

# Wildlife O&M

## Regional Application



2013-16

Part 1

# WEST COAST



West Coast Region: Index of Property Plans

Asseek Estuary

Baynes Sound

Beaver Cove OIC

Bella Coola Estuary

Buttertubs Marsh

Cluxewe WMA

Cowichan Estuary

Dudley Marsh Conservation Area

Filberg Marsh

Green Mountain WMA

Hardy Bay Quatse River Estuary

Kingcome River Estuary Conservation Area

Lazo Marsh-North East Comox WMA

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Salmon River Estuary Conservation Area

Salmon River Elk Reserve

Somenos Marsh Conservation Area Thetis

Thetis Island Bat Caves

Tofino Mudflats WMA

Willow Creek Conservation Area



## Wildlife O&M 3-year Application – ASSEK ESTUARY PROPERTY

### SITE DESCRIPTIONS / ACTIVITIES

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#### 1. Name of property:

- a. *Property Name:* **Asseek Estuary Property**
- b. *CLD Reference:* Asseek Estuary (LEA)

#### 2. Habitat Description / Values

This 67.18 hectare acquisition of the Pacific Estuary Conservation Program is critical North Coast estuarine habitat. The Asseek Estuary is located in the South Bentinck Arm. As a typical fjord delta, the property is a coastal pocket of habitat for a wide variety of fish and wildlife, whereas the coastline is generally precipitous and exposed.

In total, the drainages of the South Bentinck Arm represent one of the richest coastal areas for all 5 species of salmon. Waterfowl rest and feed on the estuary, along with three others (Noeick, Taleomey, and Ickna) on the South Bentinck Arm, during spring and fall migrations to and from major nesting areas in the Cariboo and Chilcotin regions. Trumpeter swans winter in the estuary.

Of the four estuaries, Asseek is unique in that it is not glacial-fed and has a small watershed, resulting in a relatively stable clear-water system. Combined with low gradient in the lower reaches, the result is an extensive floodplain marsh controlled by beaver dams. The marshes are used extensively by grizzly bears for sedge grazing and root foraging. Other wildlife include black bear, wolf, cougar, deer, and various furbearers.

#### 3. Guiding Documents

- TNT/Province Lease Agreement, 1989*
- Asseek Estuary Wildlife Reserve General Management Plan, 1989*
- TNT/Province Management Agreement 2011*

#### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1: Maintain biodiversity and habitat for fish and wildlife, particularly waterfowl and grizzly bear	Objective 1: Inspect property for concerns when opportunities present Objective 2: Inventory and map the floodplain Objective 3: Examine enhancement options for wintering trumpeter swans	S-T Indic 1 –Property inspection completed S-T Indic 2 – Floodplain inventoried and mapped S-T Indic 3 – Enhancement options assessed	L-T Indic 1 – Maintained biodiversity and habitat. L-T Indic 2 – Enhanced biodiversity and habitat.
Goal 2: Public use and safety	Objective 1: Ensure that informational signage, where present, is maintained	S-T Indic 1 – Signs maintained S-T Indic 2 – Inspections are completed and deficiencies /risks are addressed	L-T Indic 1 – Public is informed of habitat values and property goals L-T Indic 2 – Balance between public use and habitat protection is maintained

#### 5. Financial Sustainability

This property is deemed as requiring passive management, with minimal cost. The property is co-owned by The Nature Trust, Ducks Unlimited Canada, and Wildlife Habitat Canada. This increased conservation agency involvement should result in management efficiencies for the area.

#### 6. Partner Recognition

This property is not currently signed or publicized. In the event that signs are installed, or press given, conservation partners will be acknowledged.



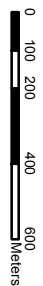
# Asseek Estuary

## Conservation Areas

- The Nature Trust
- Ducks Unlimited

## Map Symbols

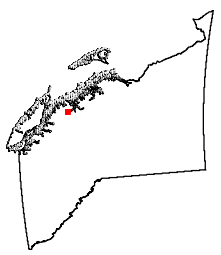
- Road



Scale: 1:20,000

UTM Zone 9 NAD 83

## BC Location



## Data sources:

- BC NGO Conservation Lands Database
- BC GOV FLNRO GeoBC
- ArcGIS Imagery

## Map produced by:



April 2012

## Wildlife O&M 3-year Application – BAYNES SOUND CONSERVATION AREAS

### SITE DESCRIPTIONS / ACTIVITIES

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For each property or property complex, the following should be completed

#### 1. Name of property:

- |                          |  |
|--------------------------|--|
| a. <i>Complex Name:</i>  | <b>BAYNES SOUND CONSERVATION AREAS</b> |
| b. <i>CLD Reference:</i> | Baynes Sound (LEA 1) – Coal Creek      |
|                          | Baynes Sound (LEA 2) – Coal Creek      |
|                          | Baynes Sound (LEA 3) – Fanny Bay       |
|                          | Baynes Sound (LEA 4) – Millard Creek   |
|                          | Baynes Sound (MR) – Mud Bay            |
|                          | Baynes Sound (TAC 1) – Fanny Bay       |
|                          | Baynes Sound (TAC 2) – Fanny Bay       |
|                          | Baynes Sound (TAC 3) – Mud Bay         |

#### 2. Habitat Description / Values

Baynes Sound, located in the Coastal Douglas Fir BEC zone, is a shallow coastal channel fringed by protected bays, open foreshore, tidal estuaries, inshore marshes and adjacent forests. Comox Harbour, which bounds Baynes Sound on the north, is a large low gradient deltaic deposit. Together these protected waters and their many freshwater streams function as a single estuary. The combinations of sheltered and exposed waters together with the resultant varying intertidal substrates have given rise to a wide range of different habitat types including inshore and foreshore marshes, low gradient deltas and tidal flats that receive input from nutrient rich river systems, and rocky intertidal beaches. These numerous different habitats support a complex food web that supports a wide range of birds species including fish eating species such as herons, loons and cormorants; diving ducks such as buffleheads and scoters that prey on gastropods and bivalves; shore birds that feed in the exposed intertidal areas such as Turnstones and Dunlin; and dabbling ducks, geese and swans that feed upon the emergent vegetation of estuarine and foreshore habitats. One of the most important sources of food for birds in this area is the prolific herring spawn that occurs throughout the region. During the peak of the herring spawn upwards of 60,000 birds descend upon the foreshore areas of the region to feed upon adult herring and their eggs.

The Baynes Sound area is a site of global significance for 7 species of birds including: Pacific Loons, Western Grebes, Brant, Black Turnstones, Mew Gull, Thayer's Gull, and Glaucous-winged Gull. Three other species are present in nationally significant numbers: Pelagic Cormorant, Trumpeter Swans, and nesting Great Blue Herons. The area also is home to several species of raptors and owls.

The Baynes Sound Conservation Area also fulfills important habitat requirements for several life stages of at least six salmonid species. The estuaries and riparian areas provide spawning and rearing habitat for coho, chum, coastal cutthroat trout and likely some steelhead. A small spring

(400m in length) known as Bob’s Spring, provides good spawning grounds and rearing habitat for a small run of chum salmon. Coho salmon fry and various life stages of cutthroat trout dominate the lower reaches of Cowie and Tweedie creeks throughout the year. The nutrient rich estuaries provide excellent rearing grounds for adult cutthroat and coho, along with chum, and chinook juveniles. Other wildlife utilizing the area include: deer, cougar, bear, sea-lions, seals. The Conservation Area also includes several rare ecosystems and plant associations.

### 3. Guiding Documents

- Baynes Sound/Lambert Channel IBA Conservation Plan – 2001*
- Fanny Bay Conservation Area Management Plan – 1992*
- Courtenay River Estuary Management Plan - 2012*
- Millard/Piercy Watershed Management Plan – 2001*
- Fanny Bay Conservation Agreement (Province/DUC) - 1988*
- BC Spartina Response Plan - 2010*
- Coastal Invasive Plant Management Strategy 2010*
- Vancouver Island Conservation Land Management Program Agreement*
- TNT/Province Management Agreement 2011*

### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1: To preserve and enhance the conservation areas natural ecosystems for fish and wildlife	<p>Objective 1: Reduce and eventually stop the degradation of existing habitats, and in particular stop the loss and degradation of the high value biophysical units.</p> <p>Objective 2: Undertake restoration activities to maintain and improve the existing habitat base in the area to support viable and productive populations of fish, wildlife and plants, including invertebrates.</p> <p>Objective 3: Maintain a diversity of productive habitats within Baynes Sound in order to sustain and improve the estuarine ecosystem.</p> <p>Objective 4: Increase fish and wildlife populations towards historical levels.</p>	<p>S-T Indic 1 – identify critical habitats that may require further protection enhancement /restoration work</p> <p>S-T Indic 2 – no loss in existing habitat value</p> <p>S-T Indic 3 – restoration works identified and implemented</p> <p>S-T Indic 4 – conduct annual surveys in conjunction with activities under Goal 3</p>	<p>L-T Indic 1 – No further degradation of habitats</p> <p>L-T Indic 2 – increased habitat diversity and species utilization</p> <p>L-T Indic 3 - Number of sites and lands where habitat improvement takes place. Longterm success of the enhancement works. Levels of partnerships developed for these projects</p> <p>L-T Indic 4 Identification and protection of important habitat (additional ha secured).</p>
Goal 2: To encourage	Objective 1: Protect and restore	S-T Indic 1 – recreational	L-T Indic 1 – On- going recreational use

<p>an understanding and an appreciation of the conservation areas ecology, and its importance in the health and vitality of the surrounding communities</p>	<p>the resources of the estuary while providing opportunities for public recreational use and cultural, spiritual and food collection practices that are compatible with fish and wildlife conservation.</p> <p>Objective 2: Increase the public engagement and stewardship of the estuary</p>	<p>use studies/data collected for estuary S-T Indic 2 – Acceptable uses are determined and managed</p> <p>S-T Indic 3 – undertake public outreach activities with CVNS, EWG, Fanny Bay Enhancement Society</p> <p>S-T Indic 4 – identify opportunities for stewardship projects to engage community</p>	<p>of conservation for wildlife viewing</p> <p>L-T Indic 2 Engaged stewardship community</p>
<p>Goal 3: Assess the long-term health and integrity of Baynes Sound and the success of habitat restoration and enhancement initiatives</p>	<p>Objective 1: Establish baseline data in order to improve the capacity of the conservation area to support vigorous populations of plants, fish and wildlife</p>	<p>S-T Indic 1 – priority baseline studies identified and implemented</p> <p>S-T Indic 2 – funding secure to implement priority actions of monitoring programs</p>	<p>L-T Indic 1 – comprehensive species /ecosystem inventory database available for Baynes Sound</p> <p>L-T Indic 2 – Monitoring plans implemented on recommended schedule</p> <p>L-T Indic 3 – Land management activities guided by results of monitoring program</p>
<p>Goal 4: Public safety</p>	<p><i>Objective 1:</i> Ensure built facilities on property are inspected annually <i>Objective 2:</i> Conduct risk assessments for “non-built” hazards (e.g. wildlife trees)</p>	<p>S-T Indic 1 – inspections are completed and deficiencies /risks are addressed</p>	<p>L-T Indic 1 – public continues to enjoy a safe environment for wildlife viewing and interpretation</p>
<p>Goal 5: To foster on-going relationships for the betterment of the conservation area complex and to bring additional resources to assist with the management initiatives</p>	<p><i>Objective 1:</i> Continue to work with the local stewardship groups and CREMP Mgmt Authority <i>Objective 2:</i> Work cooperatively with local government and stewardship groups to develop joint applications for funding /workplans</p>	<p>S-T Indic 1 – all interest groups and stakeholders are represented S-T Indic 2 – meetings result in greater collaboration and shared resources</p>	<p>L-T Indic 1 – continued strong partnership approach to conservation in Baynes Sound</p> <p>L-T Indic 2 – increased in-kind and cash contributions to the management of conservation area.</p>

## 5. Financial Sustainability

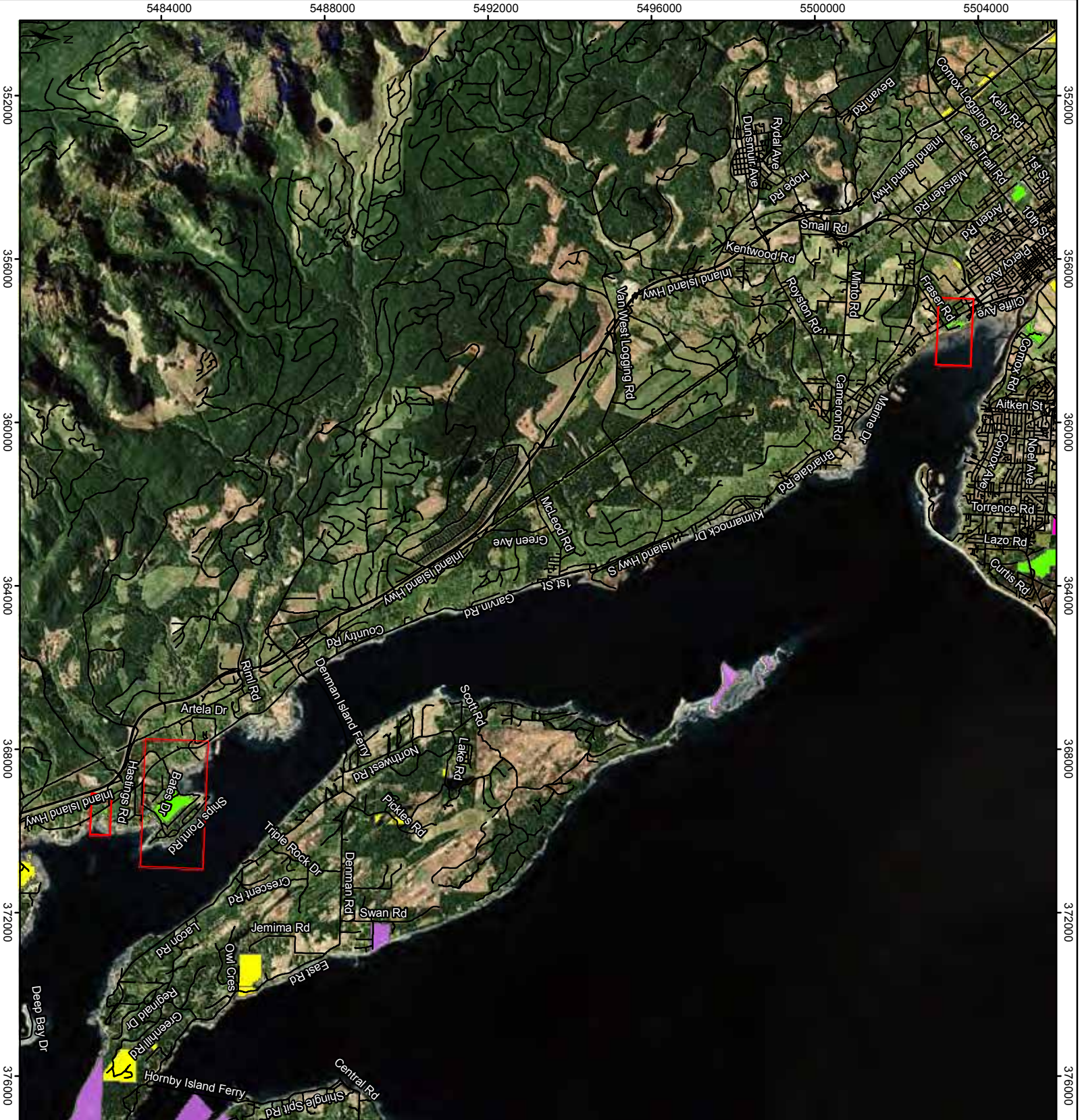
The Baynes Sound Conservation Area complex is in a tremendous position for on-going cash and in-kind support from local government and the stewardship community. Through active partnerships with the Comox Valley Regional District, City of Courtenay and the Town of Comox a great deal of local government resources are available and have included: Grant-in-Aid’s (\$) for inventory and land management work, in-kind mapping/GIS support, co-management agreements for the management of trails, and annual property tax exemptions. In addition to the local government there is a very large stewardship community in the Comox Valley that has



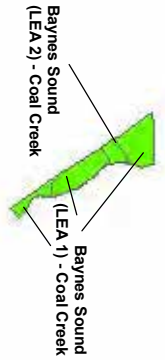
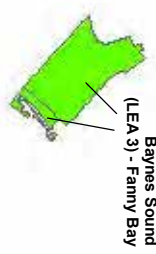
provided substantial in-kind support to the conservation area. The groups working on projects include: Comox Valley Naturalists, Project Watershed, Estuary Working Group, Fanny Bay Enhancement Society, Millard Piercy Watershed Stewards, Comox Valley Land Trust. In addition there is a volunteer warden that works on the Fanny Bay unit of the Conservation Area.

6. **Partner Recognition**

As per the VICLMP agreement and the HCTF agreement, all boundary and regulatory signs include the Province's logos. All publications/interpretive/ restorative/ enhancement signage includes the logos of all funding partners including HCTF.

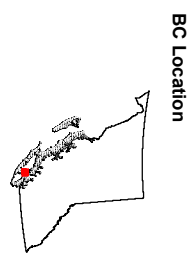
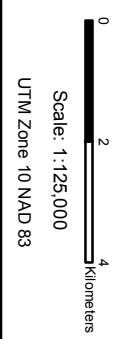


## Baynes Sound



- Conservation Areas**
- The Nature Trust
  - Private Conservancy
  - Provincial Protected Area

- Map Symbols**
- Road



**Data sources:**  
 BC NGO Conservation Lands Database  
 BC GOV FLNRO GeoBC  
 Bing Maps Aerial

## Wildlife O&M 3-year Application – Beaver Cove (OIC)

### SITE DESCRIPTIONS / ACTIVITIES

For each property or property complex, the following should be completed

#### 1. Name of property:

- a. *Complex Name:* **Beaver Cove Conservation Area**
- b. *CLD Reference:* Beaver Cove (OIC)

#### 2. Habitat Description / Values

Beaver cove conservation area is located at the mouth of Kokish River, 50 kilometers southeast of Port Hardy. It is within the Coastal Western Hemlock submontane very wet maritime biogeoclimatic zone and is 32.698 hectares in size. Directly adjacent to the property on the eastern side is an operational dry land lumber sort.

#### 3. Guiding Documents

*Parcel Report (2003)*

*Vancouver Island Conservation Land Management Program Agreement*

*TNT/Province Management Agreement 2011*

#### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1: To preserve and reclaim fish and wildlife habitat	<p><i>Objective 1:</i> To allow natural rehabilitation of degraded estuarine habitats impacted by historical log dumping</p> <p><i>Objective 2:</i> To protect estuarine and surrounding upland areas from alienation to preserve fish and waterfowl habitat values</p>	<p><i>S-T Indic 1</i> – No loss in existing habitat value</p> <p><i>S-T Indic 2</i> – Boundary and Regulatory signs installed</p>	<p><i>L-T Indic 1</i> – Naturally functioning ecological processes restored and remain uninterrupted</p> <p><i>L-T Indic 2</i> – Fish and wildlife populations towards historical levels.</p>
Goal 4: Public safety	<p><i>Objective 1:</i> Conduct risk assessments for onsite hazards (e.g. wildlife trees) and manage accordingly</p>	<p><i>S-T Indic 1</i> – Inspections are completed and deficiencies /risks are addressed</p>	<p><i>L-T Indic 1</i> – Limited public access remains safe</p>

#### 5. Financial Sustainability

Due to the remoteness of the property, additional funding opportunities are limited.

#### 6. Partner Recognition

As per the VICLMP agreement and the HCTF agreement, all boundary and regulatory signs include the Province's logos. All publications/interpretive/ restorative/ enhancement signage includes the logos of all funding partners including HCTF.





## Wildlife O&M 3-year Application – BELLA COOLA ESTUARY PROPERTY

### SITE DESCRIPTIONS / ACTIVITIES

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1. Name of property:

- a. *Property Name:* Bella Coola Estuary Property
- b. *CLD Reference:* Bella Coola Estuary (LEA)

2. Habitat Description / Values

This 47.6 hectare acquisition of the Pacific Estuary Conservation Program is critical North Coast estuarine habitat. The property is important for migratory birds, fish and mammals including grizzly bears. The tide flat at this site hosts wintering trumpeter swans.

The property lies within a broader complex of conservation lands designated as the Bella Coola Estuary Conservancy.

3. Guiding Documents

- TNT/Province Lease Agreement, 1991*
- TNT/Province Management Agreement 2011*



#### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1: Maintain biodiversity and habitat for fish and wildlife	Objective 1: Inspect property for concerns when opportunities present	S-T Indic 1 –Property inspection completed	L-T Indic 1 – Maintained biodiversity and habitat.
Goal 2: Public use and safety	Objective 1: Ensure that informational signage, where present, is maintained	S-T Indic 1 – Signs maintained S-T Indic 2 – inspections are completed and deficiencies /risks are addressed	L-T Indic 1 – Public is informed of habitat values and property goals L-T Indic 2 – Balance between public use and habitat protection is maintained

#### 5. Financial Sustainability

This property is deemed as requiring passive management, with minimal cost. It is within a broader complex of conservation lands designated as the Bella Coala Estuary Conservancy. This increased conservation consideration should result in management efficiencies for the area.

#### 6. Partner Recognition

This property is not currently signed or publicized. In the event that signs are installed, or press given, conservation partners will be acknowledged.



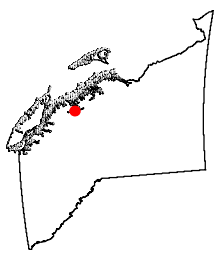
# Bella Coola Estuary

**Conservation Areas**  
 The Nature Trust



Scale: 1:10,000  
 UTM Zone 9 NAD 83

## BC Location



**Data sources:**  
 BC NGO Conservation Lands Database  
 BC GOV FLNRO GeoBC  
 Bing Aerial

Map produced by:



April 2012

## Wildlife O&M 3-year Application – Buttertubs Marsh Conservation Area

### SITE DESCRIPTIONS / ACTIVITIES

#### 1. Name of property

- a. *Complex Name*      **Buttertubs Marsh Conservation Area**
- b. *CLD Reference*      Buttertubs Marsh (LEA 1)  
Buttertubs Marsh (LEA 2)

#### 2. Habitat Description / Values

The Buttertubs Marsh Conservation Area is a reclaimed urban wetland, operating as part of a larger river and floodplain complex adjacent to the Millstone River in the City of Nanaimo, within the Moist Maritime Coastal Douglas-fir Biogeoclimatic zone (CDFmm). The Conservation Area has significant wetland values for a number of species including both federally and provincially listed species of amphibians and birds. Buttertubs Marsh contains four distinct habitat types: marsh and shallow water, Millstone River and riparian area, marsh shoreline and riparian area and vegetated upland.

Despite extensive modification from past agricultural practises Buttertubs Marsh has significant wetland values for many species, including: purple martin (Red-listed), trumpeter swan (Blue-listed), American bittern (Blue-listed), great blue heron (Blue-listed), green heron (Blue-listed), turkey vulture (Blue-listed), short-eared owl (Blue-listed), and painted turtle (Blue-listed). Dominant shallow water vegetation includes; floating and anchored cattail, hardhack, hummocks, willow, common mares tail, yellow pond lily, and red-osier dogwood, characteristic of a shrub swamp habitat. The marsh also serves as both a nesting site and brood rearing area for many species of waterfowl.

