River</li> <li>Coquitlam River</li> <li>Capilano River</li> <li>Seymour River</li> <li>Stamp River</li> <li>Cowichan River</li> <li>Gold River</li> <li>Englishman River</li> </ul>	FFSBC HCTF LBIS	Provincial Steelhead Management Framework
<b>27. Sturgeon</b>	Reach and maintain a natural population age structure and reach biological targets throughout the species' natural distribution in the Fraser River.	<ul style="list-style-type: none"> <li>Lower Fraser River Guardian Program</li> <li>Spawning Monitoring</li> <li>Population Monitoring (acoustic telemetry implementation)</li> <li>Sturgeon juvenile indexing study</li> <li>Sturgeon catch and effort monitoring</li> <li>Thermal monitoring</li> <li>Establishment of fisheries management objectives</li> <li>Consultation, Outreach &amp; Education on use, bycatch and monitoring</li> </ul>	Priority Areas of Lower Fraser River: <ul style="list-style-type: none"> <li>10 identified sturgeon spawning areas</li> <li>Overwintering and rearing areas</li> <li>High use juvenile rearing areas</li> <li>Lower Pitt River</li> <li>Harrison River</li> </ul>		
<b>28. Watershed Planning (SC)</b>	Identification, analysis, and prioritization of south coast watershed condition.	<ul style="list-style-type: none"> <li>Establish quantitative objectives for numerous values</li> <li>Habitat Assessments</li> <li>Regional fish inventory activities</li> </ul>	<ul style="list-style-type: none"> <li>Priority watersheds will be identified through this project.</li> </ul>		

## 2019/20 Coast Area Integrated Investment Plan

Target Species	Strategy	Potential Treatments/Activities	Geographic Priority Area	Potential Funding Sources	Notes
	<ul style="list-style-type: none"> <li>Clarify Watershed-based Objectives for Aquatic Ecosystem Values in South Coast</li> <li>Assess Management of Aquatic Ecosystem Values in the South Coast</li> </ul> <p>Implement Integrated Aquatic Resource Management Strategies</p>	<ul style="list-style-type: none"> <li>Strategies to manage priority watersheds</li> <li>Field verification of fish distribution model</li> </ul>			
<b>29. Watershed Planning (WC)</b>	Mitigate impacts of resource development on high value and hydrologically sensitive fish streams	<ul style="list-style-type: none"> <li>Fisheries Sensitive Watershed Implementation:                             <ul style="list-style-type: none"> <li>Identify hydrologically sensitive streams</li> </ul> </li> <li>Review knowledge of fish values</li> </ul>	<ul style="list-style-type: none"> <li>NICC District</li> <li>And priorities TBD by assessment</li> </ul>	LBIS HCTF	<p>Links to steelhead / fisheries management</p> <p>Potential First Nations partners/funding.</p>
<b>30. Western Painted Turtle (SC)</b>	Maintain or increase the number of individuals and distribution of Painted Turtle Pacific Coast Population units, and ensure the quality and quantity of habitat remains stable or increases, while improving survivorship and recruitment within its range in B.C.	<ul style="list-style-type: none"> <li>Population Monitoring</li> <li>GIS wetland/riparian habitat assessments</li> <li>Habitat Improvements (nesting beaches and basking features)</li> <li>Removal of Invasive Species</li> <li>Head-starting or growing up hatchlings</li> <li>Conservation of habitat areas</li> <li>Monitoring and assessing habitat                             <ul style="list-style-type: none"> <li>Develop "Develop with Care" planning document</li> </ul> </li> </ul>	<p>Priority Population Units:</p> <ul style="list-style-type: none"> <li>Nicomen Slough</li> <li>Cheam Lake</li> <li>Jerry Suline</li> <li>Westcreek Wetland (?)</li> <li>Brunette River?</li> </ul>	OSF Husbandry Partners	Federal Recovery strategy
<b>31. Western Painted Turtle (WC)</b>	<p>Determine geographic distribution, abundance and population sustainability.</p> <p>Inform habitat management</p>	<ul style="list-style-type: none"> <li>Inventory Vancouver Island populations and assess viability; discover new populations and improve distribution knowledge base, confirm use of nesting sites;</li> <li>Test use of UAV as inventory tool;</li> <li>Support eDNA research and implement as field tool;</li> </ul>	<ul style="list-style-type: none"> <li>Nanaimo,</li> <li>Pt. Alberni,</li> <li>Cowichan Valley,</li> <li>Comox Valley</li> <li>CRD</li> </ul>	LBIS HCTF	

