



# BC/TNT Joint Conservation Land Management Program (Wildlife O&M)

*HCTF Project #0-451*

## Regional Summary Reports

## 2018-19



NATURE TRUST  
BRITISH COLUMBIA



# West Coast Region

# WEST COAST REGION

## Ecological Significance

The Vancouver Island West Coast Region contains some of the most diverse and rarest ecosystems in British Columbia and support internationally significant populations of fish and wildlife as well as some of the rarest species found in the Province.

Estuaries, wetlands and riparian areas are among the most diverse and productive ecosystems in the world. The importance of protecting and managing these habitats cannot be understated given their substantial life history functions and benefits not only to fish and wildlife but to the human population as well (e.g. clean water supplies, flood protection, mitigating impacts from climate change). It is estimated that more than 50% of wildlife species in North America rely on access to wetland habitat for at least part of their life-cycles, and almost 35% of all rare, threatened, and endangered wildlife species are dependent on wetland ecosystems (Wetland Action Plan for British Columbia, 2010).



In British Columbia, estuaries and coastal wetlands comprise less than 3% of BC's coastline, while providing habitat to over 80% of all coastal fish and wildlife species. Approximately 500 species of named plants and animals are associated with wetlands and estuaries, and 70 of those species are federally listed as endangered or threatened. Vancouver Island and the Central contain significantly higher ranked estuaries than any other eco-region in the province (CWS Technical Report Series #476, 2007). Of the 8 Class 1 estuaries in BC, 4 are located on Vancouver Island.

Despite their importance and rarity, approximately 43% of the province's estuaries are threatened by coastal development, modification, and pollution; approximately 60% of marsh habitats along the estuaries of the Salish Sea have been lost.

Since 1976, The Nature Trust of BC and the Province of British Columbia has worked together with several partner agencies to secure these critical habitats on Vancouver Island and the Central Coast. From the Cowichan Estuary to the Kingcome Estuary more than 60 conservation properties have been secured protecting over 11,000ha of critical fish and wildlife habitat along with rare ecosystems.

### Key Property Complexes

Baynes Sound	Buttertubs Marsh
Cluxewe Estuary	Cowichan Estuary
Dudley Marsh	Filberg Marsh
Kingcome Estuary	Lazo Marsh
Nanaimo Estuary	Orel Lake
Englishman River (PQWMA)	Salmon River Elk Reserve
Salmon River Estuary	Asseek Estuary
Somenos Marsh	Kumdis Slough
Willow Creek	Bella Coola Estuary
Koeye Estuary	Quatse WMA
Tofino Mudflats WMA	



## West Coast Region Program Summary 2018-2019

*HCTF O&M Funding allocated \$140,000 to the West Coast Region in 2018-19 to support projects focusing on the development & implementation of site specific management/restoration plans; ongoing fish and wildlife inventory and monitoring; recreational infrastructure (trails, interpretive signs); and the on-going engagement of community groups. In addition to HCTF, partner agencies contributed over \$600,000 to support this work.*

In 2018/19 \$140,000 was invested by HCTF in the West Coast Region that greatly assisted the conservation partners in achieving several key land management objectives. Of this funding:

- **\$85,000** was invested in Management activities including:
  - \$12,000 at Somenos Marsh to complete the management plan, work with Cowichan Tribes on a partnership agreement, address several homeless encampment issues, update boundary/regulatory signs, conduct a legal survey, work with partners on project implementation and implement a new farm plan.
  - \$11,000 at Parksville Qualicum Beach Wildlife Management Area updating boundary and regulatory signs, installation of new interpretive signs, working with BCCOS in addressing several homeless encampment issues, facility maintenance, danger tree removals and working with regional staff to review foreshore development proposals and finalize an evaluation framework for reviewing these types of proposals.
  - \$8,000 at Lazo Marsh NE Comox Wildlife Management Area updating boundary and regulatory signs, trail/boardwalk/viewing platform maintenance, danger tree removals, addressing trespass concerns and liaising with community partners.
  - \$7,000 at Willow Creek Conservation Area addressing public safety concerns including danger tree removal, trail erosion and bridge footings; working with community partners to address concerns regarding adjacent developments.
  - \$5,000 at Cowichan Estuary Conservation area maintaining infrastructure including dikes and water control structures; updating regulatory signage; farm management; and, working with community partners in the development of restoration and enhancement plans.
  - \$5,000 at Baynes Sound Conservation Areas maintaining trails and infrastructure, liaising with community partners on management issues/concerns, inspecting and maintaining water control structures and updating/installing new boundary/regulatory signage.
- **\$36,000** invested in Restoration, Enhancement, Inventory and Monitoring including:
  - \$9,000 invested in ongoing efforts to continue the development and implementation of a more comprehensive coastal/estuarine monitoring program for conservation lands in the West Coast, including work at the Asseek, Bella Coola, Cluxewe, Koeve, Kumdis, Quatse, Cluxewe, Englishman, Nanaimo and Cowichan conservation areas. This monitoring work has broader benefits for all



BC coastal areas with a focus on ecosystem resiliency as it relates to climate change and includes vegetation, water quality, and fish/wildlife habitat utilization metrics. Monitoring results will continue to inform strategic land management and restoration priorities, help in gauging the success of on-the-ground initiatives, and provide input to a resiliency ranking model of the National Estuarine Research Reserve Association (NERRA) <http://www.nerra.org/marsh>).



- \$10,000 conducting invasive species inventories and removals at 10 conservation area complexes (Somenos, Cowichan, PQBWMA, Nanaimo, Lazo Marsh WMA, Salmon River, Buttertubs Marsh, Baynes Sound, Willow Creek Dudley Marsh).
- \$6,000 to support implementation of large scale restoration projects at the Englishman Estuary (PQBWMA) and Quatse WMA.
- \$4,500 at Somenos Marsh Conservation Area monitoring species at risk (Tall Woolly Head and Vancouver Island Beggartick) and implementing restoration projects focused on riparian area enhancement and invasive weed removal.
- \$3,000 at Tofino Mudflats WMA completing a comprehensive migratory waterfowl survey.
- \$1,800 at Thetis Island Bat Caves monitoring hibernacula of Townsends Big-Eared Bats and confirming presence/absence of endangered Little Brown Myotis.

## **Conservation Outcomes**



Key conservation outcomes in 2018/19 include:

- Restoration of 20ha of estuarine habitat at the Englishman and Quatse River estuaries.
- 10ha of Roosevelt Elk habitat enhanced at Salmon River estuary.
- 5 ha of invasive species removed from conservation lands throughout region.
- 65km of coastline inventoried for Spartina with >3000kg of spartina removed.
- Extensive monitoring and inventory work completed at several conservation areas focused on estuary resiliency, migratory and breeding birds, invertebrates, and salmonids.
- On-going partnerships with First Nations, Local Governments, Stewardship Groups and Fish & Game Clubs.



For additional information, including the pertinent land management objectives and conservation outcomes, please refer to the detailed annual report and photo documentation.

Goals & Objectives by Property	Activities / Description	Image(s)
<b>Asseek Estuary Conservation Area</b>		
<b>Category:</b> 1. Management 2. Monitoring  <b>Goal:</b> 1. Goal 1, 2 2. Goal 1  <b>Goal Descriptor:</b> 1. Stakeholder engagement 2. Habitat condition	<b>Planned Activity:</b> 1. Work with local contacts in Bella Coola to identify key First Nations; liaise with Marine Use Planning Partnership to further objectives identified in the Central Coast Plan; meet with local stakeholders in Bella Coola to discuss property and engage with on the ground land management projects and monitoring 2. Year 2, 3 implement priority monitoring measures focused on habitat condition (water quality measurements, vegetation structure, wildlife trees)	 <p>Nuxalk Coastal Guardian Watchmen and vessel with Shawn Lukas (WCCLMP) after day spent in Asseek Estuary Conservation Area</p>  <p>Shawn Lukas (WCCLMP) photographing Data Logger Installation</p>
<b>Activity Completed:</b> Site visit on; July 31 and Aug. 01, 2018 with the Nuxalk First Nation Coastal Guardian Watchmen to retrieve Data Logger information; Install a 2 <sup>nd</sup> Data Logger; Measure pre-existing Rset and Install 2 <sup>nd</sup> Rset and establish benchmark elevations for all monitoring equipment.		



Goals & Objectives by Property	Activities / Description	Image(s)
<b>Baynes Sound Conservation Areas</b>		
<p><b>Category:</b></p> <ol style="list-style-type: none"> <li>1. Management</li> <li>2. Restoration Enhancement</li> <li>3. Inventory</li> <li>4. Monitoring</li> </ol> <p><b>Goal:</b></p> <ol style="list-style-type: none"> <li>1. Goal 1,2,3,4,5</li> <li>2. Goal 1,2,3,4,5</li> <li>3. Goal 3</li> <li>4. Goal 1,2,3,5</li> </ol> <p><b>Goal Descriptor:</b></p> <ol style="list-style-type: none"> <li>1. Public safety &amp; Liability; Facility Maintenance</li> <li>2. Invasive species removal</li> <li>3. Invasive species</li> <li>4. Photo monitoring</li> </ol>	<p><b>Planned Activity:</b></p> <ol style="list-style-type: none"> <li>1. No public injuries; reduction of trespasses; improved compliance with posted regulations; All facilities within conservation area maintained to acceptable standards including trails, interpretive kiosks, viewing platforms, board walks, bridges;</li> <li>2. Work towards a reduction of the EDRR terrestrial invasive species coverage by 50% from mapped 2015 levels by year 3; no new infestations within treatment areas</li> <li>3. Continued mapping of terrestrial and aquatic invasive species</li> <li>4. Standardized photo monitoring program in place for invasive species removal areas at 2 primary locations (Fanny Bay; Millard Creek)</li> </ol>	 <p>Kalia Van Osch and Curtis Rispin (WCCLMP) removing Viewing Platform from Fanny Bay Conservation Area</p>  <p>Spotted Knapweed (bagged) and debris removed from the estuary at Fanny Bay Conservation Area</p>
<p><b>Activity Completed:</b></p> <ol style="list-style-type: none"> <li>1. Viewing Platform demo and removal to ensure public safety; Debris cleanup</li> <li>2. Completed invasive species inventory and removals.</li> <li>3. All properties within Baynes Sound area (Fanny Bay, Mud Bay, Coal Creek, Millard Creek) were subject to Invasive species inventory and mapping</li> <li>4. Photo monitoring completed in Fanny Bay</li> </ol>		