#### 3. Guiding Documents

<i>Conservation Agreement (DU, TNT, Province)</i>	2006
<i>Buttertubs Marsh Conservation Area Management Plan</i>	2004
<i>Buttertubs Marsh Management Agreement (Province/City of Nanaimo/TNT)</i>	2006
<i>Coastal Invasive Plant Management Strategy</i>	2010
<i>Vancouver Island Conservation Land Management Program Agreement</i>	2010
<i>TNT – Province Management Agreement</i>	2011
<i>MNFLRNO Inspection &amp; Maintenance of Dams</i>	2011
<i>Buttertubs Marsh Western Painted Turtle Monitoring and Habitat Restoration</i>	2011

#### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short-term	Long-term
Goal 1: Maintain and, where possible, enhance plant & animal resources of the CA	<i>Objective 1:</i> Provide wildlife habitat <i>Objective 2:</i> Control exotic, invasive plant and animal species	S-T Indic 1 – Vegetation and water levels managed to allow for optimal bird and waterfowl use. S-T Indic 2 – Non-native and	L-T Indic 1 – Continued use of CA by wildlife as habitat. L-T Indic 2 –Overall increased sustainability, viability and productivity as

	<i>Objective 3:</i> Gradually increase wildlife habitat and species biological diversity	invasive plant species minimized and monitored for spreading. Ongoing habitat enhancements.	a wetland ecosystem
Goal 2: Provide for compatible public recreational and educational use of the area	<i>Objective 1:</i> Provide controlled public access <i>Objective 2:</i> Provide wildlife and nature viewing opportunities <i>Objective 3:</i> Provide public education opportunities	S-T Indic 1 – Provision of public facilities to encourage recreational viewing of the wildlife using the marsh without undue disturbance to the species involved. S-T Indic 2 – Trespasses and unpermitted uses minimized. Activities detracting from the CA's habitat value regulated. S-T Indic 3 – Interpretive kiosks installed, updated & maintained	L-T Indic 1 – Public impact and trespasses successfully mitigated. L-T Indic 2 – Public awareness regarding sensitivity of the CA increases resulting in increased cooperation and stewardship
Goal 3: To further ecological/inventory knowledge of area	<i>Objective 1:</i> To increase understanding of the CA by providing baseline data, species inventory, and research studies on vegetation, birds, fish, reptiles, and amphibians, <i>Objective 2:</i> To continue gaining insight and knowledge regarding both wetland and forest rehabilitation. <i>Objective 3:</i> Promote the collection of ecological Data prior to potential habitat enhancements or development	S-T Indic 1 – Inventories for fish and wildlife conducted (including endangered species), inventories on seasonal habitat utilization, migration routes, wildlife populations, diversity and habitat preferences completed S-T Indic 2 – Baseline data for long term monitoring established S-T Indic 3 – Water quality and levels measured and monitored	L-T Indic 1 –Comprehensive knowledge/database of fish/wildlife habitat values completed. L-T Indic 2 –Statistical trends of inventory work observed, assessed, and utilized to monitor effectiveness of projects.
Goal 4: Public safety	<i>Objective 1:</i> Ensure built facilities on property are inspected annually <i>Objective 2:</i> Conduct risk assessments for “non-built” hazards (e.g. wildlife trees)	S-T Indic 1 – inspections are completed and deficiencies /risks are addressed	L-T Indic 1 – public continues to enjoy a safe environment for wildlife viewing and interpretation

## 5. Financial Sustainability

As described in the management plan for this property complex the *Buttertubs Marsh Management Committee* has been in place for over 10 Years and includes representatives from the City of Nanaimo, TNT, DUC, MFLNRO and the Buttertubs Marsh liaison committee community group. Through the creation of a management and stewardship agreement, members of the committee have brought substantial additional resources for the management of the area. This includes:

- Trail and viewing platform maintenance
- Annual commitments of staff and equipment
- Financial contributions to projects
- Annual property tax exemptions
- Assistance with mapping and GIS work.



## 6. Partner Recognition

As per the VICLMP agreement and the HCTF agreement, all boundary and regulatory signs include the Province logo's. All publications interpretive/ restorative/ enhancement signage includes the logos of all funding partners including HCTF.



# Buttertubs Marsh

**Conservation Areas**  
 The Nature Trust

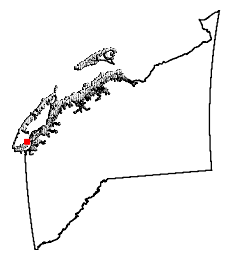
**Map Symbols**

— Road



Scale: 1:7,500  
 UTM Zone 10 NAD 83

**BC Location**



**Data sources:**  
 BC NGO Conservation Lands Database  
 BC GOV FLNRO GeoBC

**Map produced by:**



April 2012

## Wildlife O&M 3-year Application – CLUXEWE WILDLIFE MANAGEMENT AREA

### SITE DESCRIPTIONS / ACTIVITIES

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For each property or property complex, the following should be completed

#### 1. Name of property:

- a. *Complex Name:* **Cluxewe Wildlife Management Area**
- b. *CLD Reference:* Cluxewe Estuary Salt Marsh (LEA)  
Cluxewe WMA

#### 2. Habitat Description / Values

##### *Background:*

The Cluxewe River estuary and adjacent salt marsh is a diverse ecosystem that provides important habitat for numerous wildlife and fish species. The 125ha Cluxewe River saltmarsh and estuary is located approximately 10km west of Port McNeil and is within the Nahwitti Lowlands eco-region and CWH vm1 biogeoclimatic zone. The brackish marsh near the Cluxewe River mouth is typical of the productive *Carex lyngbyei* estuaries found along the East Coast of Vancouver Island. However the saltmarsh west of the mouth of the river appears to be isolated from fresh water inflows and is primarily fed by oceanic waters from Queen Charlotte Strait during high tides that enter the marsh through a narrow entrance exposed to the ocean. The northern salt marsh boundary consists of 1.8km of beach dune habitat. The combination of a brackish marsh next to a salt marsh is unusual on the East Coast of Vancouver Island and makes this property unique. The dominant vegetative communities found in the area include *Salicornia*, *Picea sitchensis*, *Elymus mollis*, *Carex lyngbyei*, *Deschampsia cespitosa*, and *Triglochin maritimum*.

The area supports a high diversity of animals that frequently use the estuary for grazing and migration. Black bears in particular feed on the extensive sedge/grasslands throughout the estuary. Other mammals that utilize the estuary include: red squirrel, wolf, mink, black-tailed deer and harbour seal.

Bird species that utilize the estuary vary season to season. In the summer the area is dominated by nesting songbirds. In the winter large populations of waterfowl are found throughout the estuary and include: Green-winged Teal, Mallard, Pintail, Brant, Canada Geese, Surf Scoter, Bufflehead, and Harlequin Duck. Other birds that are common year round include Great Blue Heron, Belted Kingfisher, Black Turnstone, and Red-breasted Merganser.

The Cluxewe River provides excellent spawning and rearing habitats for six salmonid species including steelhead, coastal cutthroat, trout, and pink, coho, chinook and chum salmon. The Salmon Enhancement Program enhances the Cluxewe River for all six occurring salmonids.

### 3. Guiding Documents

*Cluxewe Conservation Area Management Plan 1992*

*Vancouver Island Conservation Land Management Program Agreement*

*TNT/Province Management Agreement 2011*

### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1: To protect and maintain the natural integrity of the Cluxewe saltmarsh and estuary	Objective 1: Preserve and protect fish and wildlife habitats associated with the saltmarsh and estuary complex Objective 2: Compile and update vegetative and wildlife species inventory data Objective 3: Implement resource inventory programs to determine if enhancement projects are warranted	S-T Indic 1 – Inventories completed for fish, wildlife and ecological communities	L-T Indic 1 – Biodiversity maintained
Goal 2: Maintain biological diversity and where compatible sustain traditional uses	Objective 1: Maintain existing trails and signage features and identify future requirements Objective 2: Assist and promote existing monitoring programs to ensure that detrimental impacts are prevented or minimized Objective 3: encourage public awareness and sustain traditional recreational uses Objective 4: Maintain good relations with the neighbouring communities and First nations	S-T Indic 1 – Trails maintained S-T Indic 2 – partnerships developed with local community	L-T Indic 1 – stewardship of the area being led by local community and First Nations L-T Indic 2 – Fishing and hunting opportunities maintained
Goal 3: Public safety	Objective 1: Ensure built facilities on property are inspected annually Objective 2: Conduct risk assessments for “non-built” hazards (e.g. wildlife trees)	S-T Indic 1 – inspections are completed and deficiencies /risks are addressed	L-T Indic 1 – public continues to enjoy a safe environment for wildlife viewing and interpretation

### 5. Financial Sustainability

Due to the remoteness of this conservation area complex there are limited partnership opportunities to generate additional revenue or in-kind support for the area. However, there is a volunteer warden on the property and the area receives annual tax exemptions from the RDMW.

### 6. Partner Recognition

As per the VICLMP agreement and the HCTF agreement, all boundary and regulatory signs include the Province’s logos. Interpretive/ restorative/ enhancement signage includes the logos of all funding partners including HCTF.



# Cluxewe Estuary

## Conservation Areas

- The Nature Trust
- Wildfire Management Area

## Map Symbols

- Road



Scale: 1:25,000

UTM Zone 9 NAD 83

## BC Location



**Data sources:**  
 BC NGO Conservation Lands Database  
 BC GOV FLNRO GeoBC  
 ArcGIS Imagery

Map produced by:



April 2012

## Wildlife O&M 3-year Application – COWICHAN/KOKSILAH RIVER ESTUARY CONSERVATION AREA

### SITE DESCRIPTIONS / ACTIVITIES

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For each property or property complex, the following should be completed

**1. Name of property:**

- a. *Complex Name:* **Cowichan/Koksilah River Estuary Conservation Area**
- b. *CLD Reference:* Cowichan River Estuary (LEA 1) – Arbutus  
Cowichan River Estuary (LEA 2) – Dinsdale  
Cowichan River Estuary (LEA 3) – Evans  
Cowichan River Estuary (LEA 4) – Koksilah  
Cowichan River Estuary (LEA 5) – Lot 19  
Cowichan River Estuary (LEA 6) – Rodenbush  
Cowichan River Estuary (TAC) – Lot 160  
Mariners Island (TAC)  
Cowichan River Estuary (ACQ) – Blackley Farm

**2. Habitat Description / Values**

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. In British Columbia, 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 contains 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; one of them being the Cowichan/Koksilah River Estuary. Despite their importance and rarity, approximately 43% of the province's estuaries are threatened by coastal development, modification, and pollution; approximately 60% of marsh habitat along the Strait of Georgia estuaries has been lost.

The Cowichan/Koksilah River estuary conservation area is located in the Nanaimo Area Lowlands eco-region and Coastal Douglas Fir BEC zone. It is the common estuary of the Koksilah and Cowichan Rivers which have a combined watershed area of 1241 square kilometres. This complex of tidal flats, shallow marshes, agricultural areas and marine zone provides habitat for at least 229 bird species throughout the year, and is a critical stopover for migratory birds along the Pacific Flyway. In recognition of these values the area was designated an Important Bird Area (IBA) of Canada. In addition to migratory birds, the area is also used throughout the year by several passerine species including: raptors and songbirds for feeding and nesting.

Eelgrass habitats and other areas provide rearing habitat for salmonids and other marine species, and the intertidal area is used for at least 31 species of fish, including juvenile herring and salmonids.

### 3. Guiding Documents

- Cowichan Estuary Environmental Management Plan 1987*
- A review of the Cowichan Estuary Environmental Management Plan 2005*
- Cowichan Tribes Estuary Workshop Proceedings 2010*
- Ecological Strategies for the Cowichan Estuary 2004*
- Cowichan Bay – Maple Grove Management Plan 2002*
- Maple Grove License CVRD/Province 2002*
- Breeding Bird Survey –Koksilah River Estuary 1997*
- Cowichan Bay Farm – A management strategy for wildlife and agriculture 1991*
- Dinsdale Farm License Agreement – 2006*
- Property acquisition summary reports 1987-1992*
- Ducks Unlimited Protocol Agreement*
- Coastal Invasive Plant Management Strategy 2010*
- VICLMP Program Agreement*
- Management Agreement TNT/Province 2011*
- Dike Maintenance Act*

### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1: To preserve and enhance fish and wildlife habitat	<p>Objective 1: Reduce and eventually stop the degradation of existing habitats, and in particular stop the loss and degradation of the high value biophysical units.</p> <p>Objective 2: Maintain and improve the existing habitat base in the estuary to support viable and productive populations of fish, wildlife and plants, including invertebrates.</p> <p>Objective 3: Provide wintering waterfowl habitat and passerine nesting habitat through active agricultural management of Dinsdale Farm</p> <p>Objective 4: Increase fish and</p>	<p>S-T Indic 1 – identify critical habitats that may require further enhancement /restoration work</p> <p>S-T Indic 2 – no loss in existing habitat value</p> <p>S-T Indic 3 – restoration works identified and implemented</p> <p>S-T Indic 4 – conduct annual surveys in conjunction with activities under Goal 3</p> <p>S-T Indic 5 – sound agricultural practices</p>	<p>L-T Indic 1 – No further degradation of habitats</p> <p>L-T Indic 2 – increased habitat diversity and species utilization</p>

	wildlife populations towards historical levels.	implemented to maximize forage production	
Goal 2: To provide educational and interpretive opportunities; increase public knowledge of wildlife management	Objective 1: Protect and restore the resources of the estuary while providing opportunities for public recreational use and Cowichan Tribes cultural, spiritual and food collection practices that are compatible with fish and wildlife conservation.  Objective 2: Increase the public engagement and stewardship of the estuary	S-T Indic 1 – recreational use studies/data collected for estuary  S-T Indic 2 – Acceptable uses are determined and managed  S-T Indic 3 – undertake public outreach activities with Cowichan Community Land Trust , CVNS and CVRD to raise awareness of estuary  S-T Indic 4 – identify opportunities for stewardship projects to engage community	L-T Indic 1 – On- going recreational use of estuary for both wildlife viewing and waterfowl hunting L-T Indic 2 Engaged stewardship community
Goal 3: Assess the long-term health and integrity of the Cowichan Estuary and the success of habitat restoration and enhancement initiatives	Objective 1: Ensure a thorough baseline of information on the Cowichan Estuary is collected  Objective 2: Develop monitoring programs to assess ecosystem health	S-T Indic 1 – priority baseline studies identified and implemented  S-T Indic 2 – funding secure to implement priority actions of monitoring programs	L-T Indic 1 – comprehensive species /ecosystem inventory database available for Cowichan Estuary  L-T Indic 2 – Monitoring plans implemented on recommended schedule  L-T Indic 3 – Land management activities guided by results of monitoring program
Goal 4: Public safety	<i>Objective 1:</i> Ensure built facilities on property are inspected annually <i>Objective 2:</i> Conduct risk assessments for “non-built” hazards (e.g. wildlife trees)	S-T Indic 1 – inspections are completed and deficiencies /risks are addressed	L-T Indic 1 – public continues to enjoy a safe environment for wildlife viewing and interpretation
Goal 5: To foster on-going relationships for the betterment of the conservation area complex and to bring additional resources to assist with the management initiatives	<i>Objective 1:</i> Continue to work with the stewardship groups and local governments on Cowichan Watershed roundtable <i>Objective 2:</i> Work cooperatively with groups including industrial users of the estuary to secure funding for projects	S-T Indic 1 – NEMC continues to meet 2 times a year to discuss issues in the SMCA S-T Indic 2 – all interest groups and stakeholders are represented S-T Indic 3 – meetings result in greater collaboration and shared resources	L-T Indic 1 – continued strong partnership approach to NEMC L-T Indic 2 – increased in-kind and cash contributions to the management of Cowichan Estuary Conservation Area.

## 5. Financial Sustainability

Through the development of several partnerships with local government (CVRD, Cowichan



Tribes), stewardship groups (CVLT, Cowichan Valley Naturalists), industry (Western Forest Products) and other conservation partners DUC there has been a substantial amount of additional resources available for the Cowichan Estuary. This includes: annual property tax exemptions, water control structure maintenance, dike maintenance, inventory and monitoring programs and infrastructure assistance. In addition Dinsdale Farm generates annual revenue that is collected by the PECP and used for land management activities on PECP properties. Further partnership opportunities are being explored with Cowichan Tribes and the Cowichan Valley Land Trust in the development of interpretive programs at the new Estuary Nature Center.

6. **Partner Recognition**

As per the VICLMP agreement and the HCTF agreement, all boundary and regulatory signs include the Province logo's. All publications, interpretive/ restorative/ enhancement signage includes the logos of all funding partners including HCTF. However given the public is not encouraged to visit the site publications including interpretive signage are very limited.

# Cowichan River Estuary

## Conservation Areas

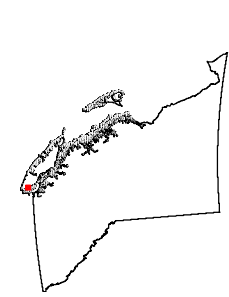
- The Nature Trust
- Ministry of Environment

## Map Symbols

- Road



## BC Location

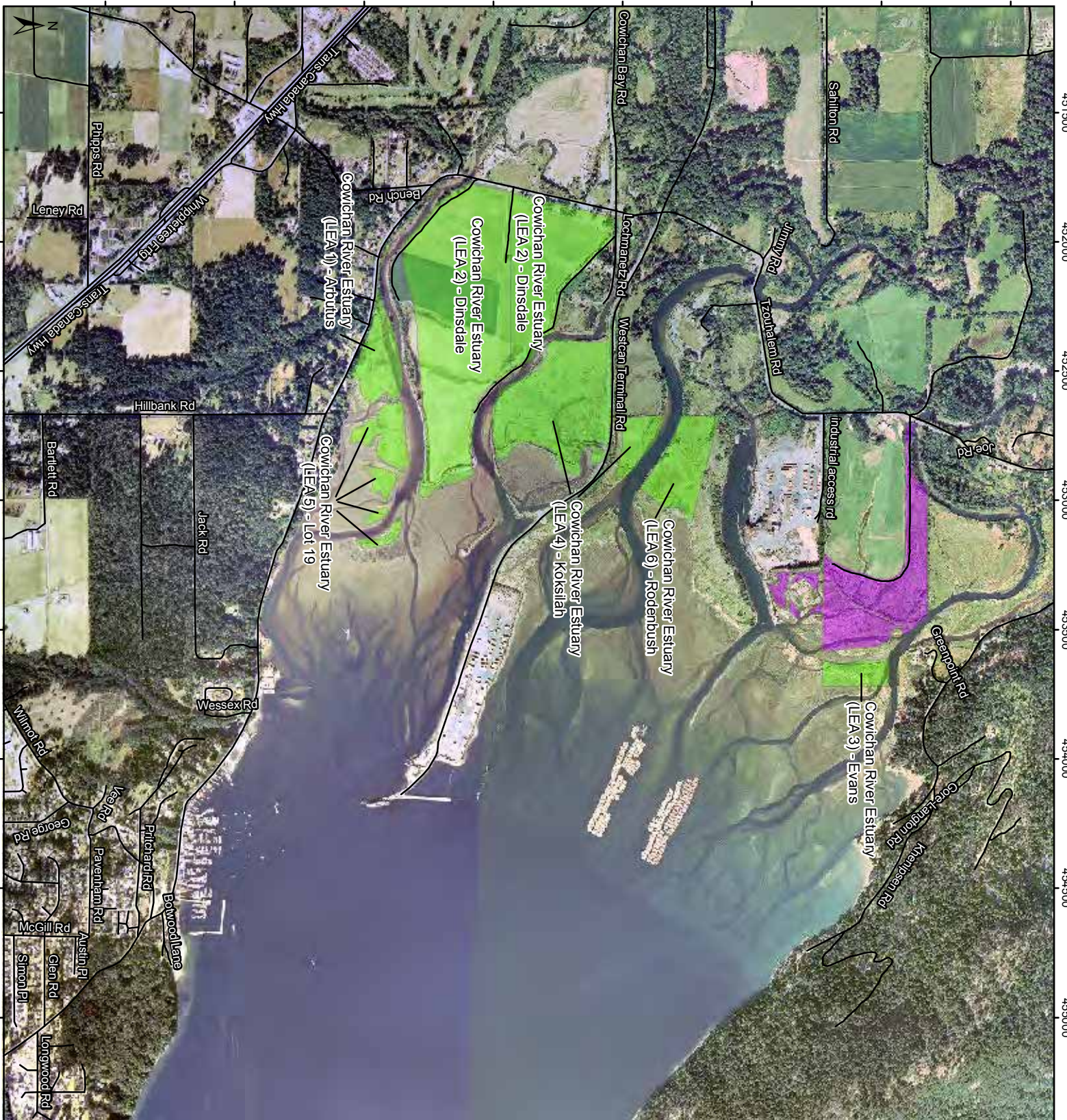


**Data sources:**  
 BC NGO Conservation Lands Database  
 BC GOV FLNRO GeoBC

**Map produced by:**



April 2012



5398500 5399000 5399500 5400000 5400500 5401000 5401500 5402000

451500 452000 452500 453000 453500 454000 454500 455000

451500 452000 452500 453000 453500 454000 454500 455000

## Wildlife O&M 3-year Application – Dudley Marsh Conservation Area

### SITE DESCRIPTIONS / ACTIVITIES

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#### 1. Name of property

- |                         |                                       |
|-------------------------|---------------------------------------|
| a. <i>Complex Name</i>  | <b>Dudley Marsh Conservation Area</b> |
| b. <i>CLD Reference</i> | Dudley Marsh (LEA 1)                  |

#### 2. Habitat Description / Values

Dudley Marsh Conservation Area is located in the Nanaimo Lowlands on Eastern Vancouver Island within the Moist Maritime Coastal Douglas-fir Biogeoclimatic zone (CDFmm). The property consists of a seasonally flooding freshwater marsh, adjacent uplands, and permanent open water habitats; providing home to six different plant communities (forest, aquatic, emergent wetland, *Phalaris* wetland, *Spirea* wetland, and spoil sites).

The wetland serves as headwater storage for a tributary of French Creek (the property includes a section of this and surrounding riparian area), storing water runoff in periods of surplus. This both buffers the effect of heavy rain falls and stabilizes minimum flows into the French Creek Watershed. Submergents and emergents in the marsh habitat include Bladderwort, Water Shield, Floating Leaved pondweed, Smartweed, Common Rush and various sedges. The surrounding upland habitat is primarily Douglas fir with an understory of Oregon grape, Vanilla Leaf, Sword ferns, and Salmonberry.

Dudley Marsh provides crucial habitat to migrating bird species of the coastal migration corridor, as well as prime wintering and breeding habitat for resident waterfowl. Breeding bird surveys conducted in 1982 by CWS recorded 52 species using the area. Mallards, cinnamon teal, pied-billed grebes and virginia rails regularly nest in the marsh, and an increased capability has been demonstrated to support growth in breeding populations of mallard, teal (blue –winged and cinnamon), and northern shoveler.

The Dudley Marsh Conservation Area also plays an important role in maintaining the salmonid values of French Creek by regulating downstream moisture deficits during the summer months. The wetland provides rearing habitat for both Cutthroat and Coho (with Coho overwintering in the marsh). Seven amphibian species have been identified in Dudley marsh. In addition, a number of endangered species occupy the conservation area, including the Vancouver Island Water Shrew (Red-listed) and a large population of red-legged frogs (blue-listed).