## 2019/20 Coast Area Integrated Investment Plan

Target Species	Strategy	Potential Treatments/Activities	Geographic Priority Area	Potential Funding Sources	Notes
		<ul style="list-style-type: none"> <li>Collaborate with local governments to develop and implement conservation strategies and habitat protection</li> </ul>			
<b>32. Western Screech Owl (SC)</b>	Inventory and monitoring to determine key management actions.	<ul style="list-style-type: none"> <li>Habitat Restoration</li> <li>Habitat Effectiveness Monitoring</li> <li>Priority Research Population Monitoring</li> </ul>	Priority Areas: <ul style="list-style-type: none"> <li>Lowland Riparian Areas</li> </ul>	HCTF LBIS FWCP	
<b>33. Western Screech Owl (WC)</b>	Inventory and monitoring to determine key management actions.	<ul style="list-style-type: none"> <li>Population inventory including new areas to identify priority habitats; combine with habitat assessments</li> <li>Refine understanding of current population dynamics on Vancouver Island (relative occupancy, population trends)</li> <li>Explore use of passive acoustic monitoring in inventory</li> </ul>	<ul style="list-style-type: none"> <li>North and west Vancouver Island hypermaritime forest types</li> </ul>	LBIS HCTF FWCP HSP	
<b>34. Western Toad</b>	Inform habitat management and population monitoring (distribution and abundance).	<ul style="list-style-type: none"> <li>Support Research initiative to assess genetic relationships with mainland population</li> <li>Complete Cowichan Valley project; support publications, BMP and DWC updates; compile distribution records and assess conflict hotspots</li> <li>Coordinate team response to potential dam removal at Morrell</li> </ul>	<ul style="list-style-type: none"> <li>Morrell Lake and Nanaimo</li> <li>Courtenay/Comox</li> <li>Haida Gwaii</li> </ul>	LBIS HCTF	
<b>35. Wetlands</b>	Identify and take inventory of wetlands within the South and West Coast Regions and determine which wetlands have high fish and aquatic wildlife values and may require special management/prioritization. Restore species at risk habitat.	<ul style="list-style-type: none"> <li>South Coast wetland mapping and inventory project</li> <li>Habitat Restoration</li> <li>Use Terrestrial Ecosystem Mapping (TEM) to update Sensitive Ecosystem Inventory (SEI) mapping and disturbance metrics</li> </ul>	Updated Priority Areas in development Priority Areas: <ul style="list-style-type: none"> <li>Morris (Harrison-Chehalis WHA)</li> <li>Chaplin</li> <li>Gordon's Brook</li> </ul>	FFSBC LBIS HCTF Habitat Stewardship Program (HSP)	
<b>36. Wolverine</b>	Characterize seasonal movement and habitat selection to inform	<ul style="list-style-type: none"> <li>Habitat occupancy and density assessments (camera traps)</li> </ul>	<ul style="list-style-type: none"> <li>Sea to Sky NRD (Squamish, Lillooet and South Chilcotin)</li> </ul>		

## 2019/20 Coast Area Integrated Investment Plan

Target Species	Strategy	Potential Treatments/Activities	Geographic Priority Area	Potential Funding Sources	Notes
	project review and management of recreation tenures and access	<ul style="list-style-type: none"> <li>• Seasonal movement and habitat selection (collaring study)</li> <li>• Population genetic analysis (hair snag traps)</li> </ul>	<ul style="list-style-type: none"> <li>• Chilliwack NRD</li> </ul>		
<b>37. Wolves</b>	Collect and study genetics to understand more about potential sub-species abundance and distribution	<ul style="list-style-type: none"> <li>• Genetics and other data collection</li> </ul>	Priority Areas: <ul style="list-style-type: none"> <li>• Vancouver Island</li> </ul>	HCTF LBIS	

## 2019/20 Coast Area Integrated Investment Plan

**Table 5: Land Conservation and Management Priorities**

*Funder Key: Environment and Climate Change Canada (ECCC), Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNR), Ducks Unlimited Canada (DUC), The Nature Trust of British Columbia (TNTBC), and the Habitat Conservation Trust Foundation (HCTF).*

Purpose and Strategy	Potential Treatments/Activities	Geographic Priority Area	Potential Funding Sources	Notes
<b>1. Crown Land Securement Partnership Program</b>	<ul style="list-style-type: none"> <li>• Designation of s16/17 Land Act Reserve or Wildlife Management Area</li> <li>• Engagement,</li> </ul>	<ul style="list-style-type: none"> <li>• Priority Areas for crown land securement (WC Region):                             <ul style="list-style-type: none"> <li>○ S'amunu WMA (H)</li> <li>○ South Bentinck Arm (H)</li> <li>○ Salmon River Estuary (H)</li> <li>○ Needan Harbour Haida Gwaii (H)</li> <li>○ Kumdis Slough</li> <li>○ Yakoun Estuary</li> <li>○ Boulton Lake</li> <li>○ Campbell River Estuary</li> <li>○ Courtenay River (or K'omoks) Estuary</li> <li>○ Chemainus Estuary Reserve</li> <li>○ Baynes Sound Reserve</li> <li>○ Shingle Bay/Spit Point Reserve</li> </ul> </li> </ul>	CWS of ECCC, DUC, TNTBC, NCC, HCTF, FLNR and ENV (BC Parks).	
<b>2. Conservation Land Management Program: West Coast Region</b>	<ul style="list-style-type: none"> <li>• Maintenance of properties and infrastructure</li> <li>• Vegetation management and property stewardship.</li> <li>• Inventory of waterfowl and other species using the WCCLMP properties</li> <li>• Restoration and enhancement of properties (e.g. removing historic dykes, treatments to enhance Roosevelt elk habitat, wetland enhancements, invasive species control)</li> <li>• Complete Phase 2 assessment of distributary channel feasibility study</li> <li>• Monitoring of properties (e.g. SET tables for monitoring estuary resiliency, MARS tool to assess impact of climate change)</li> <li>• Management of Species at Risk populations</li> <li>• Management of non-native species</li> <li>• Effectiveness monitoring</li> <li>• Continuing to develop relationships with Indigenous groups in the management of conservation lands</li> </ul>	<ul style="list-style-type: none"> <li>• Priority Areas for restoration &amp; enhancement:                             <ul style="list-style-type: none"> <li>○ Englishman River Estuary</li> <li>○ Salmon River Estuary</li> <li>○ Nanaimo River Estuary</li> <li>○ South Winchlesea Island/Somenos Marsh</li> <li>○ Green Mountain (Marmot)</li> <li>○ Cobble Hill (Barn Owl)</li> <li>○ Morrell Lake (Western Toad)</li> </ul> </li> </ul>	DU, TNTBC, CWS ECCC, FLNRO, HCTF	