Goals & Objectives by Property	Activities / Description	Image(s)
<b>Bella Coola Conservation Area</b>		
<p><b>Category:</b></p> <ol style="list-style-type: none"> <li>1. Management</li> <li>2. Inventory</li> <li>3. Monitoring</li> </ol> <p><b>Goal:</b></p> <ol style="list-style-type: none"> <li>1. Goal 1, 2</li> <li>2. Goal 1</li> <li>3. Goal 1</li> </ol> <p><b>Goal Descriptor:</b></p> <ol style="list-style-type: none"> <li>1. Stakeholder engagement</li> <li>2. Habitat condition</li> </ol> <p><b>Activity Completed:</b> Site visit; Jul. 30<sup>th</sup> and Aug. 02<sup>nd</sup>, 2018 with the Nuxalk First Nation Coastal Guardian Watchmen to retrieve Data Logger information; Install a 2<sup>nd</sup> Data Logger; Measure pre-existing Rset and Install 2<sup>nd</sup> Rset and establish benchmark elevations for all monitoring equipment</p>	<p><b>Planned Activity:</b></p> <ol style="list-style-type: none"> <li>1. Work with local contacts in Bella Coola to identify key First Nations; liaise with Marine Use Planning Partnership to further objectives identified in the Central Coast Plan; meet with local stakeholders in Bella Coola to discuss property and engage with on the ground land management projects and monitoring</li> <li>2. Year 2, 3 implement priority monitoring measures focused on habitat condition (water quality measurements, vegetation structure, wildlife trees)</li> </ol>	 <p>Nuxalk Coastal Guardian Watchmen and vessel with Shawn Lukas (WCCLMP) heading to Bella Coola Conservation Area</p>  <p>Peter deKoning (WCCLMP) downloading data from Data Logger within the estuary of Bella Coola Conservation Area</p>






Goals & Objectives by Property	Activities / Description	Image(s)
<b>Buttertubs Marsh Conservation Area</b>		
<p><b>Category:</b></p> <ol style="list-style-type: none"> <li>1. Management</li> <li>2. Restoration Enhancement</li> </ol> <p><b>Goal:</b></p> <ol style="list-style-type: none"> <li>1. Goal 1,2,3,4</li> <li>2. Goal 1</li> </ol> <p><b>Goal Descriptor:</b></p> <ol style="list-style-type: none"> <li>1. Facility Maintenance</li> <li>2. Invasive species removal; Enhancement</li> </ol> <p><b>Activity Completed:</b></p> <ol style="list-style-type: none"> <li>1. Completed maintenance on all public information kiosks; Completed maintenance on fence lines along boundary of property</li> <li>2. Invasive species identification, mapping and removal throughout the property, including extensive work removing Purple Loosestrife (<i>Lythrum salicaria</i>) within the West Marsh.</li> </ol>	<p><b>Planned Activity:</b></p> <ol style="list-style-type: none"> <li>1. Annual inspections of viewing platforms, trails, boardwalks; repairs as necessary; inspect/repair fencing as required; inspections and maintenance of water control structures and dikes; Respond to public inquiries/complaints; review development proposals that may affect conservation areas</li> <li>2. Annual work crews; partnership with local volunteers and stakeholders to achieve annual goal to achieve 3 year target; mapping; work with CISC and Provincial EDRR coordinator in identifying priority areas; Identify limiting factors for breeding bird success; work with stakeholders to construct and install nest boxes for swallows and wood ducks;</li> </ol>	 <p>Kalia Van Osch (WCCLMP) removing Purple Loosestrife</p>  <p>American Bittern in Buttertubs Marsh Conservation Area – Photo by Curtis Rispin (WCCLMP)</p>






Goals & Objectives by Property	Activities / Description	Image(s)
<b>Cluxewe Wildlife Management Area</b>		
<p><b>Category:</b></p> <ol style="list-style-type: none"> <li>Inventory</li> <li>Monitoring</li> </ol> <p><b>Goal:</b></p> <ol style="list-style-type: none"> <li>Goal 3</li> <li>Goal 1,2,3,5</li> </ol> <p><b>Goal Descriptor:</b></p> <ol style="list-style-type: none"> <li>Invasive Species</li> <li>Habitat Condition</li> </ol>	<p><b>Planned Activity:</b></p> <ol style="list-style-type: none"> <li>Coordinate inventory activities for spartina with the Spartina Working Group; utilize seasonal work crews to continue mapping/inventory of invasive species sites and input data into the IAPP database</li> <li>Year 1 2, 3 implement priority monitoring measures focused on habitat condition (water quality measurements, vegetation structure, wildlife trees, surface elevation tables)</li> </ol>	 <p>WCCPLM crew setting up Monitoring Stations within the Cluxewe Wildlife Management Area</p>  <p>WCCPLM crew installing and surveying elevation of Data Logger and staff gauge.</p>
<p><b>Activity:</b></p> <ol style="list-style-type: none"> <li>Invasive species identification, mapping and removal throughout the property, found a very minimal amount of invasive plants in the Cluxewe WMA and no Spartina.</li> <li>Retrieve Data Logger information and Install Data Loggers; Measure pre-existing Rset and Install Rset platforms and establish benchmark elevations for all monitoring equipment</li> </ol>		

Goals & Objectives by Property	Activities / Description	Image(s)
<b>Cowichan Estuary Conservation Area</b>		
<b>Category:</b> 1. Management 2. Inventory 3. Monitoring  <b>Goal:</b> 1. Goal 1, 2, 3, 4, 5 2. Goal 3 3. Goal 1, 2, 3, 5  <b>Goal Descriptor:</b> 1. Facility Maintenance 2. Invasive Species 3. Habitat Condition	<b>Planned Activity:</b> 1. Annual inspections of viewing platforms, trails, boardwalks; repairs as necessary; inspect/repair fencing as required; inspections and maintenance of water control structures and dikes in accordance with provincial standards and regulations 2. Utilize seasonal work crews to continue mapping/inventory of invasive species sites and input data into the IAPP database 3. Year 1 ,2, 3 implement priority monitoring measures focused on habitat condition (water quality measurements, vegetation structure, wildlife trees, surface elevation tables)	 <p>WCCLMP Crew Installed Gate and Signs to limit human impacts</p>  <p>Viewing Platform replaced overlooking Cowichan Estuary</p>  <p>Chelsea Mercer and Kalia Van Osch (WCCLMP) Cutting Broom along Dinsdale Dike Trail and Farm Fields</p>
<b>Activity:</b> 1. Completed dike inspections and maintenance (removing vegetation); Viewing Platform replacement; Trail and sign maintenance; 2. Invasive species identification and mapping 3. Retrieve Data Logger information and Install Data Loggers; Measure pre-existing Rset and Install Rset platforms and establish benchmark elevations for all monitoring equipment		





Goals & Objectives by Property	Activities / Description	Image(s)
<b>Dudley Marsh</b>		
<b>Category:</b> 1. Management 2. Inventory 3. Monitoring  <b>Goal:</b> 1. Goal 1, 2, 3, 4, 5 2. Goal 3 3. Goal 1, 2, 3, 5  <b>Goal Descriptor:</b> 1. Public safety and Liability; Facility Maintenance 2. Support Monitoring 3. Habitat Condition; Habitat Utilization	<b>Planned Activity:</b> 1. Property inspections and updated inventory of boundary encroachment; install updated regulatory / interpretive signs at key access points throughout conservation area complex as needed; Annual inspections of viewing platforms, trails, boardwalks; repairs as necessary; inspect/repair fencing as required; inspections and maintenance of water control structures and dikes in accordance with provincial standards and regulations 2. Conduct inventory of priority species/vegetation for monitoring work 3. Compile weekly data recordings from volunteers; work with DFO/DUC to develop water model on site; conduct water quality measurements on site throughout year; Continue amphibian monitoring program (Year 2-3); monitor for fish usage in Dudley Creek	 <p>Track Tube results from Vancouver Island University</p>  <p>Chelsea Mercer and Kalia Van Osch with invasive plants removed from Dudley Marsh Conservation Area</p>  <p>Maintenance completed on water control structure at Dudley Marsh</p>
<b>Activity:</b> 1. Property inspection including boundary walks boundary encroachment; Inspections of viewing platform and water controls completed regularly with work being completed on viewing platform 2. Students of Vancouver Island University practising field skills of environmental monitoring, inventory and data collection 3. Water control maintenance and level/flow recordings collected weekly by the Friends of French Creek throughout all seasons of year.		






Goals & Objectives by Property	Activities / Description	Image(s)
<b>Koeye River Estuary</b>		
<p><b>Category:</b></p> <ol style="list-style-type: none"> <li>1. Management</li> <li>2. Monitoring</li> </ol> <p><b>Goal:</b></p> <ol style="list-style-type: none"> <li>1. Goal 1, 2, 3</li> <li>2. Goal 1</li> </ol> <p><b>Goal Descriptor:</b></p> <ol style="list-style-type: none"> <li>1. Stakeholder engagement</li> <li>2. Habitat condition</li> </ol> <p><b>Activity:</b>            Site visit Sep. 12<sup>th</sup> 2018 with the Heiltsuk First Nation Coastal Guardian Watchmen to retrieve Data Logger information; Install a 2<sup>nd</sup> Data Logger; Measure pre-existing Rset and Install 2<sup>nd</sup> Rset and establish benchmark elevations for all monitoring equipment.</p>	<p><b>Planned Activity:</b></p> <ol style="list-style-type: none"> <li>1. Work with local contacts on North Island/Central Coast; liaise with Marine Use Planning Partnership to further objectives identified in the Central Coast Plan; meet with local stakeholders to discuss property and engage with on the ground land management projects and monitoring</li> <li>2. Year 2, 3 implement priority monitoring measures focused on habitat condition (water quality measurements, vegetation structure, wildlife trees)</li> </ol>	 <p>Heiltsuk First Nation Coastal Guardian working with Curtis Rispin (WCCLMP) taking Rset measurements</p>  <p>Rset set-up within the Koeye River Estuary</p>  <p>Heiltsuk First Nation Coastal Guardian vessel heading up river to Koeye Estuary</p>





Goals & Objectives by Property	Activities / Description	Image(s)
<b>Lazo Marsh North East Comox Wildlife Management Area</b>		
<b>Category:</b> 1. Management 2. Restoration Enhancement <b>Goal:</b> 1. Goal 1, 2, 3, 4 2. Goal 1, 2, 3 <b>Goal Descriptor:</b> 1. Public Safety & Liability; Facility Maintenance 2. Invasive species Removal	<b>Planned Activity:</b> 1. Property inspections and updated inventory of boundary encroachment; install updated regulatory / interpretive signs at key access points throughout conservation area complex as needed; Annual inspections of viewing platforms, trails, boardwalks; repairs as necessary; inspect/repair fencing as required; inspections and maintenance of water control structures and dikes in accordance with provincial standards and regulations 2. Annual work crews; partnership with local volunteers and stakeholders to achieve annual goal to achieve 3 year target; mapping; work with CISC and Provincial EDRR coordinator in identifying priority areas	 <p>Danger Tree removal (hazard removal) with wildlife trees remaining</p>  <p>Dam Inspection completed by WCCLMP staff</p>