#### 3. Guiding Documents

<i>Conservation Agreement (DU, TNT, Province)</i>	2006
<i>Post-weir Construction Amphibian Assessment at Dudley Marsh</i>	2007
<i>Property Management Status Report – Dudley Marsh</i>	Undated
<i>Coastal Invasive Plant Management Strategy</i>	2010
<i>Vancouver Island Conservation Land Management Program Agreement</i>	2010
<i>TNT – Province Management Agreement</i>	2011
<i>MNFLRNO Inspection &amp; Maintenance of Dams</i>	2011

#### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short-term	Long-term
Goal 1. Preserve and enhance fish and wildlife habitat	<p><i>Objective 1:</i> Provide optimal overwintering habitat and summer rearing areas for salmonids</p> <p><i>Objective 2:</i> Provide optimal waterfowl habitat</p> <p><i>Objective 3:</i> Maintain supplemental headwater storage for French Creek, ensuring required flow during periods of low water.</p> <p><i>Objective 4:</i> Assess habitat of area to determine further enhancement opportunities for fish and wildlife</p>	<p>S-T Indic 1 – Successful maintenance of open water habitats throughout wetland, ensuring adequate year-round depth, vegetation coverage and temperature levels.</p> <p>S-T Indic 2 – Stable, year round water flow in French Creek</p> <p>S-T Indic 3 – Conduct water quality surveys</p>	<p>L-T Indic 1 – prevention of shallow water vegetation succession/takeover in marsh</p> <p>L-T Indic 2 – Improved salmonid populations</p> <p>L-T Indic 3 – Optimal Water quality and flow levels reached and maintained</p>
Goal 2: To further ecological/inventory knowledge of area	<p><i>Objective 1:</i> To increase understanding of wetlands by providing baseline data, species inventory, and research studies on vegetation, birds, fish, reptiles, and amphibians,</p> <p><i>Objective 2:</i> To continue gaining insight and knowledge regarding wetland rehabilitation.</p>	<p>S-T Indic 1 – Ongoing inventories/surveys completed for fish, wildlife and endangered species, baseline data for long term monitoring established</p> <p>S-T Indic 2 – Annual inventory of invasive plants completed</p>	<p>L-T Indic 1 – Comprehensive knowledge/database of fish/wildlife habitat values completed.</p> <p>L-T Indic 2 –Statistical trends of inventory work observed, assessed, and utilized to monitor effectiveness of projects.</p>
Goal 3: Public safety	<p><i>Objective 1:</i>Ensure built facilities on property are inspected annually</p> <p><i>Objective 2:</i> Conduct risk assessments for “non-built” hazards (e.g. wildlife trees)</p>	<p>S-T Indic 1 – inspections are completed and deficiencies /risks are addressed. Hazards are identified and minimized.</p>	<p>L-T Indic 1 – public continues to enjoy a safe environment for wildlife viewing and interpretation</p>
Goal 4: To provide educational and interpretive opportunities; increase public knowledge of wildlife management	<p><i>Objective 1:</i> Elevate ecological awareness through educational and public involvement programs</p> <p><i>Objective 2:</i> Form partnerships with other groups involved in public education</p> <p><i>Objective 3:</i> Produce interpretive signage and other materials to support education initiatives</p> <p><i>Objective 4:</i> Develop formal wildlife viewing areas along with associated viewing infrastructure</p>	<p>S-T Indic 1 Increased number of visitors to viewing/ education facilities</p> <p>S-T Indic 2 – wildlife viewing facilities built</p> <p>S-T Indic 3 – interpretive signage created/developed</p>	<p>L-T Indic 1 – wildlife viewing structures maintained and utilized</p> <p>L-T Indic 2 – education/ stewardship groups long term use of the area for education</p> <p>L-T Indic 3 – increased number of volunteers assisting with projects at site</p>



**5. Financial Sustainability**

Efforts through the VICLMP program have resulted in a great deal of stewardship work being conducted on this property by volunteers with the Friends of French Creek (e.g. water level monitoring; site use reports). Furthermore the water control structure is operated by Fisheries and Oceans Canada who annually conduct maintenance activities on the control valves in conjunction with DUC. Property tax exemptions are annually granted by the RDN.

**6. Partner Recognition**

As per the VICLMP agreement and the HCTF agreement, all boundary and regulatory signs include the Province logo's. All publications, interpretive/ restorative/ enhancement signage includes the logos of all funding partners including HCTF.



# Dudley Marsh

**Conservation Areas**  
 The Nature Trust

**Map Symbols**  
 — Road



**BC Location**



**Data sources:**  
 BC NGO Conservation Lands Database  
 BC GOV FLNRO GeoBC

**Map produced by:**



April 2012

## Wildlife O&M 3-year Application – FILBERG MARSH CONSERVATION AREA

### SITE DESCRIPTIONS / ACTIVITIES

For each property or property complex, the following should be completed

#### 1. Name of property:

- a. *Complex Name:* **Filberg Marsh Conservation Area**
- b. *CLD Reference:* Filberg Marsh (LEA)  
Filberg Marsh (return to crown)

#### 2. Habitat Description / Values

The Filberg Marsh Conservation Area is located in the CWHxm1 zone and is characterized by warm, dry summers and moist mild winters with relatively little snow fall. The wetland habitat of Filberg Marsh supports a wide variety of plant and animal species and consists of typical aquatic plant species (cattails, reed canary grass, rushes, and lilies).

The wetland is a very good example of a beaver marsh on the East Coast of Vancouver Island. The area is used extensively by migratory birds and provides a nesting area for Mallard, Hooded Merganser, Pied-billed Grebe and possibly Blue-winged Teal and Wood Duck. Eagles and Great Blue Heron also frequent the marsh. The marsh supports a good population of cutthroat trout.

#### 3. Guiding Documents

- Property Acquisition Report – 1997*
- TNT/Province Lease 1997*
- TNT/Province Management Agreement 2011*
- Coastal Invasive Plant Management Strategy 2010*
- Vancouver Island Conservation Land Management Program Agreement*

#### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1: To protect and maintain the natural integrity of the Cluxewe saltmarsh and estuary	Objective 1: Preserve and protect fish and wildlife habitats associated with the wetland complex Objective 2: Compile and update vegetative and wildlife species inventory data Objective 3: Implement resource inventory programs to determine if enhancement projects are warranted	S-T Indic 1 – Inventories completed for fish, wildlife and ecological communities	L-T Indic 1 – Biodiversity maintained
Goal 2: Maintain	Objective 1: Maintain existing trails	S-T Indic 1 – Trails	L-T Indic 1 – stewardship of the area

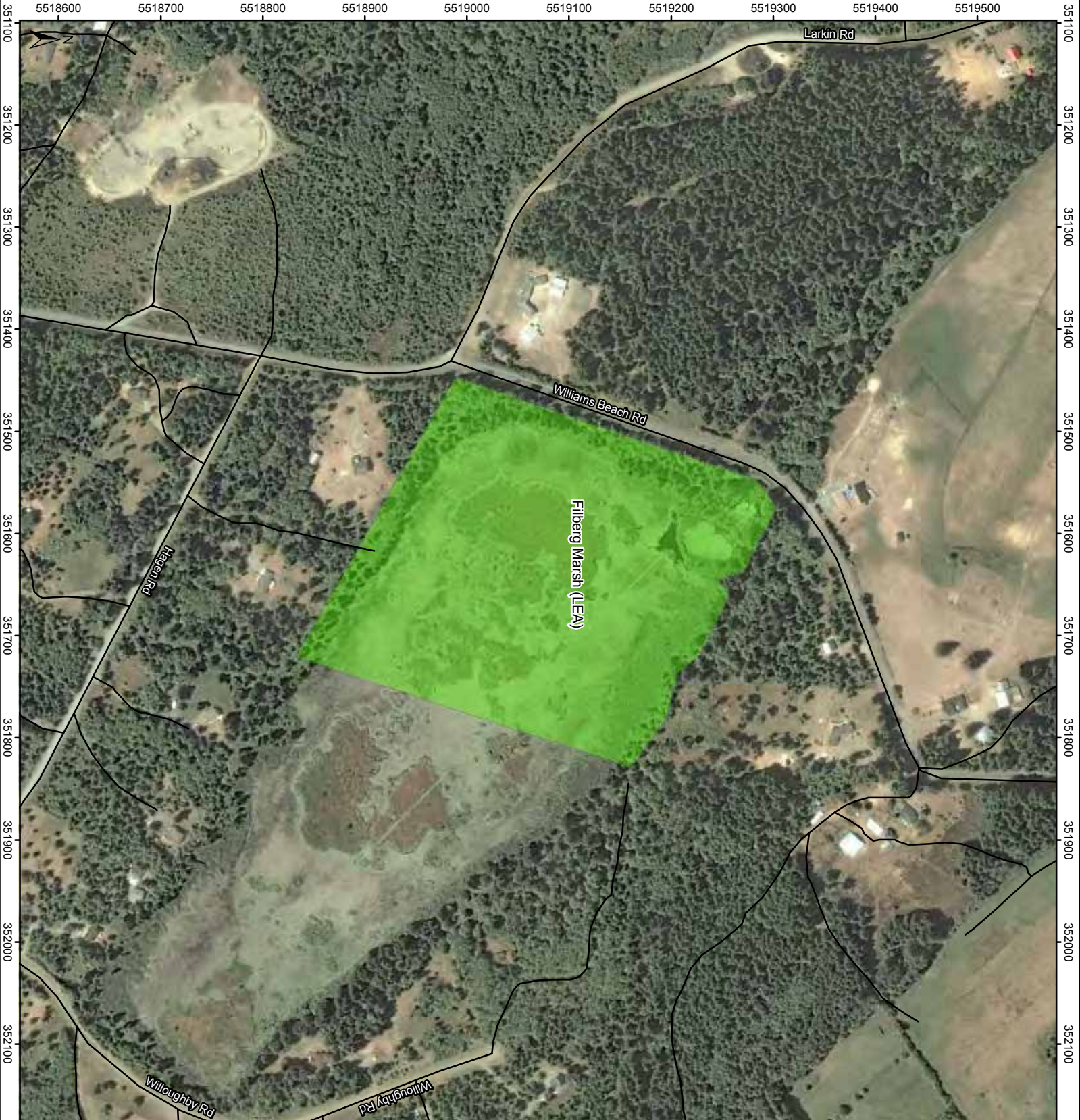
biological diversity and where compatible sustain traditional uses	and signage features and identify future requirements Objective 2: Assist and promote existing monitoring programs to ensure that detrimental impacts are prevented or minimized Objective 3: encourage public awareness and sustain traditional recreational uses	maintained S-T Indic 2 – partnerships developed with local community	being led by local community  L-T Indic 2 – diversity maintained
Goal 3: Public safety	Objective 1: Ensure built facilities on property are inspected annually Objective 2: Conduct risk assessments for “non-built” hazards (e.g. wildlife trees)	S-T Indic 1 – inspections are completed and deficiencies /risks are addressed	L-T Indic 1 – public continues to enjoy a safe environment for wildlife viewing and interpretation

5. **Financial Sustainability**

Annual property tax exemptions are granted from the Comox Valley Regional District for this property.

6. **Partner Recognition**

As per the VICLMP agreement and the HCTF agreement, all boundary and regulatory signs include the Province logo's. All publications, interpretive/ restorative/ enhancement signage includes the logos of all funding partners including HCTF.



# Fibberg Marsh

## Conservation Areas

The Nature Trust

## Map Symbols

— Road



## BC Location



**Data sources:**  
 BC NGO Conservation Lands Database  
 BC GOV FLNRO GeoBC  
 Bing Maps Aerial

Map produced by:



April 2012

## Wildlife O&M 3-year Application – Green Mountain Wildlife Management Area

### SITE DESCRIPTIONS / ACTIVITIES

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For each property or property complex, the following should be completed

**1. Name of property:**

- a. *Complex Name:* **Green Mountain Wildlife Management Area**
- b. *CLD Reference:* Green Mountain WMA

**2. Habitat Description / Values**

The Green Mountain WMA consists of 300 hectares at the top of Green Mountain from approximately the 1000 m contour up to the mountain's peak at 1465 m. It is located in the Maritime Forested and Parkland Mountain Hemlock subzone of the Mountain Hemlock Biogeoclimatic zone, and is characterized by a mix of alpine and subalpine zones with open meadows, coniferous forest, steep ravines and rocky outcroppings.

The subalpine and montane meadow areas are vital habitat for the critically endangered Vancouver Island Marmot (*Marmota vancouverensis*). The Vancouver Island marmot is endemic to Vancouver Island and was designated an endangered species in 1979 by the Committee on the Status of Endangered Wildlife in Canada (Munro, 1979), and by the provincial Cabinet in 1980. As of 2008, there were believed to be only 85 to 100 of this marmot species left in the wild, and a further 162 in four captive breeding centres. The majority of the wild population is located on mountains in the south-central region of Vancouver Island, including Green Mountain, which is currently home to a small number of Vancouver Island Marmots. Due to the special concern regarding this species, many of the management goals for the site pertain specifically to the Vancouver Island marmot.

Green Mountain also provides habitat for Roosevelt Elk, Mule Deer, Black Bear, wolf and many other non-game species. Golden eagles, sharp-shinned hawks, and marsh hawks are some of the raptors seen in the area, and juncos, jays, and flickers are some of the more common passerines. Other rare species found here include Northern Goshawk and White-tailed Ptarmigan.

Meadows are dominated by grasses, sedges, blueberries, wildflowers and bracken fern with some seepage areas found along creeks draining the areas. Patches of coniferous forest are found throughout the area, generally in ravines or on lower slopes and ridges. Prevalent tree species are Balsam Fir and Mountain Hemlock with some Yellow Cedar also present. Some areas also support White Rhododendron. A ski facility operated at Green Mountain for 25 years between 1959 and 1984. Debris from the facility still exists throughout the property, including; abandoned storage sheds, lift tower poles, cables, and other equipment/ refuse.

### 3. Guiding Documents

*Treeline Dynamics on Southern Vancouver Island, British Columbia 2000*

*Green Mountain (Block 1392) Management Plan 1986*

*Vancouver Island Conservation Land Management Program Agreement*

*TNT/Province Management Agreement 2011*

### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1: To preserve and enhance wildlife habitat	<p>Objective 1: Provide long-term security for all marmot habitats, and enhance or improve where possible.</p> <p>Objective 2: Maintain and improve the existing habitat base, and continue to support viable and productive populations of plant and wildlife species in order to sustain the ecosystem and maintain biodiversity</p> <p>Objective 3: Expand boundaries of the WMA</p>	<p>S-T Indic 1 – Removal of conifers and shrubs which are infilling subalpine and montane meadow areas</p> <p>S-T Indic 2 – Necessary Restoration works identified and implemented including, applying grass seed to cleared areas, and cleaning of debris from old ski resort</p> <p>S- Indic 3 - Non lethal marmot predation control methods implemented if necessary</p>	<p>L-T Indic 1 – Existing marmot colonies are protected leading to stable, permanent populations</p> <p>L-T Indic 2 – Long term management of subalpine and montane meadows through ongoing prevention of establishment, infilling, and maturation of conifers and other shrubs will both reduce cover required by predator species, and increase preferred marmot habitat areas.</p> <p>L-T Indic 3 – Increased species utilization of habitat</p> <p>L-T Indic 4 – No loss of existing habitat value</p> <p>L-T Indic 5 – WMA expanded</p>
Goal 2: To continue to allow public recreational use that is non-detrimental to the habitat value of the WMA, and to increase educational and interpretive opportunities	<p>Objective 1: Recognize potential conflicts stemming from various recreational uses and managed prior to disruption of wildlife, particularly marmot colonies</p> <p>Objective 2: Increase interpretive information available to public users of green mountain in order to increase educational opportunities and knowledge regarding sensitivities and concerns pertaining to the wildlife and habitat of the area</p>	<p>S-T Indic 1 – Recreational use analyzed through use of trail counters, site visits, public outreach etc.</p> <p>S-T Indic 2 – Acceptable uses determined and managed accordingly</p> <p>S-T Indic 3 – undertake public outreach activities with Nanaimo F&amp;G club, local hiking clubs etc.</p> <p>S-T Indic 4 – Interpretive, and regulatory signs installed</p>	<p>L-T Indic 1 – On- going recreational use by compatible user groups coexist without disturbance to wildlife and habitat</p> <p>L-T Indic 2 - Engaged stewardship community and increased knowledge regarding specific habit requirements of the VI marmot, community members engaged in stewardship and restoration projects</p> <p>S-T Indic 3 Successful regulation of activities potentially in conflict with management objectives</p>
Goal 3: Assess the long-term health of the ecosystem its	Objective 1: Ensure a thorough baseline of information is recorded and collected regarding habitat	S-T Indic 1 – Priority baseline studies identified and implemented i.e. VI	L-T Indic 1 – Comprehensive species /ecosystem inventory database available for the Green Mountain

wildlife populations,	values and species populations and utilization	marmot population monitoring with MFLRNO S-T Indic 1 – conduct annual surveys in conjunction with activities under Goal 3..ie S-T Indic 3 – funding secure to implement priority actions of monitoring programs	WMA L-T Indic 2 – Monitoring plans implemented on recommended schedule L-T Indic 3 – Land management activities guided by results of monitoring program
Goal 4: Public safety	<i>Objective 1:</i> Conduct risk assessments for natural hazards (e.g. wildlife trees) and potential hazards associated with recreational use by public	S-T Indic 1 – Inspections are completed and risks are addressed including assessing hiking trails, and prohibiting motorized vehicle traffic where necessary S-T Indic 2 –Boundary signs installed, maps included on interpretive signage	L-T Indic 1 – Public continues to enjoy a safe environment for recreation, wildlife viewing and interpretive opportunities
Goal 5: To foster on-going relationships for the betterment of the conservation area complex and to bring additional resources to assist with the management initiatives	<i>Objective 1:</i> Continue to work cooperatively with the Nanaimo Fish and Game Protective Association, and involve community members, recreational groups and educational institutions in future restoration projects and studies	S-T Indic 1 – All interest groups and stakeholders represented S-T Indic 2 – Further engagement of various user groups results in greater collaboration and sharing of resources S-T Indic 3 – New management plan developed in cooperation with stakeholders	L-T Indic 1 – Continued cooperation between recreational user groups and land management L-T Indic 2 – Increased in-kind and cash contributions to the management of Green Mountain and VI Marmot programs L-T Indic 3 – Completion of studies relating to wildlife populations and habitat conditions in conjunction with Goal 3.

**5. Financial Sustainability**

Several management and restoration initiatives for this WMA are shared with the Marmot Recovery Foundation who conduct annual monitoring of the Green Mtn marmot colonies. In addition a long standing partnership exists with the Nanaimo Fish and Game Club who provide both financial and in-kind assistance to the management of the WMA.

**6. Partner Recognition**

As per the VICLMP agreement and the HCTF agreement, all boundary and regulatory signs include the Province’s logos. All publications/interpretive/ restorative/ enhancement signage includes the logos of all funding partners including HCTF.



## Wildlife O&M 3-year Application – Hardy Bay/Quatse River Estuary

### SITE DESCRIPTIONS / ACTIVITIES

For each property or property complex, the following should be completed

#### 1. Name of property:

- a. *Complex Name:* **Hardy Bay – Quatse River Estuary**
- b. *CLD Reference:* Port Hardy (TAC) – Hardy Bay

#### 2. Habitat Description / Values

Hardy Bay/Quatse River Estuary is located in Port Hardy on the northeast coast of Vancouver Island and is made up of the Glen Lyon, Quatse and Quatsese River estuaries. It is approximately 134 ha in size, and consists of estuarine/ tidal marsh habitat, riparian river corridors and floodplain. The fish and wildlife habitat values of Hardy Bay are very significant for the area, and it is ranked amongst the top ten estuaries on Vancouver Island. It is within the Coastal Western Hemlock submontane very wet maritime biogeoclimatic zone.

All seven Pacific salmon species depend on the Quatse River Estuary at some point in their life cycle. This extensive fish rearing capacity provides support for the successful Quatse River Hatchery which has drastically improved fisheries stocks in the area. Several species of shellfish are also present in Hardy Bay. The estuary is part of the Pacific flyway corridor and provides critical wintering habitat for over sixty species of waterfowl and other waterbirds. Year round, the estuary and adjacent highlands provide habitat to over 100 bird species. Common bird and waterfowl species include: Northern shovellers, green-winged teal, gadwall, American widgeon, harlequin ducks, trumpeter swans, hooded mergansers, bald eagles and great blue herons.

Tree species found in the terrestrial areas of the complex include western hemlock, coastal Douglas fir, Sitka spruce. The understory consists of salal, red huckleberry, Alaskan blueberry, oval-leaved blueberry, false azalea, ferns, and many species of mosses. Intertidal and marine plant species include American glasswort and green algae. Eelgrass communities are also known to inhabit the area.