## 2019/20 Coast Area Integrated Investment Plan

<p><b>3. Conservation Land Management Program: South Coast Region</b></p>	<ul style="list-style-type: none"> <li>• Maintenance of properties and infrastructure</li> <li>• Vegetation management and property stewardship</li> <li>• Monitoring of properties</li> <li>• Restoration and enhancement of properties (e.g., wetland/riparian, fish habitat, and upland forest restoration)</li> <li>• Management of Species at Risk populations (e.g., western painted turtle population augmentation and habitat restoration)</li> <li>• Management and mapping of non-native species (e.g., narrow-leaved cattail in the South Arm Marshes WMA, yellow-flag iris in Cheam Lake Conservation Area)</li> <li>• Ecosystem mapping and inventory of flora and fauna with emphasis on Species at Risk</li> <li>• Continue marsh recession investigation in the Fraser River estuary as part of the Sturgeon Bank Marsh Recession Project</li> <li>• Research to understand ecological effects of overabundant species (e.g., snow geese, Canada geese)</li> <li>• Prioritize and update management plans for the 11 south coast WMAs and other conservation areas</li> <li>• Continue to develop relationships with Indigenous groups in the management of conservation lands</li> <li>• Continue to develop relationships with local stewardship groups in the management of conservation lands</li> <li>• Continue collaborating with local cities, First Nations and other stakeholders to increase the resilience of Fraser River estuary tidal ecosystems to sea-level rise</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Priority Areas for restoration &amp; enhancement:             <ul style="list-style-type: none"> <li>○ Bert Brink WMA (wetland/riparian)</li> <li>○ Lhá:lt/Harrison-Chehalis WMA (fish habitat, Oregon spotted frog)</li> <li>○ Cheam Lake Conservation Area (western painted turtle)</li> <li>○ Camp Slough Conservation Area (upland forest)</li> <li>○ Silverhope Creek Conservation Area (upland forest)</li> <li>○ Forslund-Watson Conservation Area (upland forest/wetlands)</li> </ul> </li> <li>• Priority Areas for increasing ecological resilience to sea-level rise:             <ul style="list-style-type: none"> <li>○ Boundary Bay WMA</li> <li>○ Sturgeon Bank WMA</li> <li>○ Roberts Bank WMA</li> <li>○ South Arm Marshes WMA</li> <li>○ Skwelwil'em Squamish Estuary WMA</li> </ul> </li> </ul>	<p>HCTF, FLNRORD, DUC, TNTBC, CWS/ECCC, DFO</p>	
---	---	--	---	--

## 2019/20 Coast Area Integrated Investment Plan

**Table 6: Selected Research Section Project Priorities (Coast Area)**

*Research Section work is funded through government directly but also relies heavily on partnerships with other funders*

Priority Research Area	Research Need and Approach	Specific Focus - Systems or Species	Geographic Priority Area	Outcomes/ Notes
<b>1. Innovative silviculture to address multiple resource values</b>	Testing innovative methodologies and climate informed prescriptions for understanding ecological (wildlife habitat, hydrological function) and economic impacts at the stand level of timber management within sensitive areas that result in improved supply of timber and validation of assumptions about complex stand management.	Montane systems, subarctic transition systems, drier south coast BGC units	Coast Area, particularly drier south coast systems (CWHdm, e.g., Roberts Creek systems); systems impacted by climate change (projected climate or projected disturbance regimes), including montane units, fire impacted systems	Improved resilience of timber and ecological values; enhanced certainty re: multiple (integrated) resource values temporally and spatially
<b>2. Predicting, validating, and quantifying effects of climate change at forest stand and landscape scales</b>	(1) Hazard decline prediction model for yellow cedar (Yc) (2) successional changes after Yc decline (3) species selection to maintain timber and wildlife habitat attributes with climate shift (4) implications of Cw loss with multiyear drought conditions. Specific projects contribute to understanding of stand character, and changes in forest composition and structure, including implications for wood quality, timber volume production, and sustainability of forest ecosystem values with projected climate change	Yc (species) and ecological (plant) communities	Coast Area (coastal Yc range)	Understanding of risks of different strategic and site-level decisions (e.g., planting, trees species selection; harvest methods) and the effects on timber supply, cultural heritage resources and ecosystem values on the whole (e.g., habitat, forage, cultural plants, carbon).
<b>3. Old forest structure, function, and conservation approaches at the stand and landscape scales</b>	Support development of guidance and tools for old forest and red and blue listed communities management under legislative requirements	Drier south coast systems particularly, but provincial priority across systems (cross regional collaboration); riparian systems across Coast Area	Coast Area - drier systems with greater harvest and land use pressure particularly (and more red & blue listed communities, e.g., CDFmm, CWHxm, dm, mm); fire impacted systems; systems vulnerable to climate shift (e.g., rain on snow watersheds to rain systems)	Inform land use planning (e.g. OGMA's), SOPs, LUO implementation, cumulative effects framework, and assist in development in GBR benchmarks, and BMPs for structural retention, post-harvest.
<b>4. Soil fertility and stand productivity</b>	Knowledge to better incorporate site quality into silviculture treatment outcomes, species nutrition and growth, climate change scenarios, and fertilization practices in British Columbia;		Wetter BGC units, units anticipated to be part of the coastal fertilization programme; Phosphorus-limited systems; systems vulnerable to climate change (and more rapid shifts in species selection guidance); areas being restored after disturbance	Improved TSR and certainty of timber supply and silviculture investment (stocking, species selection, survival under new climate regimes with soil nutrient regime shifts); efficient allocation of fertilization resources across Coast Area;