Goals & Objectives by Property	Activities / Description	Image(s)
<b>Nanaimo River Estuary</b>		
<b>Category:</b> 1. Management 2. Inventory 3. Monitoring <b>Goal:</b> 1. Goal 1, 2, 3, 4, 5 2. Goal 3 3. Goal 1, 2, 3, 5 <b>Goal Descriptor:</b> 1. Facility Maintenance; Public Safety and Liability 2. Support Monitoring 3. Habitat Condition	<b>Planned Activity:</b> 1. Annual inspections of viewing platforms, trails, boardwalks; repairs as necessary; inspect/repair fencing as required; inspections and maintenance of water control structures and dikes in accordance with provincial standards and regulations; Property inspections and updated inventory of boundary encroachment; install updated regulatory / interpretive signs at key access points throughout conservation area complex as needed 2. Conduct inventory of priority species/vegetation for monitoring work 3. Year 1 ,2, 3 implement priority monitoring measures focused on habitat condition (water quality measurements, vegetation structure, wildlife trees, surface elevation tables)	 <p>Kalia Van Osch and Chelsea Mercer (WCCLMP) removing broom from Nanaimo River Conservation Area</p>  <p>Curtis Rispin (WCCLMP) completing Short Eared Owl surveys</p>  <p>Curtis Rispin (WCCLMP) Installing Rod Surface Elevation Table (Rset)</p>
<b>Activity:</b> 1. Maintenance on facilities including stairs, bridges and viewing platforms; Sign installations and replacement as needed to ensure public compliance 2. Winter surveys for Short Eared Owls and use of habitat within the conservation area 3. Retrieve Data Logger information and Install Data Loggers; Measure pre-existing Rset and Install Rset platforms and establish benchmark elevations for all monitoring equipment		



Goals & Objectives by Property	Activities / Description	Image(s)
<b>Parksville Qualicum Beach Wildlife Management Area</b>		
<b>Category:</b> 1. Management 2. Restoration Enhancement 3. Monitoring <b>Goal:</b> 1. 1, 2, 3, 4, 5 2. 1, 3, 4, 5 3. 1, 2, 3, 5 <b>Goal Descriptor:</b> 1. Public Safety & Liability; Stakeholder Engagement 2. Invasive Species Removal 3. Habitat condition	<b>Planned Activity:</b> 1. Property inspections and updated inventory of boundary encroachment; install updated regulatory / interpretive signs at key access points throughout conservation area complex as needed; undertake legal surveys as required; Liaise with stakeholder groups on an on-going basis to discuss projects/activities within Conservation Area that assist in meeting management goals for the conservation complex; 2. Annual work crews; partnership with local volunteers and stakeholders to achieve annual goal to achieve 3 year target; mapping; work with CISC and Provincial EDNR coordinator in identifying priority areas; 3. Year 1, 2, 3 implement priority monitoring measures focused on habitat condition (water quality measurements, vegetation structure, wildlife trees, surface elevation tables)	 <p>WCCLMP crew working with the Mid-Vancouver Island Habitat Enhancement Society performing beach seining within the Englishman River Estuary</p>  <p>Chelsea Mercer and Kalia Van Osch (WCCLMP) maintaining restoration areas and recently planted native species</p>  <p>WCCLMP Crew installing Interpretive signage within the Englishman River Estuary</p>
<b>Activity:</b> 1. Conducted routine property inspections for encroachments, public safety concerns, and signage; Working with various stakeholders and helping with the many projects undergoing in the area. 2. Invasive species identification, mapping, and removal across property including revisiting previously known/treated sites using IAPP 3. Retrieve Data Logger information and Install Data Loggers; Measure pre-existing Rset and Install Rset platforms and establish benchmark elevations for all monitoring equipment		



Goals & Objectives by Property	Activities / Description	Image(s)
<b>Quatse Wildlife Management Area</b>		
<b>Category:</b> 1. Management 2. Restoration Enhancement 3. Monitoring <b>Goal:</b> 1. Goal 1, 2, 3 2. Goal 1, 2 3. Goal 1, 2, 3, 5 <b>Goal Descriptor:</b> 1. Facility Maintenance 2. Invasive Species Removal 3. Habitat condition	<b>Planned Activity:</b> 1. Annual inspections of viewing platforms, trails, boardwalks; repairs as necessary; inspect/repair fencing as required; 2. Annual work crews; partnership with local volunteers and stakeholders to achieve annual goal to achieve 3 year target; mapping; work with CISC and Provincial EDRR coordinator in identifying priority areas; 3. Year 1, 2, 3 implement priority monitoring measures focused on habitat condition (water quality measurements, vegetation structure, wildlife trees, surface elevation tables)	 <p>Peter deKoning, Chelsea Mercer, and Kalia Van Osch (WCCLMP) surveying elevations for Rset device installed in Quatse WMA</p>  <p>Grading historic berms to enhance area for increased carex growth and habitat complexity of estuary within the Quatse WMA</p>
<b>Activity:</b> 1. Inspected facilities within WMA including boardwalks/bridges – deemed for removal in 2019 2. Invasive species identification, mapping, and removal across property including revisiting previously known/treated sites using IAPP 3. Retrieve Data Logger information and Install Data Loggers; Measure pre-existing Rset and Install Rset platforms and establish benchmark elevations for all monitoring equipment		



Goals & Objectives by Property	Activities / Description	Image(s)
<b>Salmon River Estuary Conservation Area</b>		
<b>Category:</b> 1. Management 2. Restoration Enhancement 3. Monitoring <b>Goal:</b> 1. Goal 1, 2, 3, 4, 5 2. Goal 1, 2 3. Goal 1, 2, 3, 4 <b>Goal Descriptor:</b> 1. Facility Maintenance 2. Invasive Species Removal 3. Habitat Condition	<b>Planned Activity:</b> 1. Annual inspections of viewing platforms, trails, boardwalks; repairs as necessary; inspect/repair fencing as required; 2. Annual work crews; partnership with local volunteers and stakeholders to achieve annual goal to achieve 3 year target; mapping; work with CISC and Provincial EDRR coordinator in identifying priority areas; 3. Year 1, 2, 3 implement priority monitoring measures focused on habitat condition (water quality measurements, vegetation structure, wildlife trees, surface elevation tables)	 <p>WCCLMP crew installing Data Logger within the Salmon River estuary</p>  <p>Fence repairs and maintenance completed at site of House Removal</p>  <p>Invasive Plant treatment (Japanese Knotweed) in conservation area with FLNRORD Invasive Plant Technicians</p>
<b>Activity:</b> 1. Inspections on all facilities, bridges, fences, and viewing platforms within conservation area and repairs completed accordingly 2. Invasive species identification, mapping, and removal across property including revisiting previously known/treated sites using IAPP including all known and newly discovered Japanese Knotweed sites 3. Retrieve Data Logger information and Install Data Loggers; Measure pre-existing Rset and Install Rset platforms and establish benchmark elevations for all monitoring equipment		



Goals & Objectives by Property	Activities / Description	Image(s)
<b>Somenos Marsh Conservation Area</b>		
<b>Category:</b> 1. Management 2. Restoration Enhancement 3. Inventory <b>Goal:</b> 1. Goal 1, 2, 3, 4, 5 2. Goal 1, 3, 4, 5 3. Goal 3 <b>Goal Descriptor:</b> 1. Public Safety and Liability; Stakeholder Engagement 2. Invasive Species Removal 3. Garry Oak Ecosystem	<b>Planned Activity:</b> 1. Property inspections and updated inventory of boundary encroachment; liaison with community advocates for homeless; install updated regulatory and interpretive signs at key access points throughout conservation area complex; Implement management plan; liaise with community stakeholder groups; identify opportunities for 3rd party agreements; support volunteer activities and events within conservation area 2. Annual work crews; partnership with local volunteers and stakeholders to achieve annual goal to achieve 3 year target; mapping; work with CISC and Provincial EDRR coordinator in identifying priority areas 3. Work with community stakeholders/contractors to inventory and monitor health of Garry Oak ecosystem	 <p>Homeless Camps within Somenos Marsh Conservation Area</p>  <p>Thomas Reid (WCLMP) speaking to Cowichan Tribes, Municipalities, volunteers, and stakeholders at unveiling of new kiosk and interpretive signs at Ye'yumnuts Village Site</p>  <p>Fence installed to protect culturally sensitive areas from public access.</p>
<b>Activity:</b> 1. Continued monitoring and clearing of homeless from conservation area and cleanup of sites; Working with Cowichan Tribes to preserve culturally sensitive areas while constructing public access, educational areas, and native vegetation 2. Invasive species identification, mapping, and removal across property including revisiting previously known/treated sites using IAPP 3. Garry Oak Ecosystem maintenance included Tall Woolly Head (SAR) site		

Goals & Objectives by Property	Activities / Description	Image(s)
<b>Thetis Island Bat Caves</b>		
<p><b>Category:</b></p> <ol style="list-style-type: none"> <li>Inventory</li> <li>Monitoring</li> </ol> <p><b>Goal:</b></p> <ol style="list-style-type: none"> <li>1</li> <li>1</li> </ol> <p><b>Goal Descriptor:</b></p> <ol style="list-style-type: none"> <li>Bat Species</li> <li>Habitat Utilization</li> </ol> <p><b>Activity:</b></p> <ol style="list-style-type: none"> <li>Site visit contractor and professional cave explorer to retrieve acoustic monitoring systems within caves for bat presence/absence and population estimates.</li> </ol>	<p><b>Planned Activity:</b></p> <ol style="list-style-type: none"> <li>Work with consultants/contractors to develop an acoustic monitoring program at the bat caves to determine population estimates of bats utilizing area</li> <li>Work with consultants/contractors to monitor health of bat populations</li> </ol>	 <p>Martin Davies (Island Karst Research) inside caves installing Roost Logger</p>  <p>Roost Logger installed in cave to monitor bat species and activity within Thetis Island Bat Caves</p>