#### 3. Guiding Documents

- Hardy Bay – Quatse River Estuary Background/Facts (Undated)*
- Hardy Bay Management Area (Undated)*
- Vancouver Island Conservation Land Management Program Agreement*
- TNT/Province Management Agreement 2011*

#### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
<i>Goal 1:</i> To preserve all wildlife habitat	<i>Objective 1:</i> Sustain and where possible enhance the natural	S-T Indic 1 – Management plan completed in	L-T Indic 1 –Integrated management strategy developed to protect and

<p>within the conservation area and enhance/ restore where possible</p>	<p>resources of the conservation area</p> <p><b>Objective 2:</b> Maintain, enhance and rehabilitate the natural integrity of the various habitats and their component floral and faunal communities in a manner consistent with sound ecological principles and responsible land management practices</p> <p><b>Objective 3:</b> Address potential impacts and pressures associated with urban areas and industrial activity surrounding the WMA</p>	<p>cooperation with conservation partners and stakeholders in the area (in conj. w/ goal 5)</p> <p>S-T Indic 2 – Best management plan regarding invasive species developed and implemented</p> <p>S-T Indic 3 – Ecological data and species inventories used to determine if enhancement opportunities exist (in conj. w/ goal 2)</p>	<p>maintain the conservation area</p> <p>L-T Indic 2 – Minimal disturbance to wildlife species is maintained</p> <p>L-T Indic 3 - Opportunities to extend protection of wildlife habitat adjacent to the property identified and explored</p> <p>L-T Indic 4 – Environmental conditions beyond boundaries which impact the estuary assessed and addressed through cooperative management</p> <p>L-T Indic 5 – Development plans reviewed and activities that are detrimental to habitat prevented</p> <p>L – T Indic 6 – No net loss of habitat value</p>
<p><b>Goal 2:</b> To provide educational , interpretive, and passive recreational opportunities that do not impact the conservation area complex; increase public knowledge of wildlife management and raise awareness of the sensitivities of the area</p>	<p><b>Objective 1:</b> Provide public opportunities to experience compatible recreational and educational attributes provided by the diversity and uniqueness of a near-natural estuarine system situated in close proximity to an urban environment</p> <p><b>Objective 2:</b> Elevate ecological awareness of the estuary through public engagement and interpretive information</p>	<p>S-T Indic 1 – Regulatory signs installed</p> <p>S-T Indic 2 – Trampling of sensitive areas reduced by prevention of foot traffic to specified areas</p> <p>S-T Indic 3 – Community involvement and public stewardship opportunities assessed</p> <p>S-T Indic 4 – Interpretive signs developed and installed</p>	<p>L-T Indic 1 –Increased public use of the estuary does not adversely affect wildlife habitat values or biodiversity</p> <p>L-T Indic 2 – Public recreational use and cultural, spiritual and food collection practices are compatible with fish and wildlife conservation.</p> <p>L-T Indic 3 –Issues of trespass addressed, future problems prevented</p> <p>L-T Indic 4 – Engaged stewardship community</p>
<p><b>Goal 3:</b> Assess the habitat condition; measure the long-term health and integrity of fish, plant and wildlife populations and gauge the success of habitat protection, restoration and enhancement initiatives</p>	<p><b>Objective 1:</b> Ensure a thorough baseline of information on the biophysical features of Hardy Bay is established</p> <p><b>Objective 2:</b> Complete inventories, and fish, wildlife, plant and habitat studies; evaluate effectiveness of land management activities</p>	<p>S-T Indic 1 – Priority baseline species data and inventories established, including bird/waterfowl species, fish habitat assessment, eagle nest monitoring, and present red/blue listed species</p> <p>S-T Indic 2 – Invasive plant species surveys completed, ongoing monitoring coordinated</p>	<p>L-T Indic 1 – Comprehensive species /ecosystem inventory database available for the conservation area</p> <p>L-T Indic 2 – Monitoring plans implemented</p> <p>L-T Indic 3 – Land management activities guided by monitoring program and evaluation framework</p> <p>L-T Indic 4 – Recreational use studies/data collected</p> <p>L-T Indic 5 – Potential environmental impacts studied/ monitored</p>
<p><b>Goal 4:</b> Public safety</p>	<p><b>Objective 1:</b>Ensure built facilities on property are inspected annually</p> <p><b>Objective 2:</b> Conduct risk assessments for “non-built” hazards (e.g. wildlife trees, wildlife encounters, lost recreationists)</p>	<p>S-T Indic 1 – Inspections are completed and deficiencies /risks are addressed</p> <p>S-T Indic 2 –Survey of site boundaries completed; boundary signs installed</p>	<p>L-T Indic 1 – Public continues to enjoy a safe environment for wildlife viewing and interpretation</p> <p>L-T Indic 2 – Dangerous wildlife encounters prevented</p> <p>L-T Indic 3 – WMA boundaries marked, maps made available to public</p>
<p><b>Goal 5:</b> To foster on-going relationships for the betterment of the conservation</p>	<p><b>Objective 1:</b> Work cooperatively with the appropriate stakeholders including the District of Port Hardy, adjacent land owners, and</p>	<p>S-T Indic 1 – All interest groups and stakeholders are represented</p> <p>S-T Indic 2 – Landowners</p>	<p>L-T Indic 1 – Continued representation of various stakeholders</p> <p>L-T Indic 2 – Increased in-kind and cash contributions to the management of</p>

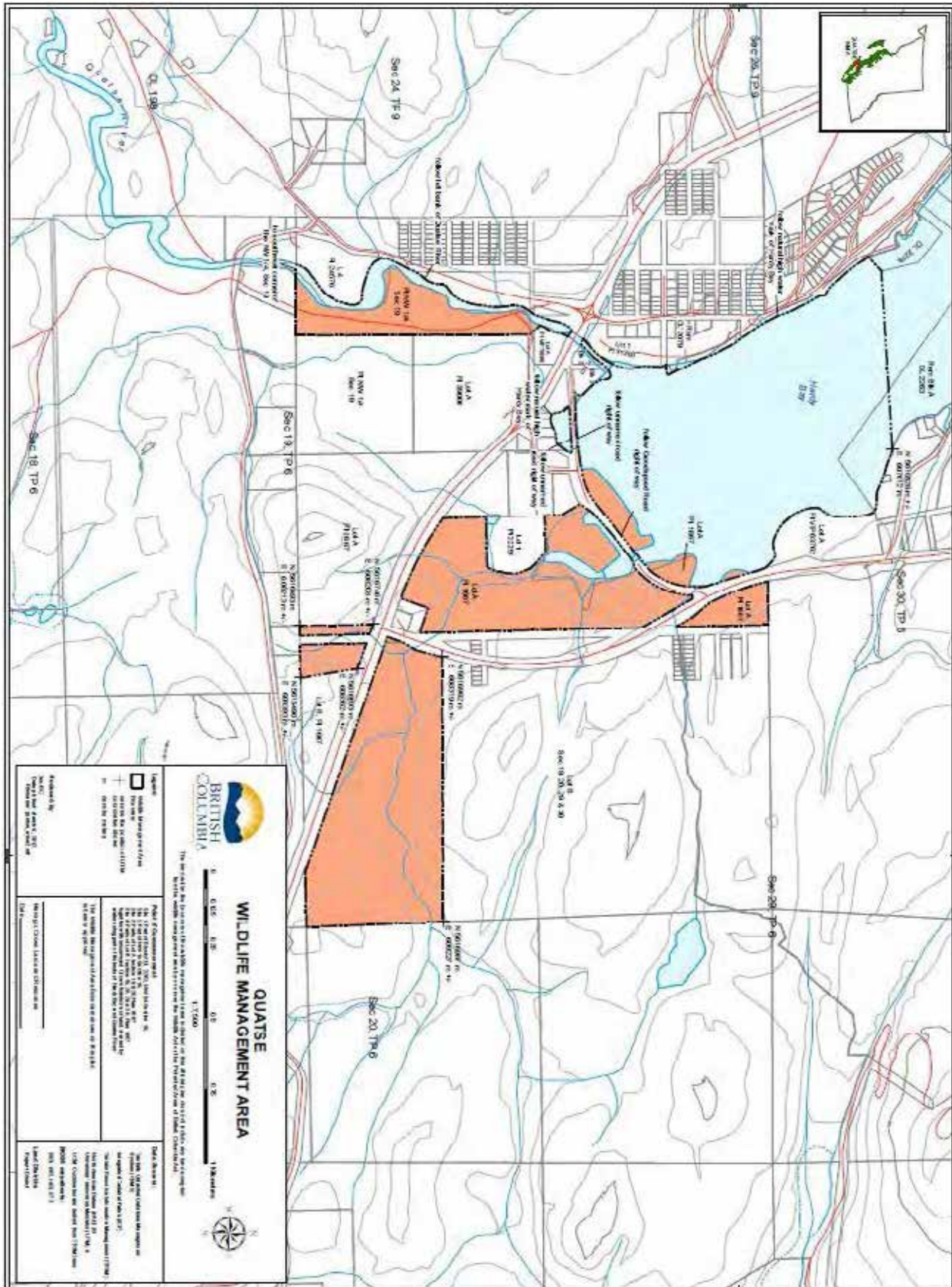
<p>area complex and to bring additional resources to assist with the management initiatives</p>	<p>community groups</p> <p><i>Objective 2:</i> To utilize public stewardship and academic support opportunities to develop and deliver research, monitoring, education, stewardship, restoration and enforcement programs</p>	<p>consulted and informed of sensitivity of the area; habitat degradation minimized in future development</p> <p>S-T Indic 3 – Positive and informative relationships with local stewardship groups maintained</p>	<p>the conservation area</p> <p>L-T Indic 3 – Involvement of schools, universities and public stewardship groups increases knowledge and awareness of Hardy Bay, shaping future management initiatives</p>
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**5. Sustainability**

The District of Pt Hardy is a partner in the area that has provided in-kind support to the management of the conservation area for several years (trail and viewing platform maintenance). Further opportunities exist with the local F&G Club as well as Salmon Enhancement Program staff at the Quatse Hatchery.

**6. Partner Recognition**

As per the VICLMP agreement and the HCTF agreement, all boundary and regulatory signs include the Province’s logos. All publications/interpretive/ restorative/ enhancement signage includes the logos of all funding partners including HCTF.



## Wildlife O&M 3-year Application – KINGCOME RIVER ESTUARY CONSERVATION AREA

### SITE DESCRIPTIONS / ACTIVITIES

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For each property or property complex, the following should be completed

#### 1. Name of property:

- a. *Complex Name:* **Kingcome River Estuary Conservation Area**
- b. *CLD Reference:* Kingcome River Estuary (LEA 1)  
Kingcome River Estuary (LEA 2)  
Kingcome River Estuary (LEA 3)  
Kingcome River Estuary (LEA 4)  
Kingcome River Estuary (TAC)

#### 2. Habitat Description / Values

Kingcome ranks within the top 10% of all estuaries (442) along the coast. It also ranks within the top 10% of estuaries within the Pacific Range Ecoregion. The conservation area is located in both the North Pacific Ranges and Outer Fiordland Ecoregions; and is in the CWHvm1 biogeoclimatic zone.

The Kingcome estuary provides important habitat for waterfowl during the migration and wintering period (September-April). Waterfowl use of coastal areas is restricted to estuary wetlands due to the generally steep and rugged terrain which dominates most of the BC coast. The estuary marshes and mudflats are used for feeding, loafing and shelter for both dabbling and diving ducks; including mallard, widgeon, green-winged teal, northern pintail, goldeneye, bufflehead. Eagles are common on the Kingcome estuary and concentrate during the spring eulachon run.

Black and grizzly bears also make extensive seasonal use of the estuary. In the spring and early summer, bears feed on sedges and roots of marsh plants and in early fall congregate to feed on migrating salmon species. The estuary is also utilized in the spring and summer by black-tailed deer and the estuary and lower valley possesses habitat capability for moose and elk.

The Kingcome estuary also serves as important rearing habitat for juvenile salmon produced by the Kingcome River and its tributaries. All five species of salmon utilize this system and the fisheries values are second only to the Kliniklini River on the mid-coast. In addition, the Kingcome River also supports summer and winter runs of steelhead as well as cutthroat and dolly varden. The river is also one of the few remaining rivers with substantial Eulachon runs in the spring.

#### 3. Guiding Documents

- Kingcome Estuary Management Strategy 1987*
- Vancouver Island Conservation Land Management Program Agreement*
- TNT/Province Management Agreement 2011*

#### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1: To sustain the natural habitats of the Kingcome Conservation Area while providing for recreational and cultural activities	Objective 1: Preserve and protect fish and wildlife habitats associated with the river and estuary complex Objective 2: Compile and update vegetative and wildlife species inventory data Objective 3: Implement resource inventory programs to determine if enhancement projects are warranted	S-T Indic 1 – Inventories completed for fish, wildlife and ecological communities	L-T Indic 1 – Biodiversity maintained
Goal 2: Maintain biological diversity and where compatible sustain traditional uses	Objective 1: encourage public awareness and sustain traditional recreational uses Objective 2: Maintain good relations with the neighbouring communities and First nations	S-T Indic 1 – partnerships developed with local community	L-T Indic 1 – stewardship of the area being led by local community and First Nations L-T Indic 2 – Fishing and hunting opportunities maintained
Goal 3: Public safety	Objective 1: Ensure built facilities on property are inspected annually Objective 2: Conduct risk assessments for “non-built” hazards (e.g. wildlife trees)	S-T Indic 1 – inspections are completed and deficiencies /risks are addressed	L-T Indic 1 – public continues to enjoy a safe environment for wildlife viewing and interpretation

#### 5. Financial Sustainability

Due to the remoteness of this conservation area complex there are limited partnership opportunities to generate additional revenue or in-kind support for the area.

#### 6. Partner Recognition

As per the VICLMP agreement and the HCTF agreement, all boundary and regulatory signs include the Province’s logos. All publications/interpretive/ restorative/ enhancement signage includes the logos of all funding partners including HCTF.



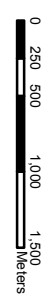
# Kingcome River Estuary

## Conservation Areas

- The Nature Trust
- Crown Designation

## Map Symbols

- Road



Scale: 1:50,000

UTM Zone 9 NAD 83

## BC Location



## Data sources:

- BC NGO Conservation Lands Database
- BC GOV FLNRO GeoBC
- ArcGIS Imagery

## Map produced by:



April 2012

## Wildlife O&M 3-year Application – Lazo Marsh-North East Comox WMA

### SITE DESCRIPTIONS / ACTIVITIES

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#### 1. Name of property

- a. Complex Name
- b. CLD Reference

**Lazo Marsh-North East Comox WMA**

Lazo Marsh-North East Comox WMA (LEA) – Lazo Marsh  
Lazo Marsh North East Comox WMA

#### 2. Habitat Description / Values

Lazo Marsh-North East Comox WMA is located on East Vancouver Island in the Comox Valley and consists of 189.19 Ha in total. Found at the northernmost limit of the Coastal Douglas Fir Biogeoclimatic zone, Lazo WMA is considered to be within a transitional area between very dry Coastal Western hemlock (CWHxm) and Coastal Douglas Fir Moist Maritime (CDFmm).

The WMA contains wetlands, riparian areas and rare sand dunes along with upland forests supporting a number of rare or threatened plant communities. Lazo Marsh is a low depression with a thin layer of organic soils over marine clays. Due to the shallow depths in the marsh, succession rates are high, and Bullrush and Salix species are becoming dominant in the south area. The wetland covers approximately 16ha of the property and is surrounded by second growth forest. Cattails (*Typha latifolia*) and water lilies dominate the wetter portions of the marsh, and drier areas with less continuous flooding have been taken over by extensive stands of hardhack (*Arctostaphylos uva-ursi*), reed-canary grass (*Phalaris arundinacea*), and willow growth (*Salix spp.*). Soils consist primarily of organic layers overlying sand and clay. The main marsh is divided in two by a sandy conifer-covered ridge that extends in from Lazo Road. The total property is surrounded by farmland, rural subdivisions and dense woodland slopes.

Thousands of waterfowl and other birds (over 140 recorded) species reside permanently or winter in the WMA, including Great Horned Owl, ducks, geese and Trumpeter Swans. A total of 8 known amphibian species utilize the habitat of Lazo Marsh Conservation Area. These include: Rough-skinned newt, Long-toed Salamander, Northwestern Salamander, Western Red-backed Salamander, Wandering Salamander, Ensatina, Pacific Chorus Frog and Red-legged Frog. Lazo Marsh and the associated Queens Ditch/Hilton spring watershed provide critical habitat to cutthroat trout and coho salmon. Other wildlife species recorded in the conservation area include: beaver, mink, and deer

#### 3. Guiding Documents

<i>Toward a Management Plan for the Lazo Watershed &amp; Queen's Ditch</i>	2002
<i>Lazo Marsh-North East Comox Conservation Area Management Plan</i>	2000
<i>Conservation Agreement (DU, TNT, Province)</i>	2006
<i>Coastal Invasive Plant Management Strategy</i>	2010
<i>Vancouver Island Conservation Land Management Program Agreement</i>	2010
<i>TNT – Province Management Agreement</i>	2011
<i>MNFLRNO Inspection &amp; Maintenance of Dams</i>	2011

*Amphibian Inventory at Lazo Marsh* 2007  
*Amphibian Road Surveys and Mitigation Assessments at 3 Sites on VI* 2012  
*Lazo Mars NE Comox MOU (Province, Town of Comox, CVRD)* 2009

#### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short-term	Long-term
Goal 1. Preserve and enhance fish and wildlife habitat	<p><i>Objective 1.</i> Continually assess and explore opportunities for further enhancement of fish production, fish utilization of Lazo Marsh, and other wildlife habitat throughout the CA</p> <p><i>Objective 2:</i> Protect areas of the WMA that are most sensitive and to maintain biodiversity in the Comox area</p> <p><i>Objective 3.</i> Prohibit development and recreational activities that are detrimental to sensitive habitat and ecosystems</p> <p><i>Objective 4.</i> Develop trail plan to minimize habitat fragmentation and overall footprint of trail system</p>	<p>S-T Indic 1 – Limiting factors to salmonids assessed, enhancements planned and implemented (i.e. addition of LWD to pools)</p> <p>S-T Indic 2 – Amphibian mortality rates surveyed on Lazo Road, culverts and amphibian fencing installed along amphibian migration corridors to mitigate impact of Lazo Rd. on amphibian populations.</p> <p>S-T Indic 3 – Nest boxes for ducks, swallows, owls, and bats installed where effective</p> <p>S-T Indic 4 –Unnecessary/ braided trails restored</p> <p>S-T Indic 5 – Ongoing regular enforcement patrols, permits required for recreation use and events held in the CA</p> <p>S-T Indic 6 –Pedestrian-only stiles at trailheads for trails bordering Lazo Marsh and in walk-only areas of Conservation Area</p> <p>S-T Indic 7 –Wildlife sanctuary boundary delineated and marked</p>	<p>L-T Indic 1 – Fish surveys indicate increased use</p> <p>L-T Indic 2 – Amphibian populations maintained/restored</p> <p>L-T Indic 3 –Successful prevention of shallow water vegetation succession and open water habitats in marsh through regular scarification</p> <p>L-T Indic 4 – Water height and quality stabilized in both sides of marsh</p> <p>L-T Indic 5 - Trail plan developed and implemented, minimizing impact of public use of CA</p> <p>L-T Indic 6 – Ensure covenants surrounding CA are being followed</p>
Goal 2. Foster stewardship towards long-term health and viability of the Conservation Area as wildlife habitat and recreational area through cooperative relationships with community and partners involved.	<p><i>Objective 1.</i> Manage all properties of CA as a single unit and work cooperatively with governments/stakeholders regarding overlapping management jurisdiction. Policies should be reviewed with public input, to outline a sensible protocol for future management initiatives.</p> <p><i>Objective 2.</i> Elevate Ecological awareness through educational programs aimed at promoting the appreciation of flora and fauna and their habitat, such as the development of stewardship programs.</p>	<p>S-T Indic 1 – Regular attendance of Lazo meetings to review development, restoration, enhancement and recreational activities</p> <p>S-T Indic 2 – Encourage private landowners to recognize and protect sensitive features adjacent to the CA.</p> <p>S-T Indic 3 – Media campaigns initiated informing local citizens of management activities and objectives</p> <p>S-T Indic 4 –Volunteer warden program implemented</p> <p>S-T Indic 5 – Interpretive signs designed/produced depicting important natural features and</p>	<p>L-T Indic 1 – Ensure natural succession of reclaimed area in CVRD’s Lazo Wildlife Park in cooperation with CVRD</p> <p>L-T Indic 2 – Increased number of visitors to viewing/education facilities</p> <p>L-T Indic 3 –Fundraising programs developed to assist with implementation of goals.</p> <p>L-T Indic 4 – Trail map, plan and directional signs for trail network completed</p> <p>L-T Indic 5 – Wildlife viewing structures maintained and utilized</p>

	<i>Objective 3:</i> Provide educational and interpretive opportunities; increase public knowledge of wildlife management	wildlife values within the CA S-T Indic 6 – Formal wildlife viewing areas and viewing infrastructure designed and constructed S-T Indic 7 – Local stream keepers encouraged to monitor fish populations and assist local agricultural community in minimizing fish habitat impacts. S-T Indic 8 – Promoted use of native plant species in landscaping adjacent developments and promoted enhancement of existing wildlife habitat on nearby landowners property	L-T Indic 6 – Education/ stewardship groups long term use of the area for education L-T Indic 7 – increased number of volunteers assisting with projects at site L-T Indic 8 –Monitoring, education and stewardship programs developed with local schools regarding ecology of the CA
Goal 3: To further ecological/inventory knowledge of area	<i>Objective 1:</i> To increase understanding of the CA by providing baseline data, species inventory, and research studies on vegetation, birds, fish, reptiles, and amphibians, <i>Objective 2:</i> To continue gaining insight and knowledge regarding both wetland and forest rehabilitation. <i>Objective 3:</i> Promote the collection of ecological Data prior to potential habitat enhancements or trail development	S-T Indic 1 – Inventories for fish and wildlife conducted (including bats rodents, amphibian, large predators, and endangered species), inventories on seasonal habitat utilization, migration routes, wildlife populations, diversity and habitat preferences completed S-T Indic 2 – Baseline data for long term monitoring established S-T Indic 3 – Annual inventory of invasive plants completed S-T Indic 4 – Water quality and levels measured and monitored	L-T Indic 1 – Comprehensive knowledge/database of fish/wildlife habitat values completed. L-T Indic 2 –Statistical trends of inventory work observed, assessed, and utilized to monitor effectiveness of projects.
Goal 4: Public safety	<i>Objective 1:</i> Ensure built facilities on property are inspected annually <i>Objective 2:</i> Conduct risk assessments for “non-built” hazards (e.g. wildlife trees)	S-T Indic 1 – inspections are completed and deficiencies /risks are addressed. Hazards are identified and minimized.	L-T Indic 1 – public continues to enjoy a safe environment for wildlife viewing and interpretation

## 5. Financial Sustainability

As described in the management plan for this property complex the *Lazo Marsh-NE Comox Management Committee* has been in place for over 12 Years and includes representatives from the Town of Comox, Comox Valley Regional District, Friends of Comox-Lazo Forest Reserve, TNT, DUC, and MFLNRO. The involvement with this committee for the Lazo Marsh complex has brought substantial additional resources for the management of the area. This includes:

- Annual commitments of staff and equipment
- Financial contributions to projects
- Annual property tax exemptions
- Assistance with mapping and GIS work.

## 6. Partner Recognition

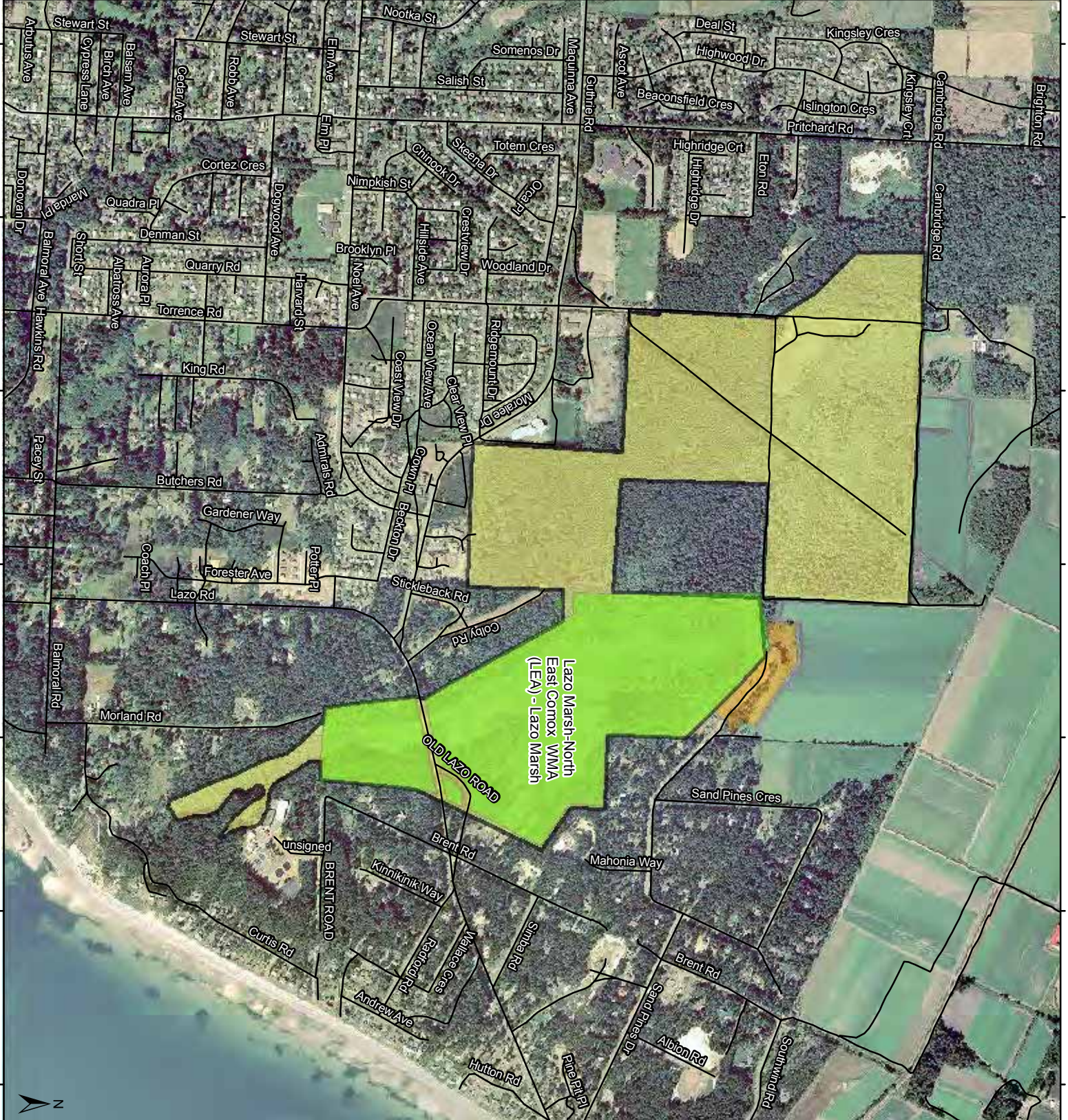
As per the VICLMP agreement and the HCTF agreement, all boundary and regulatory signs



include the Province logo's. All publications interpretive/ restorative/ enhancement signage includes the logos of all funding partners including HCTF.