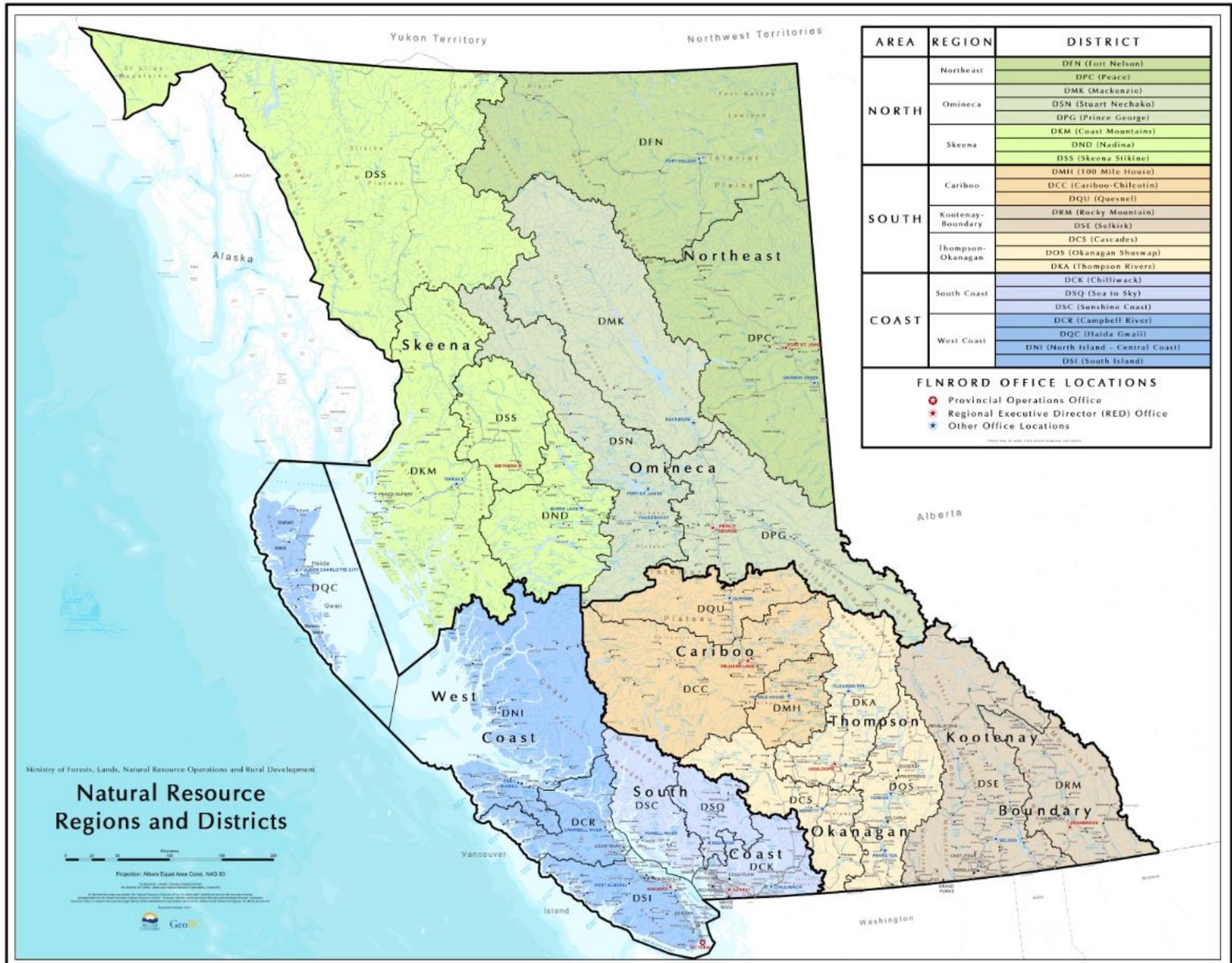
## 2019/20 Coast Area Integrated Investment Plan

Priority Research Area	Research Need and Approach	Specific Focus - Systems or Species	Geographic Priority Area	Outcomes/ Notes
<b>5. Community dynamics and responses to management (including cumulative effects) of Species at Risk (SAR)</b>	Research is needed to support development of effective conservation management / recovery plans for SAR, particularly in the context of cumulative effects assessment and projected climate change. Activities in this project will deliver improved scientific-bases for effective SAR management and recovery plans.	Focus species include Northern Spotted Owl (and Barred Owl interactions), Marbled Murrelet, Western Toad, Western Painted Turtle, Western Screech Owl, Northern Goshawk, Northern Saw-whet Owl, Sooty Grouse (Haida Gwaii), Pacific Marten	Coast Area (and into adjacent regions as appropriate for geographic range and autecological or community understanding)	Improved scientific basis for SAR planning (including management and recovery plans) and required scientific support for LUOs (e.g.; amendments for EBM, Haida Gwaii), information for hunting/trapping resource applications.
<b>6. Habitat use and impacts of management on habitat of focal species (legislative requirement or indicator species) and Species at Risk (SAR)</b>	Verification of habitat inventory and use (e.g., MaMu); refinement of habitat models and understanding of population structure (e.g., coastal tailed frog); assessment of habitat shift and prey structure shift among land use practices;	MaMu, coastal tailed frog, anadromous fish (e.g., EBM plan area)	Coast Area (and into adjacent regions as appropriate for geographic range and autecological or community understanding)	Informed habitat/LU planning and implementation for SAR and EBM implementation; improved inventory and monitoring; guidance towards BMPs (e.g., riparian BMP and WHA guidance)
<b>7. Ecosystem vulnerability to resource development and climate change – cumulative effects and outcomes of legislative direction</b>	Active adaptive management and retrospective sampling to understand the cumulative operational and ecological implications of ecological integrity objectives within the Great Bear across resource values; assessment of post fire shifts in successional dynamics of forests and associated structure and resource values.	Great Bear Rainforest (GBR LUO plan area); drier south coast (fire and drought impacted) systems	GBR specifically but applicable across Coast Area	Tools and data to refine the scientific foundations and gain certainty to inform decision making, LUOs, licensees, communities and stakeholders.
<b>8. Implications of drought for wildlife and wildlife habitat</b>	Although anecdotal evidence suggests shifts in wildlife habitat use, and reduced concentrations of some species, the change in relationship among predator and prey populations and for habitat conditions with multiple years of low snow pack and summer drought conditions are poorly understood.	Ungulate and carnivore species; FN focal species.	South coast systems (VI, mainland south coast)	Recommendations for mitigation of impacts; management strategies for UWR, WHA, riparian habitat to support climate change adaptation. Data for integration into long term projections of populations and habitat models for spatial and aspatial planning of resource availability.
<b>9. Hydrological regime characterization: implications of land and resource management and climate change</b>	Installation of components of high elevation weather station network for the central coast of BC to support EBM RONV and natural disturbance studies related to snow accumulation and melt, glacier ablation and extreme weather events; development of models of hydrologic function and classification to support understanding of ECA, safety parameters for communities and operations	Great Bear Rainforest (GBR LUO plan area)	Coast Area (real time data, models within Great Bear)	Data and model support for validation of snow depths, density and hydrological function for safety assessment, water availability for communities, wildlife, forest harvest recovery (hydrological recovery,