Goals & Objectives by Property	Activities / Description	Image(s)
<b>Willow Creek Conservation Area</b>		
<b>Category:</b> 1. Management; 2. Restoration Enhancement <b>Goal:</b> 1. 1, 2, 3, 4, 5 2. 1, 3, 4, 5 <b>Goal Descriptor:</b> 1. Public Safety and Liability; Immediate site issues, concerns 2. Invasive Species Removals	<b>Planned Activity:</b> 1. Property inspections and updated inventory of boundary encroachment; liaison with community advocates for homeless; install updated regulatory signs at key access points throughout conservation area complex; Respond to public inquiries/complaints; review development proposals that may affect conservation areas; 2. Annual work crews; partnership with local volunteers and stakeholders to achieve annual goal to achieve 3 year target; mapping; work with CISC and Provincial EDRR coordinator in identifying priority areas	 <p>Chelsea Mercer (WCCLMP) constructing new bridge along trail network within Willow Creek Conservation Area</p>  <p>Willow Creek Conservation Area Upstream bridge with signs of erosion and undermining of abutment</p>
<b>Activity:</b> 1. Danger Tree removals completed throughout conservation area; Bridge monitoring on up-stream bridge continues with trail closures in effect due to severe flooding and trail erosion; Boundary and Trespassing issues continued to be monitored with continuation of housing development 2. Revisited areas from 2016 invasive plant removals and continued efforts to identify, map and remove all invasive plants		



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# South Coast Region

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**Region: South Coast**

**Ecological Significance of the Region:**

The majority of Lower Mainland Region conservation projects focus on the Fraser River and its tributaries. One of the largest rivers in the world, the Fraser flows from the Rocky Mountains south and west to the Fraser-Puget lowland, and into the Pacific Ocean at the Strait of Georgia. The Fraser Basin watershed drains one quarter of the province. Sand and silt eroded from glacial terraces along its path are deposited as a delta in the Strait of Georgia. This delta is highly productive from an agricultural and human habitation perspective, making the Lower Mainland the socio-economic centre of the province.

The confluence of the Fraser and the Pacific Ocean results in delta marshes, estuaries, and an incredible level of diversity in fish and wildlife populations. The Fraser is the world's largest salmon river, while its estuaries provide critical resting areas for salmon migrating from salt to fresh water. Important year-round habitat for many bird species, the Fraser estuary is also a vital link in the Pacific Flyway, supporting over 1.5 million birds from three continents and 20 countries. The Boundary Bay, Sturgeon Bank, Roberts Bank, and South Arm Marshes Wildlife Management Areas (WMAs) have been designated as Western Hemisphere Shorebird Reserve Network sites. The estuary supports the largest wintering shorebird and waterfowl populations in Canada. The area also provides habitat for significant numbers of raptors and marine mammals.

The South Coast Region contains 18 Conservation Land complexes, administered regionally, including a number of properties owned by The Nature Trust of British Columbia (NTBC).

**Summary Statement of Regional Investment:**

In 2018-19 \$97,090 was invested in 16 conservation land complexes in the South Coast region, to assist regional staff and partners in achieving management objectives. Significant investments were made to eradicate invasive species, maintain infrastructure and public access, remove rubbish, and identify ecological restoration opportunities from these conservation lands. A significant investment was also made to support the ongoing research into the cause of over 200 hectares of marsh loss throughout the Fraser estuary conservation lands. Additionally, local stakeholders and conservation partners were engaged to identify opportunities to facilitate the ecological resilience of tidal marshes in the Fraser estuary conservation lands with anticipated increases in sea level.

In October 2017, the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) partnered with Ducks Unlimited Canada (DUC), NTBC, and the Canadian Wildlife Service to initiate the South Coast Conservation Land Management Program (SCCLMP). Modelled off the successful West Coast Conservation Land Management Program (WCCLMP), the goal of the SCCLMP is to provide a more collaborative and integrated approach to the management of conservation lands for the benefit of fish, wildlife, species at risk, and their habitats. In 2018/2019 this program continued to leverage resources to apply a strategic focus to the management of Wildlife Management Areas in the South Coast. A full-time Coordinator leads the partnership, including overseeing the South Coast HCTF Conservation Lands O&M budget and expanding the capacity of the program by soliciting additional funds and promote community stewardship throughout conservation lands. HCTF O&M funding continues to support the activities of the SCCLMP partnership program.

In 2017/2018 Fisheries and Oceans Canada selected three projects within South Coast Conservation Lands to receive significant investment from the Coastal Restoration Fund over the next five years. One of the main goals of each of these projects is to increase fish passage through river training structures and other infrastructure throughout estuaries. Funding includes \$1.9 million to the Squamish River Watershed Society for a project in the Skwelwil'em Squamish Estuary WMA, \$2.0 million to Ducks Unlimited Canada for a project in the South Arm Marshes WMA, and \$2.7 million to Raincoast Conservation Foundation for a project in the Sturgeon Bank and Roberts Bank WMAs. Throughout 2018/2019 all three projects have been engaging stakeholders, conducting project planning activities, and monitoring fish utilization of the respective WMAs. In February 2019 Raincoast Conservation Foundation started construction of breaches in the Steveston North Jetty to facilitate fish passage and transportation of freshwater and sediments to the Sturgeon Bank WMA foreshore; within a month of construction works, juvenile salmon (including Harrison River chinook) were using the breaches to access the foreshore marshes of the Sturgeon Bank WMA! Over the next three years the SCCLMP Coordinator will continue work with each organization to help make each project a success and to look for opportunities to support ongoing conservation land management activities.

### **Project Highlights:**

**\$9,760** invested in Bert Brink WMA for property inspection, invasive plant assessment, rubbish removal, and preparation of an ecological restoration plan.

**\$8,595** invested in Boundary Bay WMA for property inspections, rubbish removal, invasive plant management, sign maintenance, and engagement with local stakeholders for integrated planning.

**\$4,255** invested in Camp Slough Conservation Area for property inspection, invasive species management, and rubbish removal.

**\$2,250** invested in the Wells Sanctuary Conservation Area for property inspections, invasive plant removal, rubbish removal, and signage.

**\$3,895** invested in the Chilliwack River Conservation Area for property inspection, rubbish removal, and maintenance of property information signage.

**\$7,741** invested in the Lhá:lt/Harrison-Chehalis WMA for property inspection, rubbish removal, invasive species management, maintenance of property information signage, planning for site access and signage requirements, and integrated shared stewardship with local stakeholders.

**\$9,934** invested in the Pitt-Addington Marsh WMA to assess land management needs and ecological values, maintain informational signage, maintenance of public access trails and facilities, purchase of materials for volunteer-led construction/installation of duck nest boxes, and management planning for species at risk and nuisance species.

**\$3,648** invested in the Silverhope Creek Conservation Area for inspection for land management needs, public information sign installation, rubbish removal, and boundary identification.

**\$7,829** invested in Serpentine WMA for tower and trail maintenance, garbage pickup and removal, and vegetation maintenance.

**\$5,042** invested in South Arm Marshes WMA for site visits and inspections, maintenance of trails and critical drainage infrastructure, and coordinating integrated shared stewardship with local stakeholders and research partners.

**\$7,715** invested in Sturgeon Bank WMA to support ongoing research into the cause of marsh recession throughout the WMA and coordinate with stakeholders and government to ensure the ecological and shoreline projection values of the Fraser River Estuary WMAs are incorporated into regional flood adaptation strategy planning. Sturgeon Bank WMA benefits from stewardship of, and proactive action by, the City of Richmond with respect to management of invasive species, vegetation management and removal of garbage along the dyke trail that is adjacent to the WMA.

**\$9,931** invested in Cheam Lake Conservation Area to control invasive species and determine habitat utilization of 10 translocated turtles.

**\$11,065** invested in Forslund-Watson Conservation Area to clear trails, determine ecological restoration options, and control invasive species, including researching and implementing Best Management Practices for eradicating invasive Caucasian wingnut tree.

### **Conservation Outcomes:**

The 2018/2019 field season resulted in the completion of a variety of critical land management activities on a number of Conservation Lands within the South Coast Region. Assessments of the ecological attributes and issues specific to each property form the basis for activity planning for current and future field seasons.



Restoration and enhancement of conservation lands for habitat values ensures that these lands are optimal for use by fish and wildlife that depend on them; approximately 13 hectares of conservation lands were directly restored or enhanced in 2018/2019. Informational signage, indicating property ownership and management partners, serves to demarcate boundaries and to provide the public with the means to contact a land manager to discuss management concerns and issues. Maintenance of access points and facilities on conservation lands ensures that public access will be safe.

**Additional and Partner Funding:**

Over \$2,508,876 of funding was provided by FLNRORD, DUC, NTBC, and its partners:

1. \$42,496 from FLNRORD to support land management activities.
2. \$458,179.91 from DUC for land management activities in WMAs and other conservation lands, including:
  - a. \$157,599.67 invested in the South Arm Marshes WMA for the DUC Coastal Restoration Fund to restore tidal marshes and fish access, including
    - i. \$117,852.16 in direct costs
    - ii. \$39,747.51 in staff time
  - b. \$223,480 invested in the Boundary Bay and Roberts Bank WMAs for the Spartina Eradication Program
  - c. \$39,495.02 invested in the Serpentine WMA for general site management (e.g., regular project inspections, habitat maintenance, minor infrastructure repairs, design and installation of new signage, responding to inquiries from members of the public), including
    - i. \$12,371.27 in direct costs
    - ii. \$27,123.75 in staff time
  - d. \$24,819.25 invested in the Pitt-Addington Marsh WMA for general site management (e.g., regular project checks, habitat maintenance and vegetation control, excavator and operator for beaver dam removal), including
    - i. \$9,875.50 in direct costs
    - ii. \$14,943.75 in staff time
  - e. \$12,785.97 invested in the Cheam Lake Conservation Area for western painted turtle research and general site management (e.g., regular project inspections,

maintenance of habitat and water control infrastructure, small tools and supplies), including

- i. \$1,459.72 in direct costs
  - ii. \$11,326.25 in staff time
3. \$20,000 from NTBC for operations and maintenance activities on NTBC leased properties.
4. \$1,350 in-kind support from the Canadian Wildlife Service for field work conducting bulrush monitoring and elevation measurements in support of the Sturgeon Bank Marsh Recession Project.
5. \$998,075 raised by the Squamish River Watershed Society for several projects within the Skwelwil'em Squamish Estuary WMA, including:
  - a. Central Estuary Restoration Project: planning for culvert replacement, community engagement, and several studies (i.e., Squamish Estuary Qualitative Sediment Transport Assessment, Squamish Estuary Flood Modelling & Wave Impact Assessment, Fisheries Monitoring, and Water Quality Monitoring).
    - i. \$710,000 from the DFO Coastal Restoration Fund
    - ii. \$183,075 from the Fish & Wildlife Compensation Fund
    - iii. \$33,000 from the Pacific Salmon Foundation
    - iv. \$35,000 in-kind support from DFO Resource Restoration Unit
    - v. \$25,000 in-kind support from Squamish River Watershed Society
  - b. Wildlife Habitat Enhancement, including construction of bat condos and educational programming
    - i. \$5,000 from TD Friends of the Environment
    - ii. \$7,000 in-kind support from the Squamish River Watershed Society
6. \$489,315 from Raincoast Conservation with funding from the Coastal Restoration Fund to increase fish passage throughout river training infrastructure in the Fraser River delta and conduct research in salmonid utilization of estuarine marshes, including:
  - a. \$394,915 for the Fraser Estuary Connectivity Project funded by the DFO Coastal Restoration Fund, including
    - i. \$62,785 for hydrogeomorphic modelling
    - ii. Approximately \$40,000 for design Steveston North Jetty breaches