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# Lazo Marsh

## Conservation Areas

- The Nature Trust
- Wildlife Management Area
- Ducks Unlimited

## Map Symbols

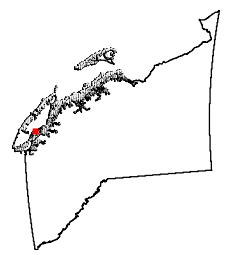
- Road



Scale: 1:15,000

UTM Zone 10 NAD 83

## BC Location



## Data sources:

- BC NGO Conservation Lands Database
- BC GOV FLNRO GeoBC

## Map produced by:



April 2012

## Wildlife O&M 3-year Application – Linton – VIHP Wetlands

### SITE DESCRIPTIONS / ACTIVITIES

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For each property or property complex, the following should be completed

#### 1. Name of property:

- a. *Complex Name:* **Linton – VIHP Wetlands**
- b. *CLD Reference:* **Linton – VIHP Wetlands**

#### 2. Habitat Description / Values

The VIHP Wetlands properties are located within the Comox-Strathcona Regional District on Vancouver Island within the Coastal Western Hemlock very dry maritime (CWHxm1) biogeoclimatic zone. The properties border the Vancouver Island Highway corridors on the south or west side of Courtenay and were originally acquired by the province to facilitate the development of the highway. All properties contain wetland habitat that are a mix of open water, riparian, forested areas and streams. Significant amounts of enhancement work have been completed for fish, waterfowl and other riparian species, including; small ponds, stream complexing, animal passage structures, wildlife trees and rock piles.

The purpose of the properties is to secure and protect freshwater wetlands and upland habitats that serve as important staging, feeding or roosting areas for migratory birds and are also important in supporting other wildlife. Furthermore, loss of ground cover in forested areas is a key concern as it alters the stream flow hydrology of wetlands and results in the degradation or loss of waterfowl habitat, both in the forest landscape and at the outlet of streams in the estuary landscape. Forested areas include cedar, fir, and hemlock with some deciduous species such as alder, maple and cottonwood. Important wildlife shrub and herbaceous species within the riparian community include ninebark, salmonberry, sedges, and cattails.

Waterfowl using the areas include Canada geese, mallard, and wood duck. Fish found within the various properties include: Piercy Creek (coho salmon, cutthroat trout), Morrison Creek (coho salmon, cutthroat trout, Dolly Varden, pink salmon), Linton Creek (rainbow trout, Dolly Varden char), Bevan Creek (coho salmon), Forbidden Creek (Dolly Varden, char), and Japanese Creek (coho salmon and cutthroat trout). Large mammals that utilize the properties include deer, black bear, beaver, wolf and cougar. The properties also provide habitat for local important populations of amphibians and avian species such as woodpeckers, raptors and passerine birds. Exclusion fencing along the Island Highway utilizes these properties as key accesses for wildlife crossing the highway using wildlife passage structures

#### 3. Guiding Documents

- VIHP Project Sheet – Background Report (Undated)*
- Vancouver Island Conservation Land Management Program Agreement*
- TNT/Province Management Agreement 2011*

#### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
<p><i>Goal 1:</i> To maintain the present habitat diversity for the benefit of fish and wildlife</p>	<p><i>Objective 1:</i> Protect and maintain the amount and quality of freshwater wetlands, upland habitats and forested wetlands</p> <p><i>Objective 2:</i> Preserve the variety, distribution and relative abundance of nesting, staging, migrating and wintering waterfowl and other species.</p> <p><i>Objective 2:</i> Provide key access points for wildlife crossing the highway</p>	<p>S-T Indic 1 – Best management plan regarding invasive species developed and implemented</p> <p>S-T Indic 2 – Boundary and regulatory signs installed</p> <p>S-T Indic 3 – Removal of illegally dumped materials and other issues of trespass addressed</p>	<p>L-T Indic 1 – Minimal disturbance to wildlife species and habitat is maintained</p> <p>L -T Indic 2 – No net loss of habitat value</p> <p>L-T Indic 3 – Continued use of properties for wildlife crossing highway</p> <p>L-T Indic 4 – Minimal public disturbance to properties</p>
<p><i>Goal 2:</i> To provide Interpretive opportunities that increase public knowledge of wildlife management and raise awareness relevant ecological sensitivities</p>	<p><i>Objective 1:</i> Elevate ecological awareness of the area through providing interpretive information</p>	<p>S-T Indic 1 – Interpretive signs developed, installed, and maintained</p>	<p>L-T Indic 1 – Opportunity continues to exist for public to be informed about conservation of the area</p>
<p><i>Goal 3:</i> Assess the habitat condition; measure the long-term health and integrity of fish, plant and wildlife populations</p>	<p><i>Objective 1:</i> Ensure a thorough baseline of information on the biophysical features</p> <p><i>Objective 2:</i> Complete relevant inventories, fish, wildlife, plant and habitat studies etc.</p>	<p>S-T Indic 1 – Priority baseline species data and inventories established, S-S-T Indic 2 – Invasive species surveys completed, ongoing monitoring coordinated (conj w/ goal 1)</p>	<p>L-T Indic 1 – Species /ecosystem inventory database available for the conservation area</p> <p>L-T Indic 2 – Monitoring framework developed</p>
<p><i>Goal 4:</i> Public safety</p>	<p><i>Objective 1:</i> To assess the property for potential safety risks and mitigate accordingly</p>	<p>S-T Indic 1 – Inspections are completed and deficiencies /risks are addressed</p> <p>S-T Indic 2 – Site surveys completed; boundary and regulatory signs installed</p>	<p>L-T Indic 1 – Risk of potential hazards on site successfully minimized</p>

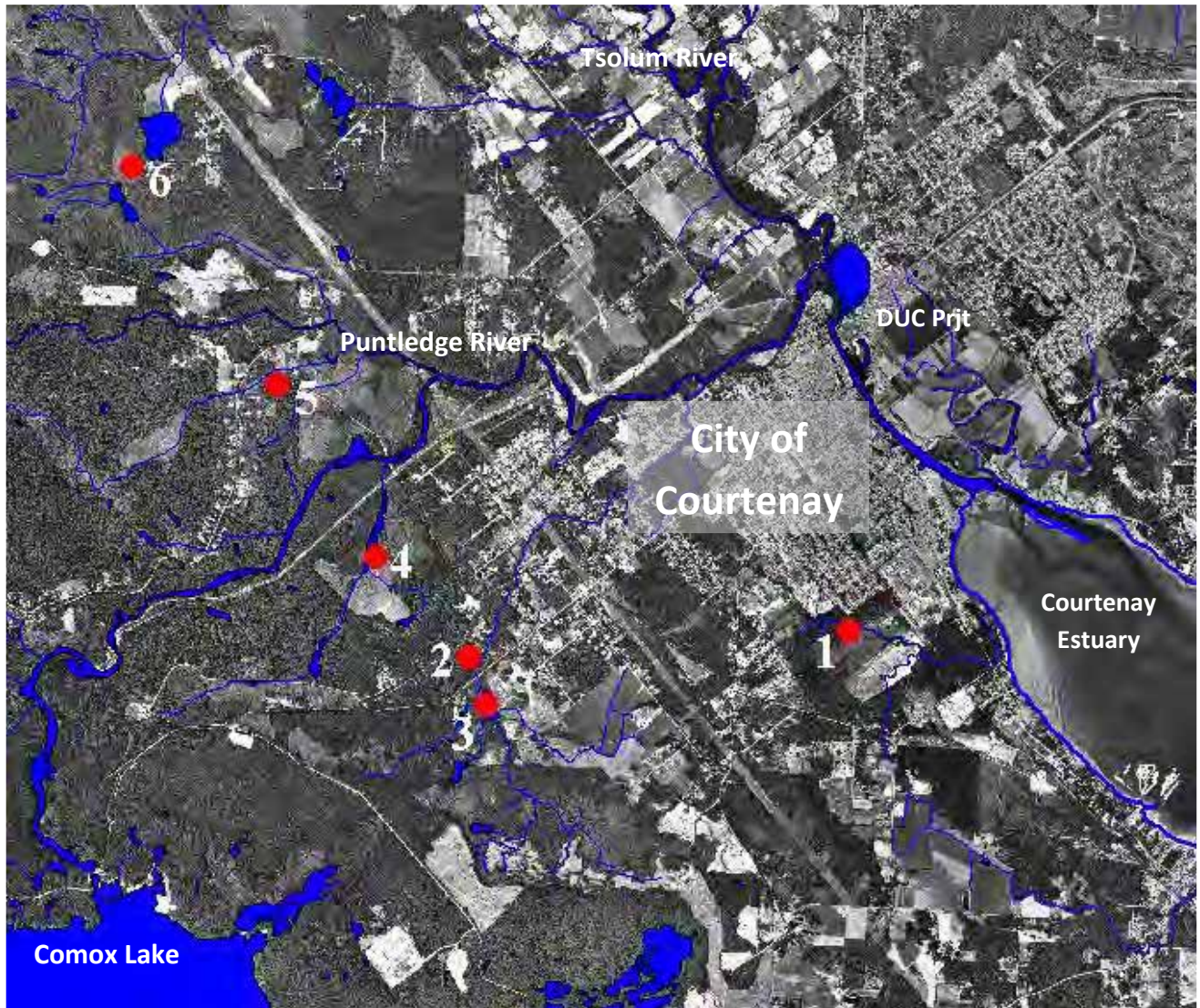
#### 5. Sustainability

Annual property tax exemptions are granted from the Comox Valley Regional District for these properties. In addition the VICLMP partners contribute resources to the VIHP Wetlands for operational purposes.

#### 6. Partner Recognition

As per the VICLMP agreement and the HCTF agreement, all boundary and regulatory signs

include the Province's logos. All publications/interpretive/ restorative/ enhancement signage includes the logos of all funding partners including HCTF.



Legend

1	Piercy Creek
2	Morrison Creek
3	Linton Creek
4	Bevan Creek
5	Forbidden Plateau Creek
6	Japanese Swamp Creek

## Wildlife O&M 3-year Application – NANAIMO RIVER ESTUARY CONSERVATION AREA

### SITE DESCRIPTIONS / ACTIVITIES

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For each property or property complex, the following should be completed

**1. Name of property:**

- a. *Complex Name:* **Nanaimo River Estuary Conservation Area**
- b. *CLD Reference:* Nanaimo River Estuary (LEA 1) – Nanaimo Island  
Nanaimo River Estuary (LEA 2) – Canada Cement  
Nanaimo River Estuary (LEA 3) – Duke Point  
Nanaimo River Estuary (LEA 4) – Duke Point Addition  
Nanaimo River Estuary (LEA 5) – Maughan Road  
Nanaimo River Estuary (LEA 6) – Holden Creek  
Nanaimo River Estuary (TAC)

**2. Habitat Description / Values**

*Background:*

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. In British Columbia, 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 contains 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; one of them being the Nanaimo River Estuary.

Despite their importance and rarity, approximately 43% of the province's estuaries are threatened by coastal development, modification, and pollution; approximately 60% of marsh habitat along the Strait of Georgia estuaries has been lost.

The Nanaimo River estuary is the largest estuary on Vancouver Island and is a very significant regional feature. The major watersheds of the Nanaimo and Chase Rivers, plus the drainages of Wexford, Beck, Holden and York Creeks together drain an area of approximately 84,000 ha. The lower 12 kilometres of the Nanaimo River and its estuary lie within the Nanaimo Lowland, a relatively low area along the east coast of Vancouver Island underlain by sedimentary rocks comprised mainly of conglomerate, sandstones and shales.

The estuary supports riparian, marsh and intertidal floral communities. Eelgrass beds occur over a large area in subtidal zone, extending up into the intertidal area. The upland vegetation, where recently undisturbed, is characteristic of the Coastal Douglas-fir moist maritime biogeoclimatic subzone. The Nanaimo estuary, in conjunction with surrounding areas, is used by thousands of over-wintering birds. The estuary is critical to waterfowl survival during severe winter weather, and is part of the larger complex of estuaries that are vital feeding, resting and marshalling areas for migrating birds of the Pacific flyway. More than 200 bird species have been

observed within the estuary, of which 18 are blue-listed and 15 are red-listed either provincially or federally. Five species of Pacific salmon and two species of migratory trout historically occurred in the estuary. The estuarine and near-shore environments are important in supporting the residency of juveniles. The Nanaimo estuary is also utilized by juvenile herring. Deer and other smaller mammals are also supported by the estuary.

### 3. Guiding Documents

*Nanaimo River Estuary Management Plan 2006*

*Environmental Monitoring Program for the Nanaimo River Estuary 2008*

*Nanaimo Estuary Terrestrial Monitoring Program 2009*

*Restoration Plan to Restore a Portion of Nanaimo Estuary Conservation Area as Habitat for Vesper Sparrow (ssp. affinis) 2011*

*Coastal Invasive Plant Management Strategy 2010*

*Vancouver Island Conservation Land Management Program Agreement*

*TNT/Province Management Agreement 2011*

### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1: To preserve and enhance fish and wildlife habitat	<p>Objective 1: Reduce and eventually stop the degradation of existing habitats, and in particular stop the loss and degradation of the high value biophysical units.</p> <p>Objective 2: Maintain and improve the existing habitat base in the estuary to support viable and productive populations of fish, wildlife and plants, including invertebrates.</p> <p>Objective 3: Maintain a diversity of productive habitats within the Nanaimo River Estuary in order to sustain and improve the estuarine ecosystem.</p> <p>Objective 4: Increase fish and wildlife populations towards historical levels.</p>	<p>S-T Indic 1 – identify critical habitats that may require further enhancement /restoration work</p> <p>S-T Indic 2 – no loss in existing habitat value</p> <p>S-T Indic 3 – restoration works identified and implemented</p> <p>S-T Indic 4 – conduct annual surveys in conjunction with activities under Goal 3</p>	<p>L-T Indic 1 – No further degradation of habitats</p> <p>L-T Indic 2 – increased habitat diversity and species utilization</p>
Goal 2: To provide educational and interpretive	Objective 1: Protect and restore the resources of the estuary while providing opportunities for public	S-T Indic 1 – recreational use studies/data collected for estuary	L-T Indic 1 – On- going recreational use of estuary for both wildlife viewing and waterfowl hunting

opportunities; increase public knowledge of wildlife management	recreational use and SFN cultural, spiritual and food collection practices that are compatible with fish and wildlife conservation.  Objective 2: Increase the public engagement and stewardship of the estuary	S-T Indic 2 – Acceptable uses are determined and managed  S-T Indic 3 – undertake public outreach activities with Nanaimo F&G and SFN to raise awareness of estuary  S-T Indic 4 – identify opportunities for stewardship projects to engage community	L-T Indic 2 Engaged stewardship community
Goal 3: Assess the long-term health and integrity of the Nanaimo Estuary, and the success of habitat restoration and enhancement initiatives	Objective 1: Ensure a thorough baseline of information on the Nanaimo Estuary is collected  Objective 2: Implement Terrestrial and Aquatic monitoring program with focus on Estuarine Performance Indicators	S-T Indic 1 – priority baseline studies identified and implemented  S-T Indic 2 – funding secure to implement priority actions of monitoring programs	L-T Indic 1 – comprehensive species /ecosystem inventory database available for Nanaimo Estuary  L-T Indic 2 – Monitoring plans implemented on recommended schedule  L-T Indic 3 – Land management activities guided by results of monitoring program
Goal 4: Public safety	<i>Objective 1:</i> Ensure built facilities on property are inspected annually <i>Objective 2:</i> Conduct risk assessments for “non-built” hazards (e.g. wildlife trees)	S-T Indic 1 – inspections are completed and deficiencies /risks are addressed	L-T Indic 1 – public continues to enjoy a safe environment for wildlife viewing and interpretation
Goal 5: To foster on- going relationships for the betterment of the conservation area complex and to bring additional resources to assist with the management initiatives	<i>Objective 1:</i> Continue to work with the NEMC <i>Objective 2:</i> Work cooperatively with NEMC members to develop joint applications for funding /workplans	S-T Indic 1 – NEMC continues to meet 2 times a year to discuss issues in the SMCA S-T Indic 2 – all interest groups and stakeholders are represented S-T Indic 3 – meetings result in greater collaboration and shared resources	L-T Indic 1 – continued strong partnership approach to NEMC L-T Indic 2 – increased in-kind and cash contributions to the management of Nanaimo Estuary Conservation Area.

## 5. Financial Sustainability

As per the management plan for this property complex the *Nanaimo Estuary Management Committee* has been in place since 2004 and includes representatives from Snuneymuxw First Nation, Nanaimo Port Authority, the Province, Log Storage Association, City of Nanaimo, Regional District of Nanaimo, Nanaimo Fish and Game, DUC, TNT and CWS. The involvement with this committee for the Nanaimo Estuary has brought substantial additional resources for the management of the area. Annual property tax exemptions are granted by both the City of Nanaimo and RDN. In addition the significance of the estuary for rare and endangered species



also bring potential additional resources from federal funding programs like HSP as well as provincial recovery programs (e.g. GOERT).

6. **Partner Recognition**

As per the VICLMP agreement and the HCTF agreement, all boundary and regulatory signs include the Province's logos. All publications/interpretive/ restorative/ enhancement signage includes the logos of all funding partners including HCTF.



# Nanaimo River Estuary

**Conservation Areas**  
The Nature Trust

**Map Symbols**  
Road



**BC Location**



**Data sources:**  
 BC NGO Conservation Lands Database  
 BC GOV/FLNRO GeoBC  
 Bing Maps Aerial

**Map produced by:**



## Wildlife O&M 3-year Application – OREL LAKE CONSERVATION AREA

### SITE DESCRIPTIONS / ACTIVITIES

For each property or property complex, the following should be completed

#### 1. Name of property:

- a. *Complex Name:* **Orel Lake Conservation Area**
- b. *CLD Reference:* Orel Lake (LEA)

#### 2. Habitat Description / Values

The Orel Lake Conservation Area is located in the CWHxm1 zone and is characterized by warm, dry summers and moist mild winters with relatively little snow fall. Orel Lake represents the headwaters Bear Creek, a critical tributary for the Oyster River that provides spawning and rearing habitat for coho salmon and cutthroat trout.

This property was secured to protect and enhance an important wetland in the Oyster River Watershed. This watershed supports a large biodiversity of indigenous wildlife and plant species including: reptiles, amphibians and mammals. Over 230 species of birds utilize the watershed for either a portion or all of their life cycle. Species occurring at Orel Lake Conservation Area include: Trumpeter Swans, mallards, northern pintail, bufflehead, ring-necked duck, American bittern, Sandhill Cranes, Pied-billed Grebes, wood ducks, red legged frogs and painted turtles.

#### 3. Guiding Documents

*Property Acquisition Report - 1988*

*Coastal Invasive Plant Management Strategy 2010*

*Vancouver Island Conservation Land Management Program Agreement*

#### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1. Preserve and enhance fish and wildlife habitat	<p><i>Objective 1:</i> Provide optimal overwintering habitat and summer rearing areas for salmonids</p> <p><i>Objective 2:</i> Provide optimal waterfowl habitat</p> <p><i>Objective 3:</i> Maintain supplemental headwater storage for Bear Creek, ensuring required flow during periods of low water.</p> <p><i>Objective 4:</i> Assess habitat of area to determine further enhancement</p>	<p>S-T Indic 1 – Successful maintenance of open water habitats throughout wetland, ensuring adequate year-round depth, vegetation coverage and temperature levels.</p> <p>S-T Indic 2 – Stable, year round water flow in Bear Creek</p>	<p>L-T Indic 1 – prevention of shallow water vegetation succession/takeover in marsh</p> <p>L-T Indic 2 – Improved salmonid populations</p> <p>L-T Indic 3 – Optimal Water quality and flow levels reached and maintained</p>

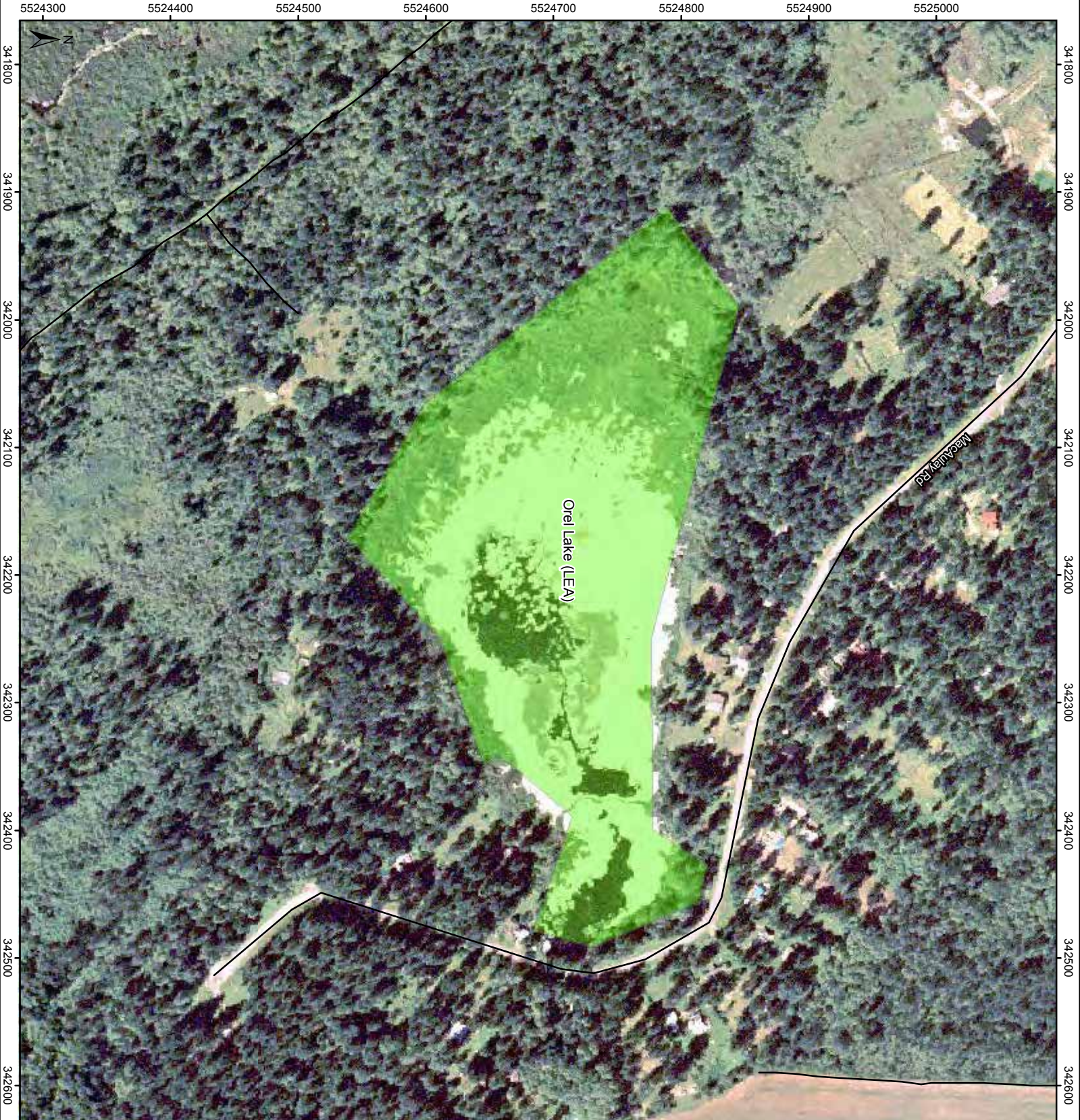
	opportunities for fish and wildlife	S-T Indic 3 – Conduct water quality surveys	
Goal 2: To further ecological/inventory knowledge of area	<p><i>Objective 1:</i> To increase understanding of wetlands by providing baseline data, species inventory, and research studies on vegetation, birds, fish, reptiles, and amphibians,</p> <p><i>Objective 2:</i> To continue gaining insight and knowledge regarding wetland rehabilitation.</p>	<p>S-T Indic 1 – Ongoing inventories/surveys completed for fish, wildlife and endangered species, baseline data for long term monitoring established</p> <p>S-T Indic 2 – Annual inventory of invasive plants completed</p>	<p>L-T Indic 1 – Comprehensive knowledge/database of fish/wildlife habitat values completed.</p> <p>L-T Indic 2 –Statistical trends of inventory work observed, assessed, and utilized to monitor effectiveness of projects.</p>
Goal 3: Public safety	<p><i>Objective 1:</i>Ensure built facilities on property are inspected annually</p> <p><i>Objective 2:</i> Conduct risk assessments for “non-built” hazards (e.g. wildlife trees)</p>	S-T Indic 1 – inspections are completed and deficiencies /risks are addressed. Hazards are identified and minimized.	L-T Indic 1 – public continues to enjoy a safe environment for wildlife viewing and interpretation
Goal 4: To provide educational and interpretive opportunities; increase public knowledge of wildlife management	<p><i>Objective 1:</i> Elevate ecological awareness through educational and public involvement programs</p> <p><i>Objective 2:</i> Form partnerships with other groups involved in public education</p> <p><i>Objective 3:</i> Produce interpretive signage and other materials to support education initiatives</p> <p><i>Objective 4:</i> Develop formal wildlife viewing areas along with associated viewing infrastructure</p>	<p>S-T Indic 1 Increased number of visitors to viewing/ education facilities</p> <p>S-T Indic 2 – wildlife viewing facilities built</p> <p>S-T Indic 3 – interpretive signage created/developed</p>	<p>L-T Indic 1 – wildlife viewing structures maintained and utilized</p> <p>L-T Indic 2 – education/ stewardship groups long term use of the area for education</p> <p>L-T Indic 3 – increased number of volunteers assisting with projects at site</p>

5. **Financial Sustainability**

Annual property tax exemptions are granted from the Comox Valley Regional District for this property. In addition partnership opportunities exist with the Oyster River Enhancement Society, DFO and BCCF for enhancement projects.