## 2019/20 Coast Area Integrated Investment Plan

Priority Research Area	Research Need and Approach	Specific Focus - Systems or Species	Geographic Priority Area	Outcomes/ Notes
				quantification of ECA); enhanced wildlife forecasting (data contributions to BC Wildfire Service) and flood forecasting
<b>10. Detection and characterization of geomorphic and hydrologic change, disturbance risk and recovery</b>	Development of surface water models for tools and guidance on cumulative effects and post-disturbance recovery, drought and floods; Evaluation of stream channel morphology and sediment supply with differing land uses;			Data to support community hazard assessment and delineation of zones of geomorphic sensitivity to climate change. Increased ability of decision makers to take action to reduce risk to communities of geomorphic events; improved public safety
<b>11. Integrated disturbance dynamics (hydrology, geomorphology, wind, fire) across spatial scales with projected shifts in climate</b>	Characterization (quantification) of current disturbance regimes is limited for systems on the coast, but these regimes provide the foundation for many management directives and policies (e.g., old forest management and OGMA establishment, GBR LUO). Additionally, we project dominant disturbances to shift with climate change and interact in novel ways. Understanding these cumulative interactions will provide greater certainty regarding additionally imposed management activities.	Watersheds anticipated to shift in hydro regime based on climatic modelling (particularly shifts from snow to rain on snow or hybrid to pluvial dominant); areas of emergent wildlife regime; GBR	Coast Area	

# APPENDIX A: Map of FLNRORD Regions and Districts



See Link: <https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/ministry-of-forests-lands-and-natural-resource-operations-region-district-contacts>

## APPENDIX B: Integrated Investment Specialists

Area, Region	Integrated Investment Specialist	Contact Number
Coast Area, West Coast	Aaron Smeeth	778 647-2002
Coast Area, South Coast	Katherine Lawrence	778 222-5932
South Area, Kootenay Boundary	Genevieve Lachance	250 825-1141
South Area, Cariboo	Christine Unghy	250 991-7260
South Area, Thompson Okanagan	Danya Leduc	250 371-3736
North Area, NorthEast	Carmela Arevalo	250 784-1245
North Area, Omenica	Mike McLachlan	778 693-3002
North Area, Skeena	Jason Northcott	250 847-7699

## APPENDIX C: Category Definitions

Carbon:	<p>Funds allocated to carbon eligible activities</p> <ul style="list-style-type: none"> <li>• Reforestation</li> <li>• Fertilization</li> <li>• Enhanced Planting Densities</li> <li>• Fibre Utilization</li> </ul>
Community:	<ul style="list-style-type: none"> <li>• Environmental projects that benefit living standards through economic, social or environmental development</li> <li>• Activities that develop, and promote environmental education to local communities</li> </ul>
Fish, Wildlife and Habitat:	<ul style="list-style-type: none"> <li>• Restoring damaged native open forest and grassland ecosystems</li> <li>• Increasing resilience of community watersheds</li> <li>• Conserve the natural diversity of fish and wildlife species</li> <li>• Monitoring and research of species at risk</li> <li>• Any project focused on: <ul style="list-style-type: none"> <li>○ Improvement or expansion of land that supports native species</li> <li>○ Innovation strategies to protect the health and diversity of ecosystems</li> </ul> </li> </ul> <p>Managing and preventing the impacts on the forest and range from pests and disease</p>
Recovery of Species	<ul style="list-style-type: none"> <li>• Activities associated with the conservation of wildlife species at risk through a value specific recovery program (caribou, marbled murrelet, northern goshawk)</li> </ul>
Fibre Recovery:	<ul style="list-style-type: none"> <li>• Promoting planning and practices that lead to cost-effective removal of low quality residual fibre</li> </ul>
Forest Rehabilitation	<ul style="list-style-type: none"> <li>• Reforestation of low value or damaged forests</li> <li>• Any project supporting the development of increased supply <ul style="list-style-type: none"> <li>○ Fertilization (survey, purchase, application)</li> <li>○ Spacing</li> </ul> </li> </ul>
Wildfire Protection:	<p>Any project focused on:</p> <ul style="list-style-type: none"> <li>• Reducing excessive fuel loads and continuity mitigate catastrophic wildfire risks</li> <li>• Removal of MPB killed stands</li> </ul>
Water:	<ul style="list-style-type: none"> <li>• Support activities to mitigate risks to water and water related resources <ul style="list-style-type: none"> <li>○ Erosion control; culverts; mitigating range and recreation impacts in a community watershed; watershed health projects</li> </ul> </li> </ul>
Miscellaneous	<ul style="list-style-type: none"> <li>• Others, that do not fit in the categories above</li> </ul>

## APPENDIX D: Funder Descriptions

---

### Community Resiliency Investment (Program)

Acronym	Intake Closing Date	Website
CRI	Check with Wildfire Staff. Last intake: October 18, 2019	<a href="https://www.ubcm.ca/EN/main/funding/lgps/community-resiliency-investment.html">https://www.ubcm.ca/EN/main/funding/lgps/community-resiliency-investment.html</a> Contact your local Wildfire Protection Officer to discuss a project proposal: <a href="https://www2.gov.bc.ca/gov/content/safety/wildfire-status/prevention/vegetation-and-fuel-management/fire-fuel-management/fuel-management">https://www2.gov.bc.ca/gov/content/safety/wildfire-status/prevention/vegetation-and-fuel-management/fire-fuel-management/fuel-management</a> (scroll to bottom of page)

#### **Description:**

The **Community Resiliency Investment (CRI)** Program is a provincial program intended to reduce the risk and impact of wildfire to communities in BC through community funding and supports and priority fuel management activities on provincial Crown land. CRI replaces the Strategic Wildfire Prevention Initiative. The CRI Program includes the categories described below.