- iii. \$292,130 for construction and removal of breaches in Steveston North Jetty.
  - b. Approximately \$83,400 for sampling salmonid utilization of estuarine marshes
  - c. Approximately \$11,000 for activities in support of the Sturgeon Bank Marsh Recession Project (i.e., salinity data collection, marsh mapping).
- 7. Over \$325,000 in-kind support from the Kirkland Island Waterfowl Society for ongoing stewardship and farming program to support wildlife on Rose, Kirkland, Gunn, and Williamson Islands within the South Arm Marshes WMA.
- 8. \$4,073 in-kind support from the Pitt Waterfowl Management Association for ongoing stewardship and nest box monitoring and maintenance in the Pitt-Addington Marsh WMA, including:
  - a. \$3,375 in-kind labour
  - b. \$698 supplies and fuel
- 9. \$4,952 from HCTF for a Seed Grant to prepare restoration plan for NTBC property within the Bert Brink WMA.
- 10. Over \$5,400 in-kind support from Lauryn Williams, Mae Whyte, and Jillian Wheatley for BCIT Ecological Restoration school assignment creating a restoration plan for the Bert Brink WMA.
- 11. \$5,120 in-kind support from the Pemberton Wildlife Association for activities supporting maintaining and improving the ecological integrity of Pemberton Wetlands WMA, including
  - a. \$4,800 in-kind support for garbage cleanup of the Green River.
  - b. \$320 in-kind support for site visits with SCCLMP Coordinator.
- 12. Over \$2,765 in-kind support from the Langley Field Naturalists for stewardship of the Forslund-Watson Conservation Area, including invasive species control and monitoring, nest box installation and cleaning, monitor bats, tree planting and monitoring, bird counts, tools and equipment.
- 13. Over \$3,310 in-kind support from the Chilliwack Field Naturalists for stewardship of the Camp Slough Conservation Area, including invasive plant control, planting of trees/shrubs, maintenance of old field, and nest box checks and installation.



14. Over \$9,720 in-kind support from SFU|BCIT MSc student Hans Hermann Alvarez and volunteers for radiotelemetry project tracking Western painted turtles and providing restoration recommendations for Cheam Lake Conservation Area.
15. Over \$9,300 in-kind support from SFU|BCIT MSc student Janelle Bode and volunteers for vegetation surveys of Sturgeon Bank, Roberts Bank, and Boundary Bay WMA tidal marshes, data analysis, and report writing.
16. Over \$149,820 for ongoing stewardship activities and public engagement in the Boundary Bay and Serpentine WMAs by the Friends of Semiahmoo Bay Society, including
  - a. Approximately \$70,000 for eelgrass research exploring nutrient loading effects and potential associated affects from climate change in the Boundary Bay WMA.
    - i. \$65,000 from the Liber Ero Fellowship Grant
    - ii. \$5,000 from the City of Surrey
    - iii. \$1,000 from DFO
  - b. \$7,000 from the Federation of Canadian Municipalities for eelgrass mapping in Mud Bay.
  - c. Approximately \$22,000 for education and awareness of the ecosystems of the Boundary bay WMA.
    - i. \$6,000 in-kind support from FoSBS for coordination and leaders
    - ii. \$10,000 for Beach Hero Marine Interpretation
    - iii. \$6,000 for school kits and programming
  - d. Over \$10,500 for citizen science and stewardship activities in the Boundary Bay WMA.
    - i. \$6,000 for Shorekeepers Marine Surveys
    - ii. Beached Bird Surveys
    - iii. \$4,500 for Blackie Spit Bird Surveys
  - e. Approximately \$33,120 in-kind support for project management and public engagement in the Boundary Bay WMA.

- f. Over \$6,000 in-kind support from volunteers helping at community events, shoreline cleanups, stakeholder working group meetings in the Boundary Bay WMA.
  - g. Approximately \$1,200 in-kind support for Nest Box Stewardship at Serpentine WMA.
- 17. Ongoing SFU research into western sandpipers in the Roberts Bank WMA.
- 18. Ongoing Environmental Assessment by Hemmera (on behalf of the Vancouver Fraser Port Authority) for the Roberts Bank Terminal 2 expansion and its effects on the adjacent Roberts Bank WMA.

**Photographs**



1. **Boundary Bay Wildlife Management Area** – NTBC beach cleanup with volunteers (photo: NTBC).



2. **Camp Slough Conservation Area** – vegetation control (photo: NTBC).



3. **Chilliwack River Conservation Area** – signage installation (photo: NTBC).



4. **Silverhope Creek Conservation Area** – signage installation (photo: NTBC).





5. **Bert Brink Wildlife Management Area** – conducting soil surveys and assessing groundwater depth at candidate restoration site, conducting presence/not detected surveys of amphibians, and mapping features (photos: Sammy Penner and Lauryn Williams).





6. **Pitt-Addington Marsh Wildlife Management Area** – community-led installation of nesting boxes for ducks (photos: Dan Ottaway and Eric Balke).



7. **Cheam Lake Conservation Area** – research project studying turtle habitat utilization and eradication of invasive yellow-flag iris using benthic barriers (photos: Eric Balke).





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# Thompson Okanagan Region



The following template is to provide a summary of activities in each region. A pdf of last year's report is available for reference: [2017-18 BC/TNT Joint Conservation Land Management Summary Report](#).

Once you have completed this form, please submit to [Karen Wipond](#), who will combine the regional components into a Provincial Summary Report. This report will be made available to the public on [HCTF's website](#).

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**Region:** Thompson Okanagan

**Ecological Significance of the Region:**

The Thompson Okanagan Region has a dry, continental climate, as it lies in the rain shadow of the Coast and Cascade Mountain ranges. Vegetation varies from Engelmann spruce and lodgepole pine at subalpine elevations, Douglas-fir at lower elevations, and ponderosa pine, bunchgrass, and sagebrush at the valley bottom. These vegetation zones are in relatively close proximity to one another, resulting in extremely rich biological diversity in a small area.

The Thompson and Nicola landscapes in the north and east of the region vary from Mt Robson in the north to rolling grasslands and the river valleys of the North and South Thompson Rivers that merge in Kamloops and reaches the Fraser River in Lytton. The region also extends beyond into Lillooet and the surrounding Coast Mountains through the Bridge River valley which flows from snowfields in the Coastal Mountains and also joins the Fraser River near Lillooet. The landscape has more than 200 lakes, sage-dressed hills, vast rolling grasslands, looming mountains and alpine valleys. The grassland areas north of Kamloops Lake are recognized for their importance to wildlife, primarily California bighorn sheep, mule deer and many species at risk.

The Okanagan portion of the region, especially in the south, contains large numbers of unique flora and fauna, as it is the northern extension of the Columbia Plateau. Analysis has shown that the South Okanagan is both the top biotic rarity hotspot and the top species richness hotspot in British Columbia. It has more federally listed species at risk than any other area of the province, and more provincially Red-listed and Blue-listed species than elsewhere. Furthermore, with some 303 species of birds recorded from the Okanagan, and similar richness in other animals and plants, many species are found here and nowhere else in Canada (Geoff Scudder, 2006).

Human development over the past century has resulted in dramatic reductions in native habitat. Grasslands, and in particular the antelope-brush ecosystem, have been greatly impacted. Over the past 15 years, the antelope-brush ecosystem has been reduced in area by over 65%, with current

loss estimated at 2% per year. Channelization of the Okanagan River for flood control in the 1950's reduced its associated marshland by 85 to 90%, seriously impacting riparian habitat viability in the region. With population expected to double in the next 25 years, habitat in the Okanagan will become increasingly endangered over time.

The Nature Trust has been working in the Okanagan area since 1971. To date, 19 properties have been secured with the help of many funding partners, totalling over 4,250 hectares (10,500 acres). These conservation holdings are particularly contiguous, providing habitat corridors on a landscape scale.

### **Summary Statement of Regional Investment:**

A total of \$100,521 of Wildlife O&M money was invested in the Thompson Okanagan Region in the 2018-2019 fiscal year, and this greatly assisted the conservation partners in addressing key land management objectives.

### **Project Highlights:**

- **\$5,600** was invested in the South Okanagan Wildlife Management Area (SOWMA), including \$2,825 from Wildlife O&M for fencing materials to be used in future restoration projects, \$1,785 for Conservation Land signage to improve public awareness, and \$990 for weed removal and maintenance of the SOWMA kiosk off road 22 in Oliver. An additional \$2,700 of in-kind support was provided by FLNRORD to coordinate ordering and delivery of fencing materials, developing and ordering new signage from Queen's Printer, and contracting out the annual kiosk maintenance work.
- **\$31,870** of Wildlife O&M funding was invested in the Antler's Saddle – Garnet Valley conservation lands (CL) in 2018/19, of which the majority (\$23,140) was spent contracting the first phase of a fencing project to exclude cattle and deter off-road vehicle use. In addition to the 2.6 km of wildlife-friendly range fencing completed in 2018/19, Wildlife O&M funding was used to purchase native grass seed to revegetate the fence right-of-way (\$1,110) and stockpile additional materials needed for construction the final phase of the project in 2019/20 (\$5,290). Prescribed thinning and burning treatments continue to occur in the Garnet Valley CL, through partnerships with the Okanagan Nation Alliance, BC Wildfire Service and the MFLNRORD Wildlife Section. In 2018/19 these Ungulate Winter Range (UWR) and habitat improvements only required \$2,325 of Wildlife O&M funding for a pre-burn vegetation assessment contract. A cost-saving partnership has been developed with the BCWS in which they have offered to undertake the prescribed thinning treatments as it provides the opportunity for hands-on chainsaw training of their staff.

Not including the work contributed by BCWS, FLNRORD provided an additional \$23,450 of in-kind support for this project through monetary contributions from the District Range program (\$12,500) for fence construction, \$1500 from the Ecosystems Section to cover honoraria for PIB engagement activities and \$9,450 contributed in staff-time for coordination of projects and contracts.