6. **Partner Recognition**

As per the VICLMP agreement and the HCTF agreement, all boundary and regulatory signs include the Province logo's. All publications, interpretive/ restorative/ enhancement signage includes the logos of all funding partners including HCTF.



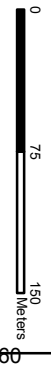
# Orel Lake

## Conservation Areas

The Nature Trust

## Map Symbols

— Road



Scale: 1:4,000

UTM Zone 10 MAD 83

## BC Location



## Data sources:

BC NGO Conservation Lands Database  
BC GOV FLNRO GeoBC

## Map produced by:



April 2012



## Wildlife O&M 3-year Application – Parksville-Qualicum Beach WMA

### SITE DESCRIPTIONS / ACTIVITIES

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#### 1. Name of property

- a. *Complex Name*
- b. *CLD Reference*

#### **Parksville-Qualicum Beach WMA**

Parksville-Qualicum Beach WMA

Parksville-Qualicum Beach WMA (LEA 1) - Englishman River

Parksville-Qualicum Beach WMA (LEA 2) - Englishman River

Parksville-Qualicum Beach WMA (LEA 3) - Englishman River

Parksville-Qualicum Beach WMA (LEA 4) - Parksville Flats

#### 2. Habitat Description / Values

The P-QBWMA is located adjacent to the communities of Parksville and Qualicum Beach on the east coast of Vancouver Island and lies within the Nanaimo lowland section of the Mount Arrowsmith Biosphere Reserve in the Coastal Douglas fir Moist Maritime Biogeoclimatic Zone (CDFmm).

Three major biophysical components are included in the P-QBWMA: seventeen kilometres of Coastal foreshore, Englishman River and Qualicum River estuaries (including 43 hectares of upland habitat around the Englishman estuary), and 14.5 km of streambed and riparian area along the Englishman River. Two large rivers (Little Qualicum, Englishman) and six creeks (Grandon, French, Morningstar, Carey, Craig and Beach) drain into P-QBWMA.

Ranging from offshore eelgrass and kelp beds, sandy beaches, intertidal mudflats and salt marshes to large river systems flowing through forested areas, the diversity of ecosystems found in the P-QBWMA, provide refuge for many plant and animal species. Over 250 species of birds, including hawks owls, warblers, sparrows and finches have been reported within the WMA. Mammals such as black bear, river otter, mink, marten, deer, elk, cougar and water shrews depend on the WMA for their survival as do many reptiles and amphibians. The WMA is also home to a large variety of plant species characteristic of Douglas fir dominated forests.

The intertidal habitat supports thousands of migrant waterfowl along the Pacific Flyway corridor, and provides critical staging grounds for the internationally important Brant sea goose. Over sixty other waterfowl species and marine birds depend on the WMA, including; Grebes, Harlequin Ducks, Scaup, Scoters, and Trumpeter Swans. Millions of Pacific herring spawn along the intertidal foreshore area each spring, providing a major food source for waterfowl and water birds, marine mammals, and local fisheries systems. The estuaries and foreshore zones also provide vital rearing habitat to Pacific salmonid species, while the river systems provide crucial habitat to spawning salmon, steelhead and Coastal Cutthroat trout.

### 3. Guiding Documents

<i>Conservation Agreement (DU, TNT, Province)</i>	2006
<i>Coastal Invasive Plant Management Strategy</i>	2010
<i>Vancouver Island Conservation Land Management Program Agreement</i>	2010
<i>TNT – Province Management Agreement</i>	2011
<i>P-QBWMA Management Plan</i>	2003
<i>Englishman River Watershed Recovery Plan</i>	2001
<i>Englishman River Estuary (PECP)</i>	1993
<i>Caring for the Englishman River Estuary (MVIHES)</i>	2009
<i>Habitat Utilization &amp; Improvement Opportunities in the Englishman Estuary</i>	2012
<i>A strategy for the protection &amp; restoration of the Eng. River mainstream</i>	2005

### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short-term	Long-term
Goal 1. Preserve and enhance fish and wildlife habitat	<p>Objective 1. To continue efforts to reduce the disturbance of spring staging Brant and other water bird populations in the P-QBWMA</p> <p>Objective 2. To act on opportunities to improve the ecological integrity and connectivity of the P-QBWMA to surrounding natural areas and ecosystems</p> <p>Objective 3: Reduce and eventually stop the degradation of existing habitats, and in particular stop the loss and degradation of the high value biophysical units.</p> <p>Objective 4: Maintain and improve the existing habitat base in the estuary to support viable and productive populations of fish, wildlife and plants, including invertebrates.</p>	<p>S-T Indic 1 – Seasonal beach closure signs installed and enforced by Conservation Officers, patrolled by VIU Students</p> <p>S-T Indic 2 – Best action to take regarding Mine Rd. dyke determined, with respect to habitat enhancement and flood protection</p> <p>S-T Indic 3 – Juvenile salmonid use of Englishman River Estuary report completed</p> <p>S-T Indic 4 – Ongoing Invasive plant species removal</p> <p>S-T Indic 5 – identify critical habitats that may require further enhancement /restoration work</p> <p>S-T Indic 6 – no loss in existing habitat value</p> <p>S-T Indic 7 – restoration works identified and implemented</p> <p>S-T Indic 8 – conduct annual surveys in conjunction with activities under Goal 3</p>	<p>L-T Indic 1 – P-QBWMA remains a spring -staging area for Brant</p> <p>L-T Indic 2 – Mine Rd. Dyke plan implemented and successful</p> <p>L-T Indic 3 – Habitat improvement opportunities implemented</p> <p>L-T Indic 4 – Continued long-term use of WMA by traditional native fish and wildlife species</p> <p>L-T Indic 5 – No further degradation of habitats</p> <p>L-T Indic 6 – increased habitat diversity and species utilization</p>
Goal 2. To foster on-	Objective 1. To improve local	S-T Indic 1 – Volunteer Warden	L-T Indic 1 – Increase in

<p>going cooperative stewardship programs focused on the long-term health and viability of the Conservation Area as wildlife habitat and a recreational area.</p>	<p>awareness and build community support by disseminating information about the values and management issues in the P-QBWMA</p> <p>Objective 2. To clarify policies and objectives for all trail development within the P-QBWMA and integration with surrounding municipal and regional trail systems</p> <p>Objective 3. To identify the P-QBWMA in a consistent and appealing manner</p> <p>Objective 4. Address issues of vandalism and habitat damage</p> <p>Objective 5. To support education of landowners and the public about developing and maintaining properties adjacent to the foreshore in environmentally sensitive ways</p>	<p>Program implemented and functional</p> <p>S-T Indic 2 – P-QBWMA info brochures distributed, explaining sensitivities and wildlife viewing opportunities</p> <p>S-T Indic 3 – Ongoing projects completed in cooperation with Arrowsmith Naturalists</p> <p>S-T Indic 4 – WMA signage installed, interpretive kiosks maintained, updated regularly</p> <p>S-T Indic 5 – Involvement in annual Brant Wildlife Festival</p>	<p>public involvement in stewardship of the WMA</p> <p>L-T Indic 2 – Increased volunteer participation, public and landowner support</p>
<p>Goal 3: To further ecological/inventory knowledge of area</p>	<p>Objective 1. To identify inventory and monitoring priorities within the P-QBWMA and source means of implementing these activities</p> <p>Objective 2: To increase understanding of the WMA by providing baseline data, species inventory, and research studies on the riparian habitat, stream conditions, vegetation, birds, fish, reptiles, amphibians and other wildlife found within the CA</p>	<p>S-T Indic 1 – Completed surveys of waterfowl; amphibians; salmonids; invasive plant species; riparian, terrestrial, and marine vegetation; in-stream habitat; birds and other wildlife.</p> <p>S-T Indic 2 – Work in cooperation with partner agencies and naturalists organizations to conduct surveys</p> <p>S-T Indic 3 – Eelgrass mapping and monitoring completed</p> <p>S-T Indic 4 – Water quality assessed and monitored</p> <p>S-T Indic 5 – Baseline data established</p>	<p>L-T Indic 1 – Comprehensive knowledge/database of fish/wildlife habitat values completed.</p> <p>L-T Indic 2 –Statistical trends of inventory work observed, assessed, and utilized to monitor effectiveness of projects.</p>
<p>Goal 4: Public safety</p>	<p>Objective 1:Ensure built facilities on property are inspected annually</p> <p>Objective 2: Conduct risk assessments for “non-built” hazards (e.g. wildlife trees)</p>	<p>S-T Indic 1 – Inspections are completed and deficiencies /risks are addressed. Hazards are identified and minimized.</p>	<p>L-T Indic 1 – public continues to enjoy a safe environment for wildlife viewing and interpretation</p>

## 5. **Financial Sustainability**

Through the long standing conservation efforts in the Parksville Qualicum Beach area several partnerships exist that bring substantial value both in terms of volunteer hours and direct cash contribution to the management of the PQB WMA. These partnerships include:

- Mt Arrowsmith Biosphere Foundation – focused on public education and sustainability
- Guardians of Mid Island Estuaries – focused on research on both the Englishman and LQ estuaries
- Mt Arrowsmith Naturalists – monthly invasive species removal, bird surveys, restoration work
- Mid Vancouver Island Habitat Enhancement Society – conduct extensive monitoring of habitat condition within the entire region (with a specific focus on the Englishman River Watershed)
- BCCF/Living Rivers – conduct extensive inventory work for fish habitat and utilization in the Englishman and LQ estuaries; in stream habitat restoration on the Englishman
- Friends of French Creek – monitor water flows of French Creek and health of estuary.
- Vancouver Island University – annual monitoring of seasonal brant closures.
- Englishman River Watershed Recovery Program Committee – discuss projects/issues in watershed

In addition to these community partnerships, annual property tax exemptions are granted from the City of Parksville, RDN, and the Town of Qualicum Beach.

## 6. **Partner Recognition**

As per the VICLMP agreement and the HCTF agreement, all boundary and regulatory signs include the Province's logos. All publications/interpretive/ restorative/ enhancement signage includes the logos of all funding partners including HCTF.

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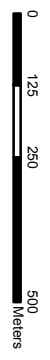


**Parksview-Quilcum Beach WMA**

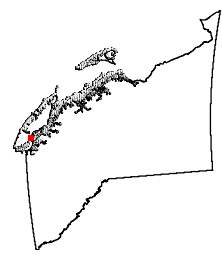


- Conservation Areas**
- The Nature Trust
  - Wildlife Management Area
  - Provincial Park

- Map Symbols**
- Road



**BC Location**



**Data sources:**  
 BC NGO Conservation Lands Database  
 BC GOV FLNRO GeoBC

**Map produced by:**



April 2012

## Wildlife O&M 3-year Application – SALMON RIVER ELK RESERVE

### SITE DESCRIPTIONS / ACTIVITIES

For each property or property complex, the following should be completed

#### 1. Name of property:

- a. *Complex Name:* **Salmon River Elk Reserve Conservation Area**
- b. *CLD Reference:* Salmon River Elk Reserve (LEA)

#### 2. Habitat Description / Values

The Salmon River Elk Reserve is located on the floodplain of the Salmon River. Active channels flow through the property, and numerous smaller seasonal channels are evident throughout. Ecologically, this is classified under the biogeoclimatic system as submontane Coastal Western Hemlock very wet maritime (CWHvm1) with a complex of site series 09(50%), 10(30%), and 11(20%), representing high, medium, and low bench sites on the floodplain. Some of the vegetation on this site is indicative of the very dry maritime variant (CWHxm2) from the rainshadow effect within the Salmon River valley. The terrain is flat with river channels, and the parent materials are fluvial. The forest cover on the property is somewhat variable, with black cottonwood dominating and with smaller components of red alder, Douglas-fir, willow, and western hemlock. There is a very well developed understory of shrubs and herbs.

The property was acquired to protect critical Roosevelt Elk habitat in the Salmon River valley. Roosevelt Elk tend to occur in small herds confined to major river valleys where low-elevation early seral forests as well as riparian, floodplain, wetland and estuarine meadow habitats provide winter-spring forage. Elk primarily subsist on sedges, grasses and ferns, supplemented by browse from willow, elderberry, cedar and hemlock. In summer and fall elk herds move to sub-alpine meadows and avalanche tracks.

#### 3. Guiding Documents

*Property Acquisition Report and Management Statement - 1980*

*TNT/Province Lease 1981*

*TNT/Province Management Agreement 2011*

*Vancouver Island Conservation Land Management Program Agreement*

#### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1. Preserve and protect Roosevelt Elk habitat	<i>Objective 1:</i> Maintain and improve the existing habitat base in the conservation area to ensure critical habitat elements are maintained (e.g. early seral forest and mix woodland).	S-T Indic 1 – identify critical habitats that may require further enhancement /restoration work	L-T Indic 1 – continued use of conservation area by Salmon River elk herd  L-T Indic 2 – increased habitat diversity and species utilization

	<i>Objective 2:</i> Maintain a diversity of productive habitats	S-T Indic 2 – no loss in existing habitat value  S-T Indic 3 – restoration works identified and implemented  S-T Indic 4 – conduct annual surveys in conjunction with activities under Goal 3	
Goal 2: To further ecological/inventory knowledge of area	<i>Objective 1:</i> To increase understanding of wetlands by providing baseline data, species inventory, and research studies on vegetation, birds, fish, reptiles, and amphibians,	S-T Indic 1 – Ongoing inventories/surveys completed for fish, wildlife and endangered species, baseline data for long term monitoring established S-T Indic 2 – Annual inventory of invasive plants completed	L-T Indic 1 – Comprehensive knowledge/database of fish/wildlife habitat values completed. L-T Indic 2 –Statistical trends of inventory work observed, assessed, and utilized to monitor effectiveness of projects.
Goal 3: Public safety	<i>Objective 1:</i> Limit public access and minimize public safety risks	S-T Indic 1 – inspections are completed and deficiencies /risks are addressed. Hazards are identified and minimized.	L-T Indic 1 – Elk continue to use property undisturbed

5. **Financial Sustainability**

Annual property tax exemptions are granted from the Comox Valley Regional District for this property.


6. **Partner Recognition**

As per the VICLMP agreement and the HCTF agreement, all boundary and regulatory signs include the Province logo's. All publications, interpretive/ restorative/ enhancement signage includes the logos of all funding partners including HCTF.




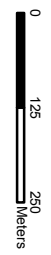
**Salmon River Elk Reserve**

**Conservation Areas**

 The Nature Trust

**Map Symbols**

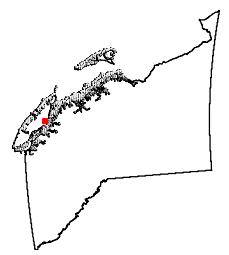
 Road



Scale: 1:10,000

UTM Zone 10 MAD 83

**BC Location**



**Data sources:**

- BC NGO Conservation Lands Database
- BC GOV FLNRO GeoBC
- Bing Aerial

**Map produced by:**



April 2012

## Wildlife O&M 3-year Application – SALMON RIVER ESTUARY CONSERVATION AREA

### SITE DESCRIPTIONS / ACTIVITIES

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For each property or property complex, the following should be completed

**1. Name of property:**

- a. *Complex Name:* **Salmon River Estuary Conservation Area**
- b. *CLD Reference:* Salmon River Estuary (LEA 1) – Matthew  
Salmon River Estuary (LEA 2)  
Salmon River Estuary (LEA 3)

**2. Habitat Description / Values**

The Salmon River Conservation Area is located within Johnstone Strait 60km north of the community of Campbell River and is located within the municipal boundaries of the Village of Sayward and the Strathcona Regional District . The area is located within the very wet maritime Coastal Western Hemlock biogeoclimatic zone (CWHvm) and overlaps the Georgia Depression and Coast Mountain Eco-Provinces.

The Salmon River estuary is the only significant area of coastal wetland habitat located on a relatively steep and rugged 250km stretch of coastline from Campbell River to the network of estuaries on the Quatsino lowlands of Vancouver Island. This strategic location has made the Salmon River a critical stopping point for migrating waterfowl, shorebirds, and passerines and provides critical habitat to several fish and mammal species; the Salmon River estuary is ranked amongst the top ten on Vancouver Island in terms of productivity and resource values.

The Salmon River Conservation Area is located within the Coastal Western Hemlock biogeoclimatic zone and is in the transitional zone between two sub-variants (Submountain Very Wet Maritime - CWHvm1 & Very Dry Maritime - CWHxm) of the CWH zone (Blackwell & Associates 2004, Green & Klinka, 1994). The CWHvm1 zone is characterized by a wet, humid climate with cool summers and mild winters with very light snow fall. The CWHxm zone occurs at lower elevations along the east side of Vancouver Island as far north as Kelsey Bay. This zone is characterized by warm, dry summers and moist mild winters with relatively little snow fall. Well drained fluvial sites, like those found in the Conservation Area, support excellent stands of Sitka spruce, western hemlock, western red cedar and red alder.

The Salmon River estuary Conservation Area supports a wide diversity of avian species including waterfowl, upland birds, and raptors. The Conservation Area is an important over-wintering habitat for Trumpeter Swans, Great Blue Herons, and several species of dabbling and diving ducks. Raptors that utilize the area include Osprey, Bald Eagle, Red-tailed Hawk, Sharp-shinned Hawk, Merlin, Northern Goshawk, Northern Harrier and American Kestrel. Peak use of the estuary by waterfowl occurs from October to February (daily avg. 1,500 – 2,000 dabblers & 250-350 divers). Marbled Murrelets have also been recorded in the upland and foreshore areas of the Conservation Area. A summer breeding bird survey conducted in 2004 recorded 76 different species utilizing the area including Caspian Terns and the rare vagrant Northern Mockingbird. A fall 2004 bird survey recorded the presence of the blue-listed Northern Pygmy Owl.

The Conservation Area also provides breeding habitat for several species of waterfowl and passerines. Mallards and Common Mergansers are known to utilize the area for breeding and brood rearing. The old-growth forest characteristics of the upland portions of the Conservation Area also provides potential breeding habitat for cavity nesting birds.

Several species of large and small mammals utilize the Conservation Area for foraging, grazing, and hunting. The Conservation Area provides winter-spring forage habitat for Roosevelt Elk and Black-tailed Deer where they feed on sedges, grasses and ferns. Ungulates also utilize the Conservation Area during periods of high snow fall for thermal cover. In the late summer and early fall Black-bears are found throughout the Conservation Area feeding on berries and salmon. Cougars are frequently observed utilizing the area as well. Other mammals recorded include: raccoon, ermine, river otters, voles and squirrels.

The conservation area supports all pacific salmon species including sea-run dolly varden and cutthroat trout.