#### **FireSmart Community Funding and Supports**

The Union of BC Municipalities (UBCM) and First Nations' Emergency Services Society (FNESS) are working with the Ministry of Forests, Lands, Natural Resource Operations & Rural Development (FLNRORD), represented by the BC Wildfire Service (BCWS), to administer the FireSmart Community Funding & Supports portion of the program for local government and First Nation applicants. This portion of the CRI Program will provide funding for eligible activities that align with the 7 [FireSmart](#) disciplines, namely:

- Education
- Fuels management
- Legislation and planning
- Development considerations
- Inter-agency cooperation
- Emergency planning
- Cross-training

#### **Crown Land Wildfire Risk Reduction (WRR)**

The new WRR category of the CRI Program will be led by FLNRORD (in partnership with First Nations, local government, industry and others) for wildfire risk reduction activities taking place on Crown Land, and includes:

- prescribed fire (including planning and operational treatments) and the development of a comprehensive provincial prescribed fire program
- risk reduction activities targeting provincially identified critical infrastructure, beginning with critical response infrastructure such as government-owned radio repeaters, weather stations and airtanker bases
- additional fuel management planning and treatment activities focusing on provincial Crown land located around communities

The Crown Land WRR funding targets areas facing a higher wildfire risk, near communities or critical infrastructure. Those who are interested in conducting wildfire risk reduction activities on Crown land are encouraged to contact the BC Wildfire Service's local fire centre or their local Integrated Investment Specialist to confirm the appropriate funding source.

# **Fish & Wildlife Compensation Program**

<b>Acronym</b>	<b>Intake Closing Date</b>	<b>Website</b>
FWCP	October 25, 2019	<a href="http://fwcp.ca/">http://fwcp.ca/</a>

## **Description:**

The Fish & Wildlife Compensation Program (FWCP) conserves and enhances fish and wildlife in watersheds impacted by BC Hydro dams. The FWCP is funded annually by BC Hydro. The FWCP directs those funds towards priority actions across its three regions to fulfill its mission and work towards its vision of thriving fish and wildlife populations in watersheds that are functioning and sustainable.

By funding projects to support fish and wildlife populations in our Coastal, Columbia and Peace Regions, the FWCP is fulfilling BC Hydro's applicable water licence obligations and voluntary commitments to compensate for fish and wildlife impacts.

BC Hydro is actively engaged in the FWCP and works in equal partnership with the Province of B.C., Fisheries and Oceans Canada, First Nations and Public Stakeholders by participating on FWCP's regional Boards. The FWCP's three independent regional Boards review and approve all project funding decisions and annual operating plans.

## **Eligible Applicants:**

Any group, government agency, First Nation, business, or individual that can meet our mandatory requirements

## **Funding Categories:**

- Seed Grant – to further develop a project idea prior to submitting a large grant application
- Small Grant – have a \*total project cost of less than \$20,000
- Large Grant – have a \*total project cost of more than \$20,000

*\*Total project costs include funding from all sources including, but not limited to the FWCP, other funders (if any), the total value of all in-kind contributions (if any), and applicable taxes.*

## **Criteria:**

We fund projects that align with priorities in our regional Action Plans and support the following types of actions, which are consistent with our mandate:

- Actions to create, restore, or otherwise improve the function of ecosystems that have been impacted by BC Hydro activities
- Actions to create, restore, or otherwise improve the function of alternate ecosystems that provide a better opportunity for investment
- Specific management actions for species of interest, as identified by recovery teams and action/implementation groups
- Baseline inventories that contribute to the development of habitat- or species-based actions within our Action Plans
- Monitoring programs designed to measure the effectiveness of FWCP-funded habitat and species actions
- Actions that contribute to all aspects of managing co-operatively managed conservation lands
- Participation as a team member in species of interest planning

## **Forest Carbon Initiative/ Low Carbon Economy Leadership Fund:**

<b>Acronym</b>	<b>Intake Closing Date</b>	<b>Website</b>
FCI/LCELF	TBD	LCELF – Funds have been allocated to FCI through Federal-Provincial agreement <a href="https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/natural-resources-climate-change/natural-resources-climate-change-mitigation/forest-carbon-initiative">https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/natural-resources-climate-change/natural-resources-climate-change-mitigation/forest-carbon-initiative</a> <a href="https://www.canada.ca/en/environment-climate-change/news/2017/12/low_carbon_economyleadershipfund.html">https://www.canada.ca/en/environment-climate-change/news/2017/12/low_carbon_economyleadershipfund.html</a>

Forest Carbon Initiative funding is Ministry led and (generally) not available to parties external to government other than Ministry led projects funded directly and through FESBC. Additional internal intakes may occur in the future subject to funding. Activities include Reforestation, Fertilization, Fibre Utilization, and Tree Improvement. A modest proportion of the funding has been allocated to ongoing research that supports the program objectives.

### **Program Objective:**

- Manage forests to avoid emissions and increase carbon sequestration

### **Example Strategies / Opportunities:**

#### Reforestation

1. Reforestation of deforested areas, site prep followed by reforestation (e.g. roads, pipelines, seismic lines, mines etc.).
2. Under planting (e.g. fire-killed site in a protected area).

#### Fertilization

1. Forest Fertilization to sequester carbon and enhance tree growth.

#### Fibre Utilization:

1. Utilization of residual fibre that would otherwise be burned following harvesting operations.

#### Tree Improvement:

1. Establishing standards and requirements of planting seedlings with a higher genetic volume gain.
2. Possible opportunities for silviculture activities that are incremental to current legal reforestation obligations resulting in increasing the number of trees established or diversifying species.