- **\$4,450** was invested at the Keremeos Creek property. Primary tasks included site visits; fence maintenance and new construction; boundary and information signage produced and installed; and working with RDOS and EMBC to address flood risk and potential dike failure.
- **\$13,600** was invested at the Vaseux Lake-Schneider property. Primary tasks included site visits; planning for invasive plant management to protect this high integrity grassland habitat; 500m of new boundary fence installed along with 2 access gates; and continuation of the photographic monitoring program; review and discussions with RDOS staff and contractors regarding monitoring wells and leachate control plans.
- **\$4,670** was invested at the Vaseux Lake – Emery & Franmar complex. Primary tasks included site visits; maintenance of fences; invasive plant management including surveys, mechanical control seeding following treatments; watering of riparian restoration planting to ensure survival; and continuation of the photographic monitoring program.
- **\$8,204** was invested at the Vaseux Lake – Brock & Thomas complex. Primary tasks included site visits; invasive species management including survey and mechanical removal; fence repairs and sign development and installation; review of utility right of way holder plans; and operational oversight of Allendale Water Users Community to ensure conservation goals and objectives are met and addressed.
- **\$6,000** was invested at the Okanagan Falls Biodiversity Ranch. Primary tasks included site visits; invasive species management including survey and mechanical removal; fence repairs; and continuation of the photographic monitoring program.
- **\$6,000** was invested at the White Lake Basin Biodiversity Ranch. Primary tasks included site visits; invasive species management including survey and mechanical removal; fence repairs; and continuation of the photographic monitoring program.

**Conservation Outcomes:**

Numerous conservation outcomes were achieved on these lands in 2018-2019 using Wildlife O&M funding. Many of these outcomes continue to build upon the efforts and investments of previous years. The largest single investment this year was in Antler's Saddle – Garnet Valley Conservation lands with the installation of over 2.5 km of wildlife-friendly fencing, which utilized materials purchased and stockpiled last year using HCTF funds. This completed Phase I fencing of the Antler's Saddle – Garnet Valley Conservation Lands perimeter fence, a project that has required several years of planning and collaboration between PIB and MFLNRORD Range and Ecosystems staff to get to this point. Funds remaining in this year's budget were also used to stockpile the remaining materials that will be required for the final phase (Phase II) this coming year. Phase II of this fencing project is shorter than Phase I, at approximately 1.5 km in length. Once this final portion of the fencing has been installed in Garnet Valley, the Conservation Land will have a perimeter fence to exclude cattle from entering it, and approximately 215 hectares of land will be protected from livestock impacts and preserved for wildlife values including ungulate winter range.

Planning continues for fencing and restoration work at the South Okanagan Wildlife Management Area (SOWMA), a process involving thorough engagement and collaborative work with the Osoyoos Indian Band (OIB) to assess and inventory cultural values in the core land area prior to any physical work taking place. In 2018/2019 Wildlife O&M funding was used to purchase and stockpile fencing materials for future projects at SOWMA. In 2019/20 there are plans to develop a contract for posting the new Conservation Land signage at various SOWMA parcels and identify priority locations for future signage.

The 2018-2019 field season saw a wide range of land management needs and activities addressed. These activities ranged from reacting to and dealing with flooding concerns, to restoration efforts including invasive plant management.

Boundary fence lines were surveyed and repaired, new fence lines were installed and old fences were removed all in an effort to reduce trespass, control unauthorized motor vehicle and other non-compatible uses on sensitive habitats throughout the region. In total more than 22 km of fence lines were surveyed and repairs carried out and work plans updated as required. 500m of new boundary fence was installed using Operations and Maintenance funds while an additional 3.48 km of new fencing was installed utilizing other funding sources. Public information and property boundary signage was installed in key locations to help inform the public of land ownership and protect the important conservation values of each property complex.

Invasive plant management continued to play a key role in the conservation land management efforts of 2018-19. Surveys and mechanical control in key areas were undertaken across the region. A large focus for the 2018-19 season was working with the Okanagan and Similkameen Invasive Species Society (OASISS) to develop an integrated invasive plant management plan for the White Lake Basin Biodiversity Ranch. More than 152 surveys across 52 sites covering approximately 305 hectares of land were carried out by summer crews at this one property complex. This work was undertaken in concert with larger area based pilot project with support from many partners from all levels of government, including the National Research Council and BC Parks.

Approximately 35 hectares of land was restored in 2018-2019, by undertaking invasive plant management/removal at key sites, post treatment all areas were seeded with an approved dryland grass seed mix. Other projects such as boundary fence installation, contributed to restoration effort of conservation lands however these projects were not included in the total hectare estimate.

**Photographs:**



**SOWMA kiosk vegetation management and cleanup (before & after)**





**Antler`s Saddle – Garnet Valley (ACQ 2) Conservation Land Fencing (before & after)**



**New Fence Line in Garnet Valley**



### Bags of Seed for revegetation of fence ROW



### New Conservation Land Signage





**Keremeos Creek:**

**Non-built hazard removal**



**Fence line Maintenance**





**Vaseux Lake Brock Thomas:**

**Photographic Monitoring**



**Garbage Clean Up**



**Invasive Plant Control/removal**





**Emery Franmar:**

**Spring Flooding,**





**Skaha lake Eastside:**

**Spring Flooding**



**Secondary Trail Closures;**



**Okanagan Falls Biodiversity Ranch:**

**Invasive Plant removal.**





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# Kootenay Boundary



The following template is to provide a summary of activities in each region. A pdf of last year's report is available for reference: [2017-18 BC/TNT Joint Conservation Land Management Summary Report](#).

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**Region:** Kootenay

**Ecological Significance of the Region:**

The Kootenay region is world renowned for its scenic beauty and biological diversity. Forest, shrub, grassland and wetland ecosystems provide habitat for a wide variety of plant and animal species, including many species at risk.

From the heights of the Rocky Mountain Range, there are vantage points where you can overlook the entire expanse of the East Kootenay region of south-eastern British Columbia. The western horizon, viewed from these vantage points, is profiled by the Purcell Mountain range which is separated from the Rocky Mountains by an enormous valley known as the Rocky Mountain Trench. Two great rivers begin here; the Kootenay flowing south through dry grasslands, with signs of historic wildfires, and the Columbia flowing north through a series of long valley-bottom lakes and lush wetlands. This great river eventually swings south at Boat Encampment and continues south between the Monashee and Selkirk Mountain ranges in the West Kootenay and into the state of Washington at Waneta. Another important river, the Elk, begins its journey in the eastern Rocky Mountains and winds its way along towering cottonwoods to join the Kootenay immediately south of the small community of Baynes Lake.

The geographic diversity of the Kootenay landscape along with wide variations in climate has created conditions and habitats that support rare plant life, productive aquatic systems, and abundant populations of elk, deer, Rocky Mountain bighorn sheep, mountain goat and moose. Such abundant wildlife naturally attracts predators and consequently, wide-ranging carnivores are still common in the Kootenay's. Additionally, over 270 species of birds make use of the region, many on their migratory travels along the Pacific flyway.

From a rare species perspective, the grasslands, dry forests, montane forests, scattered wetlands, and cottonwood habitats in the Kootenay region provide unique habitats that support rare species such as the American badger, Swainson's hawk, Northern leopard frog and Lewis' woodpecker.

However, the low elevation valleys of the Kootenay's, which provide some of the most important habitat for a wide spectrum of wildlife, continue to be developed and attract increased levels of human settlement. In turn, this creates additional pressures on the landscape and impacts wildlife habitat and biodiversity values. Fortunately, the Ministry of Forests, Lands, Natural Resource and Rural Development (FLNRORD) along with The Nature Trust of British

Columbia (NTBC) have worked for decades to conserve ecologically significant habitats within the region. As a result, dozens of properties have been secured and, when combined with properties conserved by other land trusts and agencies, have resulted in a significant area of the Kootenay landscape being conserved in perpetuity.

### **Summary Statement of Regional Investment:**

In 2018-19, \$110,064.00 was invested into 19 NTBC and FLNRORD conservation property complexes in the Kootenay- Boundary Region, to assist regional staff and partners in achieving management objectives.

The funding was used for a wide variety of operations and maintenance activities, the highlights of which are outlined below.

### **Project Highlights:**

Project highlight for the Kootenay Boundary region during the 2018-19 year, include:

- \$9,666.66 was invested into the Big Ranch Conservation Complex, where the NTBC Conservation Youth Crew monitored, repaired, and enhanced existing Trembling Aspen exclosure cages designed to encourage the rejuvenation of the older, heavily browsed stands. The conservation crew also maintained/repared approximately 4.5km of boundary fenceline, monitored the usage and health of previously inoculated wildlife trees, and completed an invasive plant inventory.
- \$13,763.31 was invested for the removal and installation of a new boundary fence, repair of existing fences, and inventory of invasive plants at the Bull River Conservation Complex. An older boundary fence, which was hazardous to wildlife was removed and replaced with a new 550m, wildlife friendly designed fence. Remaining boundary fencelines were repaired, and a property wide invasive plant inventory was completed to help inform future management objectives on this complex.
- \$9,077.27 was directed to operation and management activities on the Cherry Creek/Bummers Flats Conservation Complex. Primarily through mechanical treatment by the conservation crew, invasive species were removed from both NTBC and FLNRORD conservation parcels and disposed of at local transfer stations. Boundary fenceline were maintained and repaired, and recently restored wetlands at cherry creek were planted with native riparian vegetation and then protected with exclusion fencing.
- \$2,157.81 was invested on NTBC's Redfish Creek Conservation Property. This property was assessed for danger trees, and all trees of concern were removed by a certified danger tree faller. Projects of this nature are important on properties like Redfish Creek, as they experience a high amount of public use.