### 3. Guiding Documents

*Salmon River Estuary Management Plan 2005*

*Coastal Invasive Plant Management Strategy 2010*

*Vancouver Island Conservation Land Management Program Agreement*

### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1: To improve the ecological integrity of the Conservation Area through acquisition, crown reserve designation, covenants and management agreements.	<p><i>Objective 1:</i> Inventory and assess securement options on lands surrounding conservation area and identify high priority sites.</p> <p><i>Objective 2:</i> Section 106 application to FLNRO for unalienated crown foreshore lands adjacent to the Kelley Property and viewing tower.</p> <p><i>Objective 3:</i> Promote conservation area for WMA designation.</p>	<p>S-T Indic 1 – property securement options identified</p> <p>S-T Indic 2 – crown reserve applications complete</p> <p>S-T Indic 3 – support for WMA designation</p>	<p>L-T Indic 1 – Conservation Area expanded to protect all critical habitats in SRE.</p> <p>L-T Indic 2 – WMA designated.</p>
Goal 2: Reclaim and restore damaged altered habitats to improve fish and wildlife habitat.	<p><i>Objective 1:</i> Assess conservation area for damaged or altered habitats and develop plan for remediation.</p> <p><i>Objective 2:</i> Identify key habitat requirements for rare/endangered species and work towards improving these requirements (e.g wildlife tree recruitment).</p>	<p>S-T Indic 1 – restoration projects identified and remedial plans implemented</p> <p>S-T Indic 2 Rare species habitat components are assessed and identified</p>	<p>L-T Indic 1 – Restoration plans completed and habitat improved</p> <p>L-T indic 2 – Improved habitat elements for rare and endangered species</p>
Goal 3: To further ecological/inventory	<p><i>Objective 1:</i> Conduct on-going inventories for fish and wildlife to</p>	<p>S-T Indic 1 – priority inventory work is</p>	<p>L-T Indic 1 – comprehensive knowledge/database of fish/wildlife</p>

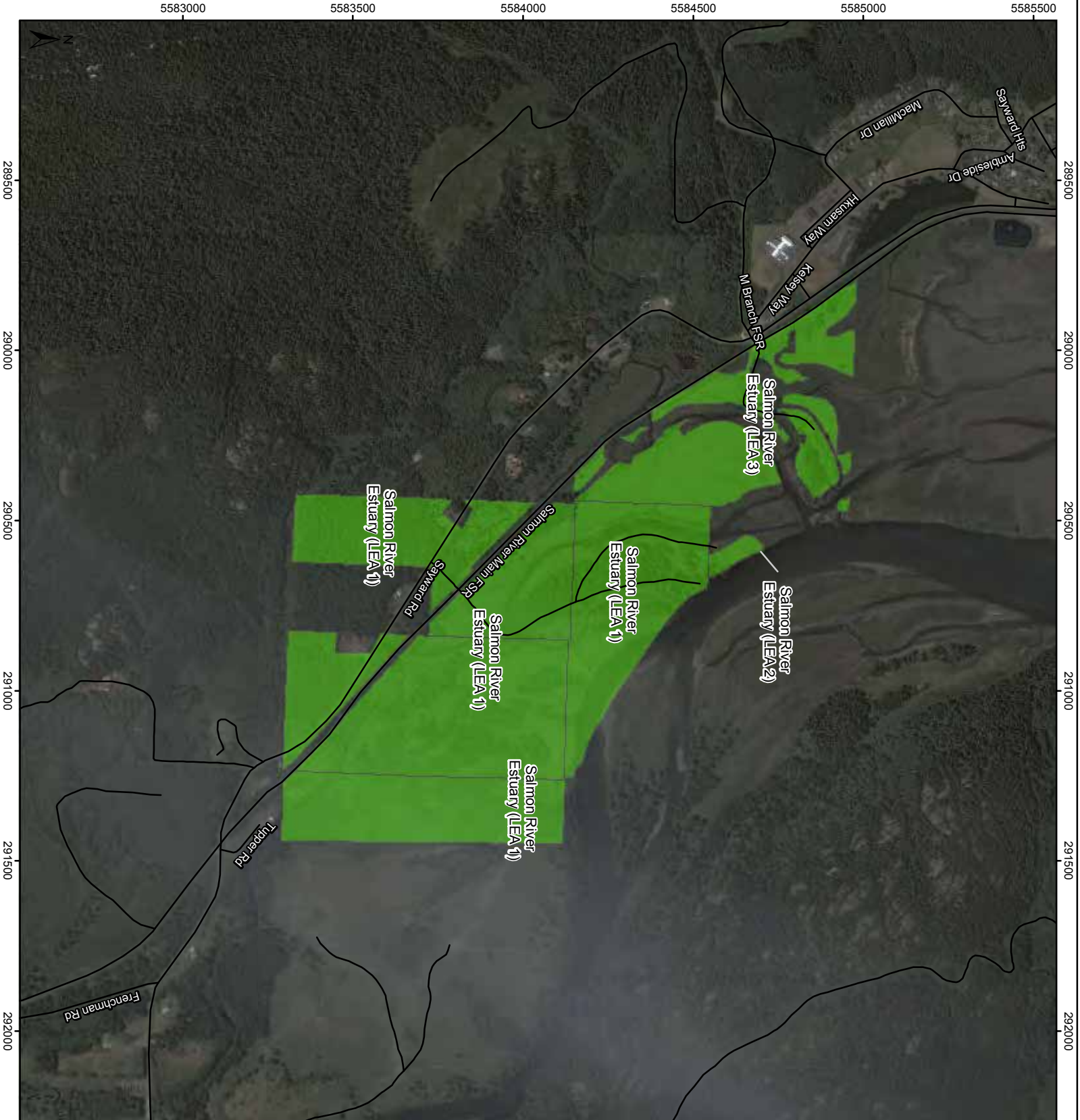
knowledge of area	establish baseline data for on-going long term monitoring. <i>Objective 2:</i> Inventory C/A for rare and endangered species	completed S-T Indic 2 – inventory work is being utilized to monitor effectiveness of projects	habitat values completed
Goal 4: To manage and reduce ecological damage caused to Conservation Area by human use and promote sustainable wildlife viewing areas.	<i>Objective 1:</i> Place regulatory signage at all access points outlining appropriate uses of the property. <i>Objective 2:</i> Maintain and promote wildlife viewing opportunities through the development of new viewing locations. <i>Objective 3:</i> Develop interpretive signage outlining fish, wildlife and cultural values of the area. <i>Objective 4:</i> Deactivate trails leading into sensitive areas.	S-T Indic 1 – boundary integrity is maintained; no trespass infringement  S-T Indic 2 – wildlife viewing opportunities provided  S-T Indic 3 – interpretive signage developed	L-T Indic 1 – public recreation wildlife viewing continued on property without impacting ecological integrity of area.
Goal 5: Public safety	<i>Objective 1:</i> Ensure built facilities on property are inspected annually <i>Objective 2:</i> Conduct risk assessments for “non-built” hazards (e.g. wildlife trees)	S-T Indic 1 – inspections are completed and deficiencies /risks are addressed	L-T Indic 1 – public continues to enjoy a safe environment for wildlife viewing and interpretation

5. **Financial Sustainability**

As per the management plan for this property complex several local partnerships have been developed to assist with the management of this property. This includes the presence of a volunteer warden (Sayward Fish and Game Club) as well as support provided by the Village of Sayward. An on-going challenge at this property complex is receiving property tax exemptions from the Village of Sayward; the portion of the property located in the Strathcona RD is annually exempted.

6. **Partner Recognition**

As per the VICLMP agreement and the HCTF agreement, all boundary and regulatory signs include the Province logo's. All publications, interpretive/ restorative/ enhancement signage includes the logos of all funding partners including HCTF.



## Salmon River Estuary

### Conservation Areas

- The Nature Trust

### Map Symbols

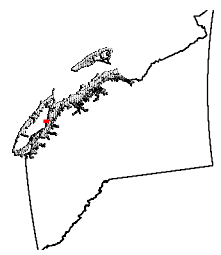
- Road



Scale: 1:15,000

UTM Zone 10 MAD 83

### BC Location



**Data sources:**  
 BC NGO Conservation Lands Database  
 BC GOV FLNRO GeoBC  
 Bing Maps Aerial

### Map produced by:



April 2012

## Wildlife O&M 3-year Application – SOMENOS MARSH CONSERVATION AREA

### SITE DESCRIPTIONS / ACTIVITIES

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For each property or property complex, the following should be completed

**1. Name of property:**

- a. *Complex Name:* **Somenos Marsh Conservation Area**
- b. *CLD Reference:* Somenos Marsh LEA 1  
Somenos Marsh LEA 2

**2. Habitat Description / Values**

Somenos Lake is located in the Coastal Douglas Fir BEC zone along the Nanaimo Area Lowlands of eastern Vancouver Island. The Somenos Lake system is comprised of 5 habitat components that form a wetland complex of exceptional value to waterfowl and other wildlife. These include: Somenos Lake, adjacent marshes, agricultural fields, forests and woodlands, and riparian areas. The leased parcels identified above are located within the adjacent marsh and include riparian habitat and agricultural fields.

The Somenos Lake complex supports thousands of waterfowl throughout the winter that feed in the flooded agricultural fields and marsh land areas of Somenos Lake. Many of these waterfowl also use the nearby Chemainus and Cowichan estuaries. As such the Somenos Lake complex is part of a habitat system that is critical to wintering and staging waterfowl in the region. In recognition of these values the area was designated an Important Bird Area (IBA) of Canada. In addition to migratory birds, the area is also used throughout the year by several passerine species including: raptors and songbirds for feeding and nesting.

In addition to the exceptional wildlife values the Somenos Lake system is an important rearing and staging area for salmonids. Coho and cutthroat trout return to spawn in the Somenos Basin and tributaries each year. Fish from Somenos Lake enter the marsh system and meadows during winter floods, leaving as waters recede. The streams in the Somenos area include Bings, Somenos, Richards and Averill Creek.

**3. Guiding Documents**

- Somenos Marsh Conservation Area Management Plan 2001*
- Coastal Invasive Plant Management Strategy 2010*
- Vancouver Island Conservation Land Management Program Agreement*
- Somenos Basin Project – Phase One Restoration Feasibility Report, 1999*
- Somenos Farm License Agreement and Annual Farm Plan 2010*
- Somenos Marsh Conservation Agreement (TNT, DUC, Province) 2008*
- TNT/Province Management Agreement 2011*
- Bings Creek Rehabilitation Plan 2000*
- Somenos Marsh Ecosystem Mapping and Ecosystem Management Plan, 2003*

#### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1: To preserve and enhance fish and wildlife habitat	<p><i>Objective 1:</i> Increase waterfowl numbers and diversity</p> <p><i>Objective 2:</i> Assess habitat of area to determine enhancement opportunities for fish and wildlife</p> <p><i>Objective 3:</i> Improve water quality</p> <p><i>Objective 4:</i> Increase habitat structural elements to enhance passerine species abundance/utilization</p> <p><i>Objective 5:</i> Maintain agricultural land forage</p>	<p>S-T Indic 1 – Annual waterfowl surveys completed</p> <p>S-T Indic 2 – Annual inventory of invasive plants completed</p> <p>S-T Indic 3 – decreased persistency of invasive plants</p> <p>S-T Indic 4 – implementation of riparian planting program</p> <p>S-T Indic 5 – habitat structure assessment completed</p> <p>S-T Indic 6 – m2 of habitat restored, invasive weeds removed</p>	<p>L-T Indic 1 – Enhanced waterfowl numbers including species diversity across habitat units</p> <p>L-T Indic 2 – TRUS/GBHE population maintained</p> <p>L-T Indic 3 – Invasive plants reduced in conservation area</p> <p>L-T Indic 4 – improved fish utilization of Bings Creek</p> <p>L-T Indic 5 – improved water quality</p>
Goal 2: To provide educational and interpretive opportunities; increase public knowledge of wildlife management	<p><i>Objective 1:</i> Elevate ecological awareness through educational and public involvement programs</p> <p><i>Objective 2:</i> Form partnerships with other groups involved in public education</p> <p><i>Objective 3:</i> Produce interpretive signage and other materials to support education initiatives</p> <p><i>Objective 4:</i> Develop formal wildlife viewing areas along with associated viewing infrastructure</p>	<p>S-T Indic 1 Increased number of visitors to viewing/ education facilities</p> <p>S-T Indic 2 – wildlife viewing facilities built</p> <p>S-T Indic 3 – interpretive signage created/developed</p>	<p>L-T Indic 1 – wildlife viewing structures maintained and utilized</p> <p>L-T Indic 2 – education/ stewardship groups long term use of the area for education</p> <p>L-T Indic 3 – increased number of volunteers assisting with projects at site</p>
Goal 3: To further ecological/inventory knowledge of area	<p><i>Objective 1:</i> Conduct on-going inventories for fish and wildlife to establish baseline data for on-going long term monitoring.</p> <p><i>Objective 2:</i> Inventory C/A for rare and endangered species</p>	<p>S-T Indic 1 – priority inventory work is completed</p> <p>S-T Indic 2 – inventory work is being utilized to monitor effectiveness of projects</p>	<p>L-T Indic 1 – comprehensive knowledge/database of fish/wildlife habitat values completed</p>
Goal 4: To restore the land's capability for agriculture	<p><i>Objective 1:</i> Restore amount of area that can be cultivated to 1981 levels</p> <p><i>Objective 2:</i> Improve drainage of agricultural fields</p> <p><i>Objective 3:</i> Reach target growing season water level of 4.6m geodetic by June 15th</p> <p><i>Objective 4:</i> Limit invasive species</p>	<p>S-T Indic 1 – no further loss of agricultural production</p> <p>S-T Indic 2 – improved conveyance of water off of agricultural fields</p> <p>S-T Indic 3 – control/ eradication of invasive weeds in fields</p>	<p>L-T Indic 1 – 4.6m geodetic is achieved and maintained</p> <p>L-T Indic 2 – increased cultivation and agricultural stability at Somenos</p>

	in-growth in agricultural areas		
Goal 5: Public safety	<i>Objective 1:</i> Ensure built facilities on property are inspected annually <i>Objective 2:</i> Conduct risk assessments for “non-built” hazards (e.g. wildlife trees)	S-T Indic 1 – inspections are completed and deficiencies /risks are addressed	L-T Indic 1 – public continues to enjoy a safe environment for wildlife viewing and interpretation
Goal 6: To foster on-going relationships for the betterment of the conservation area complex and to bring additional resources to assist with the management initiatives	<i>Objective 1:</i> Continue to work with the Somenos Marsh Management Committee <i>Objective 2:</i> Work cooperatively with SMC members to develop joint applications for funding /workplans	S-T Indic 1 – SMC continues to meet 3 times a year to discuss issues in the SMCA S-T Indic 2 – all interest groups and stakeholders are represented S-T Indic 3 – meetings result in greater collaboration and shared resources	L-T Indic 1 – continued strong partnership approach to SMCA L-T Indic 2 – increased in-kind and cash contributions to the management of SMCA.

#### 5. Financial Sustainability

As per the management plan for this property complex the *Somenos Marsh Management Committee* has been in place for over 10 Years and includes representatives from North Cowichan, City of Duncan, CVRD, Cowichan Tribes, TNT, DUC, MFLNRO and SMWS. The involvement with this committee for the Somenos Marsh complex has brought substantial additional resources for the management of the area. This includes:

- Partner agreements at Somenos Marsh completed with the Somenos Marsh Wildlife Society for the operations and maintenance of boardwalks and interpretive signs at public access points on the leased lands.
- Farm license agreement generates annual revenue of approximately \$1500 (varies each year depending on cultivated land) which is paid directly to HCTF via MFLNRO.
- Property tax exemptions have been granted annually by the Municipality of North Cowichan.

#### 6. Partner Recognition

As per the VICLMP agreement and the HCTF agreement, all boundary and regulatory signs include the Province logo's. All publications, interpretive/ restorative/ enhancement signage includes the logos of all funding partners including HCTF.



# Somenos Marsh

## Conservation Areas

The Nature Trust

## Map Symbols

— Road



Scale: 1:10,000

UTM Zone 10 MAD 83

## BC Location



## Data sources:

BC NGO Conservation Lands Database  
 BC GOV FLNRO GeoBC

## Map produced by:



April 2012

## Wildlife O&M 3-year Application – THETIS ISLAND CONSERVATION AREA

### SITE DESCRIPTIONS / ACTIVITIES

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For each property or property complex, the following should be completed

**1. Name of property:**

- a. *Complex Name:* **Thetis Island Bat Caves – Conservation Area**
- b. *CLD Reference:* Thetis Island Bat Caves (LEA)

**2. Habitat Description / Values**

The Thetis Island Bat Caves Conservation Area is situated on the northeast shoreline of Thetis Island along Trincomali Channel. The area is located within the Coastal Douglas Fir bio-geoclimatic zone and is characteristic of the coastal bluff ecosystem; rock outcrops, arbutus, douglas fir plant associations. The localized bedrock is sedimentary in nature and consists mainly of sandstones with some conglomerate. The caves, which are located near a fault line, have formed as a result of bedrock movement causing fracturing of the sedimentary rock. These geological processes have left behind large fractures, holes and crevasses. These “caves” are quite open with good air circulation although can be very humid. The cave bottom is lined with layers of sandstone and conglomerate rubble with vertical wall extending upward 10-20m to the ceiling.

In terms of wildlife values, the Thetis Island Bat Caves Conservation Area is the largest known British Columbia wintering colony of the Townsend’s Big-eared Bat (*Corynorhinus (Plecotus townsendii)*); a red listed species very vulnerable to human disturbance. In Canada this bat is found only in B.C where it is limited in range and abundance. The Thetis Island Bat Caves Conservation Area is utilized as a winter hibernacula (mating and over-wintering) as it provides stable micro-climatic conditions critical for winter survival. The largest known population of Townsend’s Big-eared Bats hibernate in the caves in the conservation area. The bats utilizing the cave complex congregate in the area in the beginning of October when they will first mate before settling into winter hibernation; emerging in April with the males dispersing and females forming small nursery colonies.

This species is very vulnerable to disturbances while utilizing the hibernaculum. Such disturbances could be fatal, because of their state of torpor they cannot fly until they raise their body temperatures which expends much stored energy when food resources are non-existent.

**3. Guiding Documents**

*Thetis Island Bat Caves Management Plan – 1992*  
*VICLMP Program Agreement*  
*Management Agreement TNT/Province 2011*

**4. Goals, Objectives and Performance Indicators**

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1: Protect and maintain the cave systems as critical habitat for the Townsends big eared Bat	Objective 1: Restrict public access year round especially during September – May.  Objective 2: Recruit volunteer warden to monitor site	S-T Indic 1 – No evidence of public access  S-T Indic 2 – Volunteer warden in place	L-T Indic 1 – stable population of Townsends big-eared Bats
Goal 2: To continue to assess/research the site with a particular focus on Townsend’s big-eared bats population	Objective 1: Provide research opportunities to Universities  Objective 2: Assess colony for prevalence of white-nosed syndrome  Objective 3: Ensure thorough baseline information is collected in conservation area	S-T Indic 1 – relationships with VIU and UVic are established  S-T Indic 2 – priority baseline studies inventory studies implemented/ identified  S-T Indic 3 – site monitoring program established/implemented	L-T Indic 1 – On going research projects into Townsends Big-eared bats  L-T Indic 2 – monitoring plans implemented
Goal 3: Public safety	<i>Objective 1:</i> Conduct risk assessments for hazards (e.g. cave entrances, wildlife trees)	S-T Indic 1 – inspections are completed and deficiencies /risks are addressed	L-T Indic 1 – no public access

5. **Financial Sustainability**

Due to the very sensitive nature of this property and the identified management goals, partnerships are limited to research institutions and the involvement of a local volunteer warden. Annual property tax exemptions are granted.

6. **Partner Recognition**

As per the VICLMP agreement and the HCTF agreement, all boundary and regulatory signs include the Province logo’s. All publications, interpretive/ restorative/ enhancement signage includes the logos of all funding partners including HCTF. However given the public is not encouraged to visit the site publications including interpretive signage are very limited.



# Thetis Island

## Conservation Areas

The Nature Trust

## Map Symbols

— Road



Scale: 1:3,000

UTM Zone 10 MAD 83

## BC Location



**Data sources:**  
 BC NGO Conservation Lands Database  
 BC GOV FLNRO GeoBC

Map produced by:



April 2012

## Wildlife O&M 3-year Application – Tofino Mudflats

### SITE DESCRIPTIONS / ACTIVITIES

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For each property or property complex, the following should be completed

**1. Name of property:**

- a. *Complex Name:* **Tofino Mudflats WMA**
- b. *CLD Reference:* Tofino Mudflats WMA

**2. Habitat Description / Values**

The Tofino Mudflats WMA is located in the Windward Island Mountains Ecosection of British Columbia within the Coastal Western Hemlock Biogeoclimatic zone (including three variant areas; very wet hypermaritime, and montane/submontane very wet maritime) on the west coast of Vancouver Island. It is one of the top ten most critical wetlands for migratory waterfowl on the west coast of Canada, and is an integral part of the Clayoquot Sound UNESCO Biosphere Reserve. Approximately 21 km<sup>2</sup> in size, the Tofino Mudflats WMA is made up of 1770 hectares of tidal flats and 338 hectares of terrestrial lands, including; shallow to deep sub tidal areas, tidal mudflats supporting extensive communities of Eelgrass and Green Algae, rock/gravel beaches, marshes, tidal channels, streams, riparian areas, and Western Hemlock-Western Red Cedar coastal upland forests.

A large variety of marine and terrestrial birds depend on the WMA, including; shorebirds, waterfowl, loons, grebes, gulls, cormorants, herons, birds of prey, woodpeckers, kingfishers, hummingbirds, and Passeriformes. It is an internationally significant migratory stop-over for shorebirds and a critical wetland for wintering waterfowl. The tidal channels and eelgrass beds are important feeding areas for juvenile salmonids, while the estuarine marshes serve as critical rearing habitat. The WMA also supports many other fish, shellfish, and invertebrate species, including; pipefish, ghost shrimp, horse clams and geoducks. Amongst the many different marine and terrestrial mammals utilizing the WMA either daily or seasonally are; harbour porpoise, harbour seal, mink, river otter, raccoon, black bear, gray wolf, black-tailed deer and cougar. Eight different species of herptiles are also thought to occur within the WMA. Endangered wildlife species utilizing the WMA include northern goshawk, peregrine falcon and northern (steller) sea lion.

Tree species found in the terrestrial areas of the WMA include; western hemlock amabilis fir, western redcedar yellow cedar, mountain hemlock shore pine, red alder, pacific crabapple, pacific yew, and sitka spruce. Understory species include; salal, alaskan blueberry, red huckleberry, deer fern, evergreen huckleberry, mosses, and some herb species, including; deer fern, five-leaved bramble, bunchberry, and queen's cup.

The Tla-o-qui-aht First Nation has historically used the area in and around the Tofino Mudflats WMA, and continues to do so. Outdoor recreation and tourism activities include kayaking and canoeing, bird and wildlife watching, sightseeing, hunting, sport fishing, and clam and crab harvesting. There are a number of permitted commercial activities within the WMA, including one active mining lease. The region accounts for up to 15% of the total commercial Dungeness crab landings in BC, and it is estimated that one half of these are dependent on the WMA area.