### **Parameters / Criteria:**

- The FCI program will support the funding of the rehabilitation and reforestation of stands that provide a net GHG benefit and which otherwise would not be reforested. This includes fire and insect impacted stands and other previously deforested area outside of the timber harvesting land base (THLB), and similar areas within the THLB that are not subject to legal requirements for reforestation.
- Whenever possible, projects will stress enhanced silviculture activities in order to maximize the carbon sequestration and storage potential of a given site.
- The FCI can provide incentives to a tenure holder to haul material, that would otherwise be burned, to a facility.
- FCI may partner with FFT related activities

# **Forest Enhancement Society**

<b>Acronym</b>	<b>Intake Closing Date</b>	<b>Website</b>
FESBC	None planned, as of October 2019	<a href="http://www.fesbc.ca/">http://www.fesbc.ca/</a>

## **Description:**

The Forest Enhancement Society of BC was created in February 2016 to advance and advocate for the environmental and resource stewardship of BC's forests. FESBC is considered a Service Delivery Crown Corporation.

The purposes of the Society as laid out in its Constitution are:

- To advance environmental and resource stewardship in B.C.'s forests by:
  - i) Preventing and mitigating the impact of wildfires
  - ii) Improving damaged or low value forests
  - iii) Improving habitat for wildlife
  - iv) Supporting the use of fibre from damaged and low value forests
  - v) Treating forests to improve the management of greenhouse gases
- To advocate for the environmental and resource stewardship of B.C.'s forests.
- Do all such other things as are incidental and ancillary to the attainment of the foregoing purposes and the exercise of the powers of FESBC.

As a Crown agency, FESBC's purposes remain especially relevant to Government and will continue to guide its decisions going forward. In particular, projects that support the Government's strategic priorities and leadership in achieving its climate change targets are priorities for the Board. As evidenced by the devastating 2017 fire season, climate change will continue to have a significant impact on wildfires in the future and, as such, support for fuel management treatments and FireSmart projects that help to mitigate its negative impact on B.C. communities will also remain priorities for the Board.

As of October 2019, FESBC has provided 6 intakes in total and in the future may offer intakes for specified purposes, subject to funding availability.

## **Eligible Applicants:**

- Local Governments
- First Nation Governments
- Area based tenure holders, including TFLs, Community Forests, and Woodlots
- Business entities performing or providing forestry services on behalf of the Provincial Government and/or industry
- Forest licensees/forest tenure holders operating within a Timber Supply Area (excluding BC Timber Sales tenure holders, and tenure holders with primary timber processing facilities)
- Conservation organizations
- Provincial Government agencies

## **Funding Categories:**

- Fibre Recovery
- Forest Carbon
- Forest Rehabilitation
- Habitat Improvement
- Reducing Wildfire Risk

## **Criteria:**

- Engagement with land manager
- Alignment with FESBC purposes

- Opportunities to combine FESBC funding with other funding sources
- Community/First Nation government support
- Value-for-money – projects that provide lower funding costs per area treated
- Previous experience delivering/completing successful FESBC funded projects
- Collaborative and partnered funding opportunities are established
- Revenue opportunity to RESBC for reinvestment in FESBC purposes
- Highest combined benefit to society
- Intake specific criteria
- Research projects will be considered if they align directly with the purposes of the Society and provide operationally relevant information to better carry out FESBC projects

---

## **Habitat Conservation Trust Foundation**

<b>Acronym</b>	<b>Intake Closing Date</b>	<b>Website</b>
HCTF	Various per stream. Enhancement and Restoration Fund: November 1, 2019	<a href="https://hctf.ca/">https://hctf.ca/</a>

### **Description:**

The Habitat Conservation Trust Foundation is a non-profit charitable foundation acting as Trustee of the Habitat Conservation Trust. HCTF came into existence because its major contributors (hunters, anglers, trappers, and guide-outfitters) were willing to pay for conservation work above and beyond that expected by government for basic management of wildlife and fish resources.

HCTF's largest source of funding comes from a conservation surcharge on freshwater fishing, hunting, trapping and guide outfitting licenses sold in BC. HCTF is a proposal-driven organization and we invite grant applications from anyone who has a good idea that benefits fish, wildlife and habitat in British Columbia.

Each year, we receive many more applications than can be funded, so we use a thorough review process to determine which projects will provide the greatest conservation benefits within the context of our Strategic Plan. We get results and value for money by carefully selecting projects with a high likelihood of providing demonstrable, measurable benefits to native species of fish and wildlife.

Since the inception of our work in 1981, the Foundation and its predecessors have invested over \$170 million in more than 2000 projects across BC.

### **Available Grants under HCTF (see website for more information)**

Enhancement and Restoration Grants  
 Stewardship Grants  
 Caribou Habitat Restoration Grants  
 Public Conservation Assistance Fund (PCAF)  
 Education Grants  
 Habitat Acquisition Grants  
 Land Stewardship Grants  
 Invasive Mussel Monitoring Grants  
 Fisheries Operations and Maintenance (O&M)  
 Conservation Lands O&M

### **Enhancement and Restoration Fund:**

#### **Eligible Applicants:**

HCTF enhancement grants are available to anyone who has a good idea that benefits fish, wildlife and habitat in British Columbia. HCTF strongly encourages cost-shared proposals, and project leaders should explore the possibility of partnerships with other organizations.

**Criteria:**

- focus on freshwater wild fish, native wildlife species and their habitats
- have the potential to achieve a significant conservation outcome
- align with our purposes as laid out in the Wildlife Act

---

## **Land Based Investment Strategy**

<b>Acronym</b>	<b>Intake Closing Date</b>	<b>Website</b>
LBIS (FFT)	Fall (annually)	<a href="https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/land-based-investment">https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/land-based-investment</a> <a href="https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/land-based-investment/forests-for-tomorrow">https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/land-based-investment/forests-for-tomorrow</a>

Land Based Investment is a funding mechanism, primarily internal to government that supports and guides the investments in activities that manage, conserve, or protect British Columbia's natural resources. Ministry project managers typically contract out specific projects to the resource and environmental consulting community.