- \$10,000 was invested at the Creston Valley Wildlife Management Area for operational aspects of the WMA, where a contractor was hired to modify water control structures to ensure their longevity, and aid in their efforts to provide high quality waterfowl habitat.
- \$16,025.00 was directed to the Gold Creek Game Reserve for 800m of newly constructed range fencing on the southern boundary of the parcel. This was a wildlife friendly designed fence, with crossing points installed at high use areas. The fence traversed very difficult terrain and was completed in a collaborative effort with the Ministry of FLNRORD Habitat and Range staff. The fence will help to stop cattle trespass from adjacent range tenures, as well as restrict motorized access from the high volume of recreationalist who frequent the area.
- \$10,520.34 was invested in the Columbia Wetlands Wildlife Management Area through the delineation of the Columbia River's main channel, and a review of a gravel pit located in the WMA. Results from the delineation will inform locations for signage, as well as provide detailed maps to Transport Canada and the public regarding WMA restrictions and regulations. Both the delineation and pit review will allow for more cooperative management and compliance in the WMA.
- \$8,617.67 was invested at the Grand Forks Conservation Complex. Activities included the completion of a management plan, boundary and exclusion fence maintenance, and herbicide treatment for invasive plant infestations.
- \$4,412.96 was directed to the Premier Ridge Conservation Complex in the 2018-19 season. Activities were focused on mechanical removal of invasive species, fenceline maintenance/repair and geo-referencing of existing fencelines. The fenceline shapefiles were used to compare existing fence locations with actual parcels boundaries. Shapefiles have been used for recommendations on new fenceline construction in the 2019-2020 season. Initial works related to the restoration of a stream/wetland complex on the property have started as well.
- \$11,780 was allocated to the chemical treatment of invasive species throughout the HCTF O&M eligible Kootenay properties in 2018-19. Chemical herbicide applications were recorded and input into the provincial Invasive Alien Plant Program (IAPP) database to allow for continued monitoring of infestations and evaluation of management effectiveness over time.

### **Conservation Outcomes:**

The 2018-19 field season resulted in a wide range of critical land management needs being addressed on conservation lands in the Kootenay Boundary Region. These activities included, but were not limited to: infrastructure maintenance, repair and replacement, the development of



critical documents such as property management direction plans as well as, habitat restoration, monitoring and inventory activities.

Old fence lines were removed and replaced with new ones to reduce trespass of livestock and unauthorized motor vehicle use on sensitive conservation properties, and a new high priority fenceline was constructed along a previously unrestricted property boundary. Public information and property boundary signage was installed in key locations to inform the public of land ownership and protect the important conservation values that each property possesses. Danger tree assessments were completed on properties which receive a high volume of public use, and dangerous trees were removed by a certified professional. A much-needed delineation of the Columbia Wetlands WMA main channel was completed, as to allow for future sign installation which restricts motorized use, resulting in riparian protection and increased areas of wildlife refuge and usage. The maintenance of ongoing water level and flow management structures was completed to allow for continued access of high-quality waterfowl habitat.

Mechanical and chemical invasive plant treatments and re-seeding efforts were undertaken on many properties, to restore compromised ecosystems to native vegetative conditions. Significant effort was also directed to assisting in the establishment of healthy native vegetation on recently restored wetlands, including riparian planting, seeding and exclosure fencing. On other properties, detailed assessments and inventories were completed to help inform future management actions.

Some funding was also invested into future conservation by undertaking important planning activities, including the property assessments, infrastructure inventory, and invasive plant inventories. Results helped to create a strategic approach to the upcoming 3-year HCTF workplan on Kootenay Boundary Conservation Properties.

Approximately 50 hectares of conservation land was restored in 2018-19 with HCTF Operations and Maintenance funding. The area of restored land was calculated solely through the amount of area treated for invasive plants and area planted/seeded with native vegetation. Many other projects contributed to the restoration of conservation lands (i.e. completion of boundary fencelines), however, they are not as directly related.

**Photographs**

Figure 1: NTBC Crew photo monitoring aspen exclosure cages on the Big Ranch.

Figure 2: NTBC Crew thinning undergrowth with brush saws.

Figure 3: Planting native tree species around the restored wetlands at Cherry Creek.





Figure 4: Transporting riparian vegetation plugs for planting around the Cherry Creek wetlands.

Figure 5: NTBC crew repairing a fenceline around the Premier Ridge Conservation Complex.

Figure 6: Exclosure cages around planting zones at the Cherry Creek wetlands.





Figure 7: NTBC crew removing invasive plants at the Premier Ridge Conservation Complex.

Figure 8: NTBC crew repairing Aspen exclosure fencing at the Big Ranch.

Figure 9: NTBC crew going over daily work plan and completing daily tailgate safety meeting.





Figure 10: Identifying wildlife trees while monitoring at the Big Ranch.

Figure 11: Dike rehabilitation at the Creston Valley Wildlife Management Area.

Figure 12: Columbia River Wetlands WMA main channel delineation.

Figure 13: NTBC crew repairing fenceline brace at Columbia Lake West.





Figure 14: New fenceline installed at Gold Creek Game Reserve

Figure 15: Fenceline right of way during construction of Gold Creek Game Reserve fenceline

Figure 16: Preparing for fall seeding around Cherry Creek wetlands

Figure 17: Danger tree assessment at Redfish Creek





# Cariboo Region

**Region: Cariboo**

**Ecological Significance of the Region:**

The Cariboo Region is a diverse landscape, ranging from the Coastal Mountains in Tweedsmuir Park, to the vast dry grasslands of the Chilcotin Plateau, to the interior rainforest of the Cariboo Mountains. These varied terrains and conditions result in an equally varied diversity of fish and wildlife.

The Cariboo Region contains 6 Conservation Land complexes, administered regionally, including a number of properties owned by The Nature Trust of British Columbia.

**Summary Statement of Regional Investment:**

In 2018-19 \$32,630 was allocated to the 6 properties in the Cariboo, to assist regional staff and partners in achieving management objectives. See outcomes report for additional money secured.

**Project Highlights:**

We had multiple funding partners this year - Wildlife Habitat Canada (WHC), National Wetland Conservation Fund (NWCF) and Environmental Damages Fund (EDF).

**\$700** was invested in the Chilanko Marsh conservation area to inspect the property for safety and ecological concerns. The ~3.55km perimeter fence wire was tightened and where required fallen trees removed and fence repaired. Signage was inspected and replaced as needed. NWCF funded \$1,360 and an additional amount of \$23K, for cattle guards and fencing material.

**\$15,700** was invested in the Chilcotin Lake & Marshes conservation area to inspect the property for safety and ecological concerns, and to build a 4.8km perimeter wire fence. Property information signs were installed. WHC and EDF funded \$56,660.

**\$600.00** invested in the Dale Lake conservation area for property inspections for safety and ecological concerns, and maintenance of property information signage.

**\$700.00** invested in the Tautri Creek conservation area for property inspections for safety and ecological concerns, and maintenance of property information signage.

**\$654** was invested in the Knife Creek conservation area for a contractor to conduct routine fence maintenance on the perimeter fence. Where required, trees were bucked off the fenceline, top rails replaced, and wire strands repaired.

**\$4,320** was invested in the Hanceville conservation area. The majority of this property burned in the 2017 wildfires. Approx. 1.6km of burned posts and downed wire was removed from the property for wildlife and livestock safety purposes.

### **Conservation Outcomes:**

The 2018-19 field season resulted in important land management activities on a number of Conservation Lands within the Cariboo Region.

A significant positive outcome was the completion of livestock exclusion fencing around the Chilcotin Lake Conservation Area. Fence construction and maintenance serves to protect sensitive habitat areas from inappropriate use. Assessments of the ecological attributes and issues specific to each property form the basis for activity planning for the following field seasons.

Informational signage, indicating property ownership and management partners, with contact information was posted on properties where appropriate. This serves to demarcate boundaries and to provide the public with the means to contact a land manager to discuss management concerns and issues.

### **Photographs**



1. Chilanko Marsh – Livestock exclusion fencing repaired.





2. Chilcotin Marsh – Informational sign installed. Perimeter fences maintained.



3. Chilcotin Lake – 4.8 km of perimeter fencing constructed. Informational signage installed.







4. Knife creek property – fence maintenance.



5. Hanceville Property – post 2017 wildfire burn cleanup of burned fence posts and downed wire.





# Skeena Region

The following template is to provide a summary of activities in each region. A pdf of last year's report is available for reference: [2017-18 BC/TNT Joint Conservation Land Management Summary Report](#).

Once you have completed this form, please submit to [Karen Wipond](#), who will combine the regional components into a Provincial Summary Report. This report will be made available to the public on [HCTF's website](#).

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**Region:** Skeena

**Ecological Significance of the Region:**

The Skeena Region covers approximately one third of the province of British Columbia. It is a highly varied landscape, characterised by mountainous terrain, interspersed with large plateaus, a multitude of lakes and several of the province's largest rivers including the Skeena, the Nass and the Stikine.

The Skeena Region includes BC's North Coast from the Coast Mountains to the Pacific Ocean. This area is rich in biological diversity and noted for the Pacific Flyway, an important migration corridor for birds. Large rivers, such as the Nass and the Skeena, flow into the Pacific Ocean, providing critical estuarine habitats. The Skeena Region's extensive wilderness areas provide habitat for a wide variety of wildlife. Both Black and Grizzly Bears occur here, and salmon are abundant in the major rivers and tributaries.

The Skeena Region contains 8 Conservation Land complexes, administered regionally, including a number of properties owned by The Nature Trust of British Columbia, a Wildlife Management Area, and a Wildlife Habitat Management Area.

**Summary Statement of Regional Investment:**

In 2018-19 **\$29,204.00** was allocated to 7 properties in the Skeena, to assist regional staff and partners in achieving management objectives.

**Project Highlights:**

**\$3,250.00** invested in the Alice Arm conservation area for property inspection and invasive plant treatments.

**\$1,850.00** invested in the Kitsumkalum Lake – Nelson River conservation area for property inspection, access and safety evaluation, maintenance of property information signage, and garbage removal.

**\$1,150.00** invested in The Lakelse Lake – Mullers Bay conservation area for property inspection, access and safety evaluation, boundary sign maintenance, and rubbish removal.

**\$2,959.00** invested in The Lakelse River conservation area for property inspection, engagement with local stewardship club, and replacement of damaged boundary and trail signs.

**\$1,795.00** invested in the Nadina River Valley – Owen Lake conservation area for property inspection, maintenance of signage, invasive plant surveys, and treatment of invasive common tansy.

**\$700.00** invested in the Smith Island conservation area for maintenance of signage and engagement of local volunteer in property stewardship.

**\$4,000.00** invested in the Hubert Hill conservation area for fence repair, invasive plant removal, habitat restoration, volunteer supervision, maintaining seedbeds, and monitoring extent and condition of restored sites for maintenance records, research and recommendations for long-term.

**\$13,500.00** invested in Todagin WMA Planning and organizing ecological data collection project on Todagin WMA to establish long-term ecological monitoring plots, collect data and work towards a partnership with Tahltan Wildlife Guardians, who patrol the WMA. This work was put on hold due to the forest fires and evacuations. A contract amendment allowed for data completion of 5 plots and a literature review of long-term monitoring protocols and recommendations for Todagin WMA. This preparation provides a sound, scientific start for any future ecosystem monitoring. It is expected that there will be partnership opportunities with Parks, FLRNO Ecosystem BEC mapping and Tahltan training to lever HCTF funding in next year or two.