**Investment Categories:**

Presently, there are 18 different investment categories and the annual funding is split between them all, with the bulk of the funds allocated to the FFT Program and the Forest Health category. As noted in their 2015/16 to 2017/18 LBIS Report (available on the website) the investment categories include: *Forest Health, Current Reforestation, Timber Supply Mitigation, Tree Improvement, Inventory (VRI/Site Prod), Visual Quality, Fish Passage, Water, Range, Invasive species, Ecosystem Restoration, Recreation, Fire Management, Wildlife (Habitat), Wildlife (Species at Risk), Fish and Wildlife Inventory, Ecosystem Based Management, Land Based Investment.*

The largest program is Forests For Tomorrow (FFT) which depends on delivery agents (typically Forest Districts and forest tenure holders) who are encouraged to propose projects in line with the program objectives and selection criteria. The Forest For Tomorrow Program is divided into two distinct streams:

- Current reforestation (FFT-CR)
  - Focussed on improving future timber supply and addressing risks to other forest values through the establishment of young forests on land that would otherwise remain un-productive.
  - Focussed on surveying, site prep and planting.
- Timber supply mitigation (FFT-TSM)
  - Focussed on mitigating impacts on mid-term timbers supply caused by catastrophic disturbance in the interior or constrained timber on the coast through stand treatments.
  - Activities focussed on spacing (thinning) and fertilization (FFT)

## **Rural Dividend Fund**

<b>Acronym</b>	<b>Intake Closing Date</b>	<b>Website</b>
RDF	Temporarily suspended	Check website for updates on future intakes: <a href="https://www2.gov.bc.ca/gov/content/employment-business/economic-development/support-organizations-community-partners/rural-economic-development/rural-dividend">https://www2.gov.bc.ca/gov/content/employment-business/economic-development/support-organizations-community-partners/rural-economic-development/rural-dividend</a>

**Note: As of September 2019, the RDF is temporarily suspended and funds have been allocated to the \$69 million impacted forest worker program to support interior forest workers who are impacted by mill closures and curtailments.**

### **Description:**

The BC Rural Dividend is providing \$25 million a year to assist rural communities with a population of 25,000 or less to reinvigorate and diversify their local economies. It was developed to recognize both the contribution rural communities have made to B.C.'s economy, and the unique challenges they face to diversify beyond natural resources.

The program will contribute to the strength and sustainability of small rural communities, making them more attractive places to live and work. The program is focused on supporting worthy projects that help rural communities navigate changes impacting their economies, such as attracting and retaining youth, using innovation to drive economic growth, and developing new and effective partnerships to support shared prosperity.

**Eligible Applicants:** Local Government, First Nations and Not-for-profit Organizations

### **Funding Categories and Criteria:**

- Community Capacity Building
  - Projects that build the resources, capabilities and capacities of communities to deal with their key economic challenges and changes.
  - Projects that provide or improve community services to support economic diversity, expand market accessibility and enhance quality of life to attract investment.
- Workforce Development
  - Projects that offer training and skills development opportunities, especially for youth, so they stay in the community or return if they have left.
  - Projects that help ensure resilience in the local workforce by attracting, retaining and training workers.
- Community and Economic Development
  - Projects that help rural communities plan to build a foundation for economic growth or improve community vibrancy.
  - Projects that implement strategies to support economic growth.
- Business Sector Development
  - Projects that increase new business creation, business growth and adaptability in the community.
  - Projects that allow communities to retain existing businesses and encourage their expansion.

## APPENDIX E: Definitions

*The following definitions have been collaboratively developed and adopted by the Regional Integrated Investment Specialists.*

**Community wildfire protection plan (CWPP)** - A CWPP is a document that defines the risk from wildfires in an identified area, identifies measures necessary to mitigate those risks and outlines a plan of action to implement the measures

**Fibre Utilization**- The use of timber or wood residue in the manufacturing of forest products or generation of energy

**Fuel management** - Fuel management is the modification of forest structure to reduce forest fuel accumulations available to burn in a wildfire. The main goal of fuel management is improving public safety through; the reduction of wildfire intensities, the reduction of potential for crown fires, improved wildfire suppression success, improved firefighter safety, and improved forest resilience to wildfires. This may include treatments such as thinning, spacing and pruning trees, and removal of needles and woody debris from the forest floor.

**Integrated Investment Plan**- Strategic guidance document for land-based investments within Ministry of Forests Lands and Natural Resource Operations and Rural Development Region.

**Land Manager**- Individuals with the delegated authority to administer legislation related to the management of provincial Crown land and its cultural and natural resources.

**Primary Harvest**—The harvest of trees that are considered merchantable.

**Secondary Harvest**—The removal of material that was (and sometimes still is) regarded as waste from primary harvest.

**Wildfire** - An unplanned, unwanted wildland fire including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fires where the objective is to put the fire out. *(CIFFC Glossary 2003)*

**Wildfire management** - The activities concerned with the protection of people, property and forest areas from wildfire and the use of prescribed burning for the attainment of forest management and other land use objectives, all conducted in a manner that considers environmental, social and economic criteria. Note: Fire management represents both a land management philosophy and a land management activity. It involves the strategic integration of such factors as knowledge of fire regimes, probable fire effects, values-at-risk, level of forest protection required, cost of fire related activities, and prescribed fire technology into multiple-use planning, decision-making, and day-to-day activities to accomplish stated resource management objectives. Successful fire management depends on effective fire prevention, detection, and pre-suppression, having an adequate fire suppression capability, and consideration of fire ecology relationships.

**Wildfire risk** - Wildfire risk is a term that combines the probability of fire occurrence with the expected impacts from a fire. Although the impacts of fire can be positive, such as when considering the ecological effects or fuel reduction benefits of a wildfire, this term is generally used to suggest negative consequences of fire.

**Wood Residue**- Wood chips, slabs, edgings, sawdust, shavings and hog fuel. *(Forest Act)*