### **Conservation Outcomes:**

The 2018-19 field season resulted in management of a number of Conservation Lands within the Skeena Region, including evaluation of ecological attributes and safety concerns, which guide activity planning for ongoing land management.

Informational signage, indicating property ownership and management partners, with contact information was posted and maintained on properties where appropriate. This serves to demarcate boundaries to protect habitat values from inappropriate public usage, and to provide the public with the means to contact a land manager to discuss management concerns and issues.

Work commenced on Todagin WMA, the largest WMA in the province of British Columbia with respect to planning and organizing an ecosystem-monitoring project to assess grassland and forest condition and monitor changes. This work will continue into future years and will provide data for ecosystem-based management decisions for wildlife management and recreation.

Site restoration of Hubert Hill, near Telkwa, is ongoing. Success is being achieved with re-introduction of native species, preventing further site damage, and educational outreach.

In 2018-2019, approximately 12 hectares of conservation land was restored through various activities in the Skeena Region.



### **Photographs**

Please include some photographs highlighting project work in your region.



1. Alice Arm – surveying habitat values and managing invasive plants (giant burdock).



2. Lakelse Lake – Mullers Bay – removal of rubbish along shoreline.



3. Lakelse River – replacement of trail signage damaged by vandalism. This sign explains the conservation values of the property, and etiquette for multi-use recreation trail.





4. Nadina River Valley – monitoring and spot-treatment of invasive plants (common tansy).



5. Nadina River Valley – although much of the upland component of this property burned in 2018 wildfires, the wetland provides excellent habitat for moose.





6. Hubert Hill – invasive plant and brush removal



7. Hubert Hill restoration plots: Year 1; Year 2; Year 3



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# Omineca Region

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**Region: Omineca**

**Ecological Significance of the Region:**

The Omineca Region encompasses a large portion of northern British Columbia, with a diversity of landscapes ranging from the broad flat pine forests of the Central Plateau to the rugged peaks of the central Rocky Mountains. This Region includes the highest mountain in the Canadian Rockies, Mount Robson (3954 m).

The Omineca Region encompasses the headwaters, or portions of the headwaters, of several provincially important rivers, including the: Fraser, Nechako, Pine, Findley, Parsnip and Stuart. Within the drainages of these rivers lie several regionally important lakes and the Province's largest reservoir, Williston Lake which lies behind the W.A.C. Bennett Dam. The rivers and their tributaries provide spawning grounds for Chinook, Coho, and Sockeye Salmon. Arctic Grayling, White Sturgeon, Rainbow, Bull and Lake Trout, as well as several species of whitefish, suckers, minnows and Burbot, all live within the Omineca Regions lakes and streams. One of the highest valued recreational rainbow trout fisheries is in the Stellako River, which in 2013 became the Omineca Regions first Wildlife Management Area. Clear, cold mountain streams provide necessary habitat for Blue Listed Bull trout in the Omineca and the large meandering Nechako and Fraser Rivers are home to Red Listed White Sturgeon.

Regionally important wetlands, such as those on the Hominka and in the Cranberry Marsh / Starratt WMA, provide much needed rest and refueling stops for a number of migratory birds. Populations of American White Pelicans nest on some of the regions lakes and White Swans winter on several rivers. The northern extent of Sharptailed Grouse range occurs on southwest facing meadows in the southern portion of the region and in the agricultural lands local breeding groups of Long-billed Curlews and Sandhill cranes can be found in the spring.

The largest herds of Mountain Caribou left in the Province reside in the mountains on the eastern side of the region, and in the north populations of Northern Caribou still roam. Throughout the Omineca region there are Moose, Grizzly bear, Black Bear, Fisher, Marten, Lynx, Wolf, Mountain Goat, and Mule Deer, with local populations of Stone Sheep, Elk and White Tail Deer and Cougar where snow packs are thinner. Rare plant associations, ecosystems and habitats are scattered across the Omineca bolstering regional biological diversity, including the northern extent of Whitebark pine and Douglas fir, and the largest population of Haller's Apple moss in the world as well as the only known locations of Crumpled Tar Paper Lichen.

Given the highly diverse and geographically large area that the Omineca region covers it contains relatively few Conservation Lands. Only 5 such areas are administered regionally and they cover a small selection of the habitats that can be found regionally.

**Summary Statement of Regional Investment:**



In 2018-19 \$36964.00 was allocated to 6 conservation properties in the Omineca, to assist regional staff and partners in achieving management objectives.

**Project Highlights:**

**\$6011.57** invested in the Cranberry Marsh / Starratt WMA. Ongoing activities include Boundary identification, replacement of signs that are in disrepair, community engagement, management planning, trail assessment, minor repair of trail infrastructure, implementation of invasive plant management plans, and seasonal inspections. A community weed pull was put on by the NWIPC and attended by local Guides, Brownies, Sparks, Junior Rangers. Planning for stream crossings on the trail network has begun with the Village of Valemout and Yellowhead Outdoor Recreation Association.

**\$2658.58** invested in The Stellako River WMA for invasive species removal, seasonal inspections, and garbage removal from public access points. Fisheries and habitat values were assessed.

**\$1776.89** invested in the Joanne Lloyd property for invasive species control and removal over .25 ha, infrastructure maintenance and seasonal inspection. Work with Ministry of Transportation and Infrastructure regarding highway upgrades adjacent to the property will continue until the project is completed in 2021. Removal of a dock that has washed up on the property will have to wait until high water in 2019.

**\$1,375.00** invested in the Nechako River conservation property, to conduct management and safety inspections, manage invasive species, and maintain informational signage.

**\$3,429.00** invested in the Mount Robson Ranch property to assess property condition, needs, and public usage. Perimeter signage was installed and maintained as required. Review of adjacent forestry tenure plans was conducted to ensure no impact to conservation lands.

**\$0.00** invested in the Natasha Boyd property as Government staff time was all that was required for property assessments and signage. Signage update required images from community partners that have not been acquired. We will endeavor to get signage completed in 2019-20.

**Conservation Outcomes:**

Invasive plant management continues to be a focus on priority areas of concern and significant reductions of invasive plants have been achieved at Stellako, Joanne Lloyd. Implementing invasive plant management plans is ongoing, in conjunction with the Northwest Invasive Plant Council. A community weed pull was organized by the NWIPC in the Cranberry Marsh / Starratt WMA and had over 35 participants. In partnership with community groups, and the Village of Valemout, resurfacing of approximately 2km trail in the Cranberry Marsh was undertaken; this was funded by the Village of Valemout. Maintenance of infrastructure, installation of signage, site visits and trail maintenance were undertaken by The Nature Trust of British Columbia and FLNRORD staff. Fisheries management continues to be a priority at the Stellako River WMA with increased effort from Government being

spent. This provided opportunity for multiple site visits at reduced cost to the O&M budget. Management Plans for Stellako and Cranberry Marsh / Starratt are in final review.

### **Photographs**



1. Cranberry / Starratt Marsh – Property inspections completed. Informational signage installed at public access points.



2. Cranberry marsh weed pull participants photo KORIE MARSHALL:  
<https://www.therockymountangoat.com/2018/06/weed-pull-targets-marsh-invasive/>





3. Stellako River Wildlife Management Area – Extensive use by anglers. Garbage removed from access area and signage installed.



4. Nechako River – Invasive plants removed and informational signage installed.



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# Northeast Region

The following template is to provide a summary of activities in each region. A pdf of last year's report is available for reference: [2017-18 BC/TNT Joint Conservation Land Management Summary Report](#).

Once you have completed this form, please submit to [Karen Wipond](#), who will combine the regional components into a Provincial Summary Report. This report will be made available to the public on [HCTF's website](#).

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**Region: Northeast**

**Ecological Significance of the Region:**

The Northeast Region of British Columbia is located between the Rocky Mountain foothills and the Alberta Plains.

This region consists of the Peace River and Liard River drainages of the Arctic watershed, featuring plateaus, plains, prairies, and lowlands lying east of the Rocky Mountains. Areas at higher altitudes are poorly drained, resulting in extensive muskeg areas. The region is characterised by boreal forest with critical wetlands and lakes interspersed throughout.

Since the 1950's, the Northern Region has experienced rapid development of oil and natural gas resources, resulting in increased fragmentation of this landscape. A number of Class 1 wetlands provide critical habitat for numerous waterfowl.

The Northeast Region contains 6 Conservation Land complexes owned by The Nature Trust of British Columbia.

**Summary Statement of Regional Investment:**

In 2018-19 \$36,268.00 was allocated to 6 project areas in the Northeast, to assist regional staff and partners in achieving management objectives.

**Project Highlights:**

**\$9,724.00** invested in the Boundary Lake conservation area for property inspection, management of invasive plants, and maintenance of water control structures. Boundary signs were installed and maintained, and new informational signs were produced for installation next fiscal.

**\$4,374.00** invested in the Comstock Marsh conservation area for property inspection, management of invasive plants, and maintenance of water control structures. Boundary signage was maintained and public access areas maintained for safety.



**\$1,850.00** invested in the Dunlevy Creek conservation area for property inspection, boundary sign maintenance, and control of forest ingrowth in grassland areas (14 hectares) to maintain ungulate foraging habitat.

**\$1,633.00** invested in the Fort St. John Potholes conservation area for property inspection, maintenance of water control structures, property boundary signage, and garbage removal.

**\$14,871.00** invested in the McQueen Slough conservation area for property inspections, management of invasive plants, and maintenance of water control structures. Public access facilities, including trails and boardwalk, were maintained, as this conservation area regularly hosts elementary school children for an outdoor learning area.

**\$3,816.00** invested in the Worth Marsh conservation area for property inspections, installation of property informational signage, maintenance of water control structure, and review of oil and gas industry activities adjacent to the conservation area.

### **Conservation Outcomes:**

The 2018-19 field season resulted in a wide range of critical land management needs being addressed on conservation lands in the Northeast Region. These activities, including habitat restoration and maintenance of public facilities and structures, ensure that habitat values are maintained or enhanced, and that public access to these conservation lands is safe and appropriate.

Informational signage, indicating property ownership and management partners, with contact information, was posted and maintained where appropriate and required. This serves to demarcate boundaries to protect habitat values from inappropriate usage, and to provide the public with the means to contact a land manager to discuss management concerns and issues.

Property assessments, including evaluation of the ecological attributes and issues specific to each property, form the basis for activity planning for the following field seasons.

**Photographs**



1. Boundary Lake – Installation of informational property signage.



2. Dunlevy Creek – Removal of conifer seedlings from ungulate forage areas. Installation of boundary signs.





3. Fort St. John Potholes conservation area. Perimeter fencing inspected. Signs maintained and installed.





4. Worth Marsh – Water control structure maintained. Informational signage installed.