### 3. Guiding Documents

- Tofino Mudflats WMA Management Plan 2002*
- Tofino Mudflats WMA Management Plan Background Document 2002*
- Tofino Mudflats WMA Wildlife Viewing and Recreation Management 2002*
- Update on the Tofino Mudflats WMA Management Plan 2010*
- Vancouver Island Conservation Land Management Program Agreement*
- TNT/Province Management Agreement 2011*

### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1: To preserve all wildlife habitat within the WMA and enhance/ restore where possible	<p>Objective 1: Protect wildlife habitat and resources of the mudflats through long term conservation</p> <p>Objective 2: Regulate increasing amount of recreational use and industrial operations within the WMA and address any potential environmental impacts known or suspected to occur within the WMA</p> <p>Objective 3: Identify necessary restoration or enhancement projects to maximize biodiversity and productivity of protected habitats</p>	<p>S-T Indic 1 – Potential conflicts and activities detrimental to wildlife recognized and managed prior to damage</p> <p>S-T Indic 2 – Potential enhancements and restoration work identified to increase/improve the natural resources of the Tofino Mudflats WMA.</p> <p>S-T Indic 3 – Work cooperatively with tourism outfits, first nations and governmental bodies to identify and regulate acceptable activities (in conj. w/ goal 5)</p> <p>S-T Indic 4 – Effects of sewage on eelgrass, salmon stream habitat deterioration, improper storage of garbage/other wildlife attractants, and the establishment of invasive species (eg. Spartina) monitored and response plan developed</p>	<p>L-T Indic 1 –Integrated management strategy developed to protect and maintain the WMA</p> <p>L-T Indic 2 – Minimal disturbance to migratory bird species is maintained</p> <p>L-T Indic 3 - Opportunities to extend protection of wildlife habitat adjacent to the WMA identified and explored</p> <p>L-T Indic 4 – Ecological data and species inventories within the WMA, and to determine if any enhancement opportunities exist (in conj. w/ goal 2)</p> <p>L-T Indic 5 – Environmental conditions beyond boundaries which impact the WMA assessed and addressed through cooperative management</p> <p>L-T Indic 6 – Development plans reviewed and activities that are detrimental to sensitive fish and wildlife within the WMA prevented</p> <p>L – T Indic 7 – No net loss of habitat value</p> <p>L-T Indic 8 – All current trespass issues addressed, future problems prevented</p>
Goal 2: To provide educational , interpretive, and passive recreational opportunities that are non-detrimental to species within the	<p>Objective 1: Increase compatible interpretive and educational opportunities regarding the mudflats within the WMA and throughout the community</p> <p>Objective 2: Elevate ecological</p>	<p>S-T Indic 1 –Wildlife viewing network developed</p> <p>S-T Indic 2 –Viewing platforms constructed, existing trails assessed and maintained accordingly</p>	<p>L-T Indic 1 – Continued compatible public use of the WMA for recreational, cultural, and spiritual activities inc. wildlife viewing, hunting, food collection etc.</p> <p>L-T Indic 2 Continued management and monitoring of compatibility between</p>

<p>WMA; increase public knowledge of wildlife management and raise awareness of the sensitivities of the area</p>	<p>awareness of the WMA through public engagement and stewardship projects</p>	<p>S-T Indic 3 – Trampling of sensitive areas reduced by prevention of foot traffic to specified areas S-T Indic 4 – Public outreach and education plan developed (in conj. w/ goal 5) S-T Indic 5 – Interpretive signs developed and installed</p>	<p>recreational land-use and habitat protection monitored L-T Indic 3 – Growth of eco-tourism industry does not adversely affect wildlife habitat values or biodiversity L-T Indic 4 – Public recreational use and cultural, spiritual and food collection practices are compatible with fish and wildlife conservation.</p>
<p>Goal 3: Assess the condition of the WMA habitat; measure the long-term health and integrity of fish, plant and wildlife populations and gauge the success of habitat protection, restoration and enhancement initiatives</p>	<p>Objective 1: Ensure a thorough baseline of information on the biophysical features of the Tofino Mudflats  Objective 2: Complete inventories, and fish, wildlife, plant and habitat studies; evaluate effectiveness of land management activities</p>	<p>S-T Indic 1 – Priority baseline species data established through studies of wildlife, habitat values, terrestrial and marine plant communities S-T Indic 2 – Bird inventory of migratory species, waterfowl, raptors, nesting birds, and nest sites done; fish stock assessments of creeks in the WMA completed S-T Indic 3 – Potential environmental impacts studied i.e. commercial and recreational shellfish harvesting, sewage outfalls, aquaculture operations etc. S-T Indic 5 – Present red/blue listed species determined S-T Indic 6 – Evaluation framework developed to assess effectiveness of management activities</p>	<p>L-T Indic 1 – Comprehensive species /ecosystem inventory database available for the WMA L-T Indic 2 – Monitoring plans implemented on recommended schedule L-T Indic 3 – Land management activities guided by results of monitoring program and assessed through evaluation framework L-T Indic 4 – Education, stewardship and restoration programs have been implemented and evaluated as to successful increase of awareness, knowledge, and responsible use of the WMA (in conj w/ goals 2 and 5) L-T Indic 5 – Recreational use studies/data collected for estuary - development plans and other activities detrimental to fish and wildlife habitats successfully prevented and prohibited</p>
<p>Goal 4: Public safety</p>	<p><i>Objective 1:</i> Ensure built facilities on property are inspected annually <i>Objective 2:</i> Conduct risk assessments for “non-built” hazards (e.g. wildlife trees, wildlife encounters, lost recreationists)</p>	<p>S-T Indic 1 – Inspections are completed and deficiencies /risks are addressed S-T Indic 2 – Formal survey of WMA boundaries completed; boundary signage installed S-T Indic 3 – Wildlife encounter risks identified</p>	<p>L-T Indic 1 – public continues to enjoy a safe environment for wildlife viewing and interpretation L-T Indic 2 – Negative wildlife encounters prevented L-T Indic 3 – WMA boundaries clearly delineated, maps made available through interpretive signage</p>
<p>Goal 5: To foster on-going relationships for the betterment of</p>	<p><i>Objective 1:</i> Work cooperatively with Tla-o-qui-aht First Nations, District of Tofino, Alberni-</p>	<p>S-T Indic 1 – All interest groups and stakeholders are represented</p>	<p>L-T Indic 1 – Continued representation of various stakeholders, agencies, governing bodies (municipal,</p>

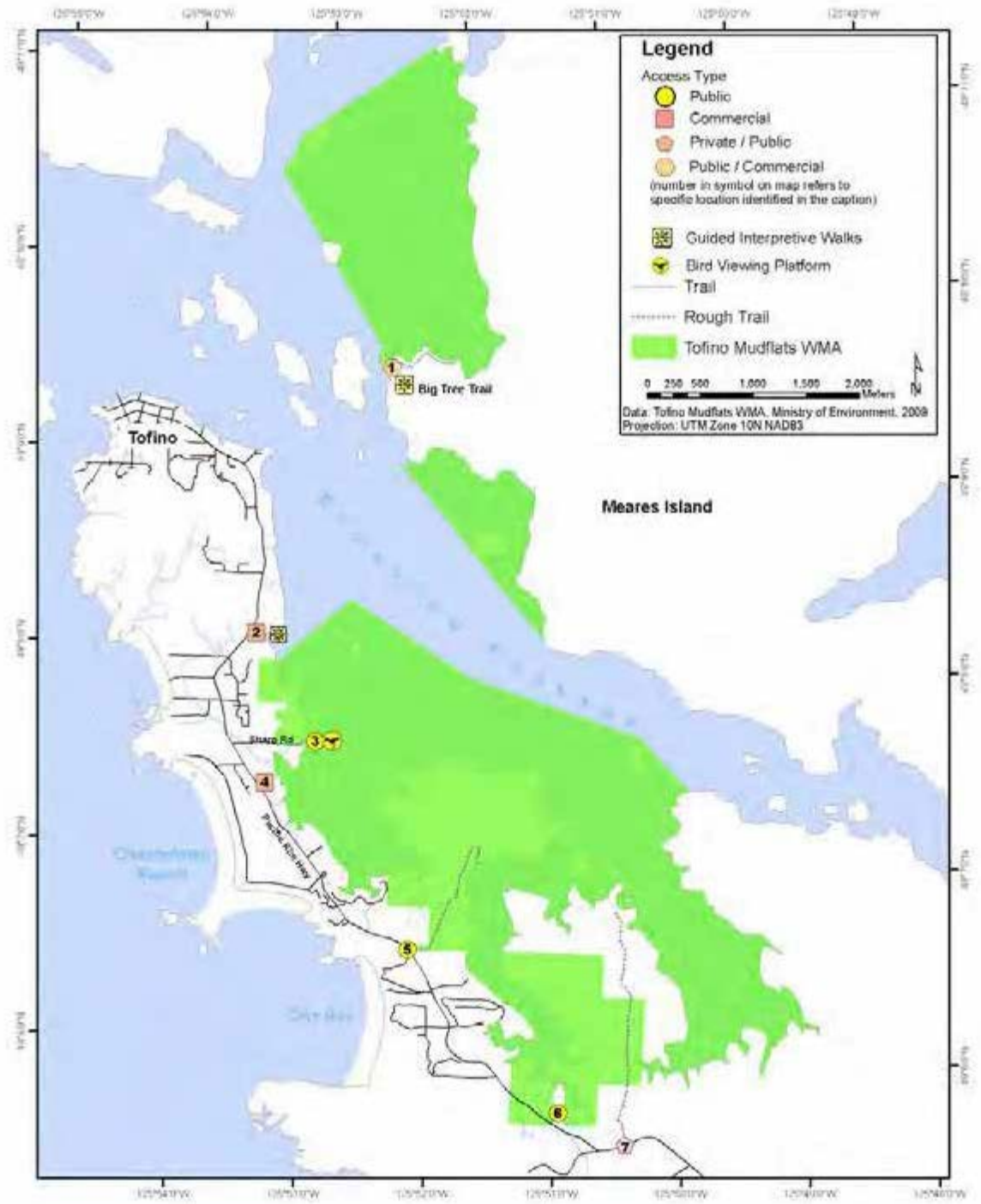
<p>the conservation area complex and to bring additional resources to assist with the management initiatives</p>	<p>Clayoquot Regional District marine planning, conservation enforcement, and emergency response in the region, e.g. Westcoast Aquatic, Ecotrust Canada, DFO, and the Canadian Coast Guard.</p> <p><i>Objective 2:</i> Consult and collaborate with all relevant agencies (Tofino Mudflats WMA Advisory Committee, Clayoquot Biosphere Trust, Strawberry Island Marine Research Society, Tofino Streamkeepers Society and the Raincoast Education Society) and individuals/stakeholders through meetings, open public sessions and personal interviews.</p> <p><i>Objective 3:</i> Seek academic support, to further develop and deliver research, monitoring, education, stewardship, restoration and enforcement programs</p>	<p>S-T Indic 2– Meetings result in greater collaboration and shared resources  S-T Indic 3 – Private landowners consulted and informed of sensitivity of the WMA; habitat Degradation minimized in future development  S-T Indic 4 – Shorebird festival coordinated elevating public awareness  S-T Indic 5 – Positive and informative relationship with local ecotourism operations maintained  S-T Indic 6 – Volunteer warden/ guardian program introduced  S-T Indic 7 – Student programs and opportunities implemented in conjunction with goal 3</p>	<p>aboriginal, regional and federal), planning departments etc.  L-T Indic 2 – Increased in-kind and cash contributions to the management of the Tofino Mudflats WMA  L-T Indic 3 – Ongoing success of shorebird festival  L-T Indic 4 – Involvement of schools, universities and other educational programs increases knowledge and successful restoration of the WMA and shapes future management initiatives</p>
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**5. Sustainability**

The Tofino Mudflats WMA receives a substantial amount of volunteer and in-kind support from several partner agencies including: Raincoast Education Society, Parks Canada, BC Parks, Clayoquot Biosphere Trust, District of Tofino. Through the long standing Tofino Mudflats Advisory Committee these partners coordinate inventory and restoration projects, educational and stewardship programs, and discuss on-going issues that affect the long term ecological health of the WMA.

**6. Partner Recognition**

As per the VICLMP agreement and the HCTF agreement, all boundary and regulatory signs include the Province’s logos. All publications/interpretive/ restorative/ enhancement signage includes the logos of all funding partners including HCTF.



## Wildlife O&M 3-year Application – Willow Creek Conservation Area

### SITE DESCRIPTIONS / ACTIVITIES

For each property or property complex, the following should be completed

#### 1. Name of property

- |                         |                                       |
|-------------------------|---------------------------------------|
| a. <i>Complex Name</i>  | <b>Willow Creek Conservation Area</b> |
| b. <i>CLD Reference</i> | Willow Creek (LEA)                    |

#### 2. Habitat Description / Values

The Willow Creek Conservation Area consists of 32.4 hectares of upland habitat bisected by a one kilometre section of Willow Creek, surrounded by suburban development on both sides. Within the Coastal Western Hemlock Eastern Very Dry Maritime Biogeoclimatic Zone (CWHxm1), the Willow Creek Conservation Area is made up of sections of narrow floodplain along braided stream sections, riparian creek-side habitat and a mixed deciduous/coniferous forest (predominantly deciduous, Douglas fir and Western Hemlock). Numerous passerine bird species utilize the property including spotted towhee, yellow throated warbler, red-breasted nuthatch and pileated woodpecker. Bear and cougar also use the area.

In-stream salmonid habitat found on the property includes fast flowing riffles, large build-ups of large woody debris, and slow-flowing pools. Prior to 1954, Willow Creek supported considerable numbers of Coho, Chum, cutthroat and steelhead. By the 1970's, fish stocks in Willow Creek consisted of coho and cutthroat, and the stream habitat quality had deteriorated. Recent enhancement initiatives have doubled the number of adult salmon returning to the stream. As it has never been stocked with hatchery-raised salmonids, Willow Creek is used as an indicator stream for wild salmonid populations for other small urban streams on the east coast of Vancouver Island.

#### 3. Guiding Documents

<i>Conservation Agreement (DU, TNT, Province)</i>	2006
<i>Coastal Invasive Plant Management Strategy</i>	2010
<i>Vancouver Island Conservation Land Management Program Agreement</i>	2010
<i>TNT – Province Management Agreement</i>	2011
<i>Property Information Sheet</i>	(Undated)

#### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short-term	Long-term
Goal 1. Preserve and enhance fish and wildlife habitat	<p><i>Objective 1.</i> Establish and preserve a healthy watershed that maintains its diversity and biophysical integrity with the support of the community, landowners and all levels of government</p> <p><i>Objective 2.</i> To increase salmonid stocks from within the existing genetic pool, and improve the</p>	<p>S-T Indic 1 – Limiting factors to salmonids assessed, enhancements planned and implemented</p> <p>S-T Indic 2 –Unnecessary/ braided trails removed and restored</p> <p>S-T Indic 3 – 4 x 4 and ATV access monitored and prevented.</p> <p>Unauthorized walking and cycling trails decommissioned and</p>	<p>L-T Indic 1 – Fish habitat optimized, surveys indicate overall increase in stock numbers</p> <p>L-T Indic 2 – Overall trail footprint and impact from recreational use minimized</p> <p>L-T Indic 3 – Continued use of CA by wildlife and bird</p>

	<p>rearing spawning, and overwintering habitat for resident and anadromous fish species</p> <p><i>Objective 3.</i> Maintain, and where suitable enhance the natural stream, riparian and upland habitat systems within the CA</p> <p><i>Objective 4.</i> Prohibit and prevent development and recreational activities that are detrimental to CA</p>	<p>restored</p> <p>S-T Indic 4 – Ongoing invasive plant species removal</p> <p>S-T Indic 5 – Property boundary signs installed</p>	<p>species</p> <p>L-T Indic 4 – Creek, riparian habitat, and surrounding forest restored as a natural system</p> <p>L-T Indic 5 – Impact from neighbouring suburban developments minimized</p>
<p>Goal 2. Foster stewardship towards long-term health and viability of the Conservation Area as wildlife habitat and recreational area through cooperative relationships with community and partners involved.</p>	<p><i>Objective 1.</i> To work with landowners, stewards, interested citizens, stakeholders, and governing bodies to encourage ecologically sound development, forming recommendations for management of natural resources within the Willow Creek watershed by reviewing the present state of the watershed and existing rules and guidelines</p> <p><i>Objective 2:</i> Provide educational and interpretive opportunities; increase public knowledge of watershed &amp; habitat management</p> <p><i>Objective 3.</i> Develop and maintain public access and use facilities</p>	<p>S-T Indic 1 – Interpretive signs designed/produced depicting important natural features and habitat values pertaining to the Willow Creek watershed</p> <p>S-T Indic 2 – Local stream keepers encouraged to monitor fish populations</p> <p>S-T Indic 3 – Campaign to promote importance of maintaining the Willow Creek watershed to community using brochures and online resources.</p>	<p>L-T Indic 1 – Increased number of visitors to CA</p> <p>L-T Indic 2 – Trail map, plan and directional signs for trail network completed</p> <p>L-T Indic 3 – Wildlife viewing opportunities maintained</p> <p>L-T Indic 4 – Educational/ stewardship groups long term use of the area</p> <p>L-T Indic 5 – Increased number of volunteers assisting with site stewardship projects, monitoring, and inventory work.</p>
<p>Goal 3: To further ecological/inventory knowledge of area</p>	<p><i>Objective 1:</i> To increase understanding of the willow creek watershed by providing baseline data, species inventory, and research studies on the riparian habitat, stream conditions, vegetation, birds, fish, reptiles, amphibians and other wildlife found within the CA</p>	<p>S-T Indic 1 – Riparian condition inventories and fish habitat assessments completed</p> <p>S-T Indic 2 – Salmonid use inventories completed</p> <p>S-T Indic 3 – Baseline data for long term monitoring established</p> <p>S-T Indic 3 – Annual inventory of invasive plants completed</p> <p>S-T Indic 4 – Water quality and levels measured and monitored</p>	<p>L-T Indic 1 – Comprehensive knowledge/database of fish/wildlife habitat values completed.</p> <p>L-T Indic 2 – Statistical trends of inventory work observed, assessed, and utilized to monitor effectiveness of projects.</p>
<p>Goal 4: Public safety</p>	<p><i>Objective 1:</i> Ensure built facilities on property are inspected annually</p> <p><i>Objective 2:</i> Conduct risk assessments for “non-built” hazards (e.g. wildlife trees)</p>	<p>S-T Indic 1 – inspections are completed and deficiencies /risks are addressed. Hazards are identified and minimized.</p> <p>S-T Indic 2 – Condition of public facilities (bridges) assessed, monitored/maintained as needed</p>	<p>L-T Indic 1 – public continues to enjoy a safe environment for wildlife viewing and interpretation</p>

## 5. Financial Sustainability

Annual property tax exemptions are granted from the City of Campbell River for this property. Further partnerships are in place with the Willow Creek Watershed Society and the Greenways Land Trust for stewardship activities at this site.




6. **Partner Recognition**

As per the VICLMP agreement and the HCTF agreement, all boundary and regulatory signs include the Province logo's. All publications, interpretive/ restorative/ enhancement signage includes the logos of all funding partners including HCTF.



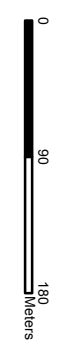
## Willow Creek

### Conservation Areas

 The Nature Trust

### Map Symbols

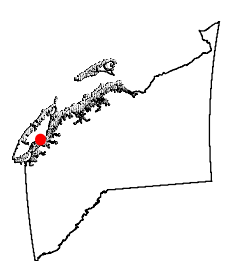
 Road



Scale: 1:5,000

UTM Zone 10 MAD 83

### BC Location



**Data sources:**  
 BC NGO Conservation Lands Database  
 BC GOV FLNRO GeoBC  
 Bing Maps Aerial

Map produced by:



# SOUTH COAST



South Coast Region: Index of Property Plans

Bert Brink WMA

Boundary Bay

Camp Slough

Chilliwack River

Coquitlam River WMA

Forslund Watson

Harrison River

Harrison-Chehalis WMA (if designated)

Pemberton Valley WMA

Pitt-Addington WMA

Roberts Bank WMA

Serpentine WMA

Silverhope Creek

Skwelwil'em Squamish Estuary WMA

South Arm Marshes WMA

Sturgeon Bank WMA

Surrey Bend

Wells Sanctuary



## Wildlife Operations & Management PART 1. PROPERTY / COMPLEX PLAN

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Please complete a separate plan for each property/complex within your region. See "Instructions for Wildlife O & M Part 1" for assistance in completing this form.

**Funding Cycle: 2013-2016**

**Project Name:**

**Region: South Coast**

### **PROJECT INFORMATION**

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Please complete the following:

**1. Name of Property/ Complex:** Bert Brink Wildlife Management Area

Bert Brink WMA includes the following TNT lease properties:

1. Bert Brink WMA (LEA1) – McGillivray Slough
2. Bert Brink WMA (LEA2) – McGillivray Cattermole

**2. Habitat Description / Values:**

The Bert Brink WMA consists of marshes, mature cottonwood riparian forest, open water and gravel bars within the flood plain of the Fraser River. These habitats are strongly influenced by variation in the level of the Fraser River. The forest and marshes are flooded during the spring freshet. The WMA supports waterfowl, raptors, amphibians, passerine birds and small mammals. The gravel bars also provide habitat for many species of fish within the Fraser Rivers, particularly White Sturgeon and salmonids.

**3. Guiding Documents:**

1. McGillivray Slough Addition - Eco-sensitivity Assessment 2009
2. McGillivray Slough (Bert Brink) WMA Management Plan 1997
3. TNT/Province Lease Agreement 1985
4. Invasive Alien Plant Program Reference Guide 2010
5. TNT/Province Management Agreement 2011
6. Invasive Plant Program of Metro Vancouver



## Wildlife Operations & Management PART 1. PROPERTY / COMPLEX PLAN

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### **4. Financial Sustainability:**

Operations and maintenance activities on conservation lands in Region 2 are coordinated by an informal committee consisting of The Nature Trust of BC, Ducks Unlimited Canada, and the Ministry of Forests, Lands and Natural Resource Operations. This coordination ensures that lands are managed in the most effective and financially sustainable manner.

### **5. Partner Recognition:**

Contributions by partners will be recognized through use of the partner's logo on signage within the WMA and on any promotional or educational publications produced. The partner's contributions will also be acknowledged on the WMA website through use of the partner's logo and a statement indicating how the partner's contribution benefits the WMA (e.g. supports operations and management, supported the purchase of lands, etc.).



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

**6. Goals, Objectives and Performance Indicators**

*Please use these Goals and Objective numbers in Wildlife O & M Part 2: Application Table.*

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators:	
		Short Term	Long Term
<b>McGillivray Slough and McGillivray Cattermole</b>			
<b>Goal 1: To conserve the ecological integrity of Fraser River floodplain and riverine habitats.</b>	<b>1: Maintain riparian and riverine wildlife through protection of habitat and, where required and possible, through restoration of natural processes, and habitat enhancement.</b>	<b>1: Properties assessed for management needs. 2: Work plans produced and implemented.</b>	<b>1: Enhanced wetland and grassland habitat</b>
	<b>2: Manage and assess impacts of invasive plants.</b>	<b>1: Decreased occurrence of invasive plants.</b>	<b>1: Improved habitat integrity</b>
<b>Goal 2: Provide opportunities for the use and enjoyment of wildlife and natural features where this is consistent with Goal 1.</b>	<b>1: Designate areas for fishing and wildlife viewing and interpretation in appropriate locations that are compatible with maintaining wildlife populations and habitat.</b>	<b>1: Cooperation with other agencies and non-government organizations.</b>	<b>1: Consistent regulation of human activities.</b>
	<b>2: Control human activities to ensure that they are compatible with Goal 1.</b>	<b>1: Informative signage maintained 2: Access barriers maintained</b>	<b>1: Public is informed regarding acceptable access. 2: Access restrictions enforced</b>



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

<b>Goal 3: Eliminate hazards to public health or safety.</b>	<b>1: Inspect human made facilities annually, and assess risks associated with naturally occurring hazards (e.g. wildlife trees).</b>	1: Completion of inspections and mitigation of deficiencies/risks.	1: Safe environment for public access is maintained.
<b>Bert Brink WMA</b>			
<b>Goal 4: To maintain and/or enhance wildlife and their habitats.</b>	<b>1. Manage non-native, invasive species.</b>	1. Stop spread of large patches of invasive plant species within the WMA.  2. Eliminate small patches of invasive plant species within the WMA.	1. Extirpate populations of invasive species from the WMA where practical.  2. Limit populations of invasive species where elimination is impractical.  3. Wildlife habitat maintained.
	<b>2. Enhance habitat for species of high conservation concern that are extant within the WMA.</b>	1. Identify opportunities to enhance habitat for species of high conservation concern that are extant within the WMA.	1. Increase reproductive output or population sizes of species of conservation concern.
	<b>3. Increase species richness within the WMA.</b>	1. Identify opportunities to introduce, or re-introduce, species of conservation concern.	1. Self-sustaining populations of introduced or re-introduced species.
	<b>4. Increase stewardship of stakeholders and adjacent property owners.</b>	1. Frequency of chronic non compliance events (wildlife disturbance, trespass, habitat degradation) within the WMA	1. Low frequency of non compliance events (wildlife disturbance, trespass, habitat degradation) within the WMA is



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

		is reduced.  2. Involvement of stakeholders in stewardship of the WMA is increased	maintained.  2. Involvement of stakeholders in stewardship of the WMA is maintained.
<b>Goal 5: Subject to maintenance of the wildlife resource, provide the widest possible range of wildlife oriented public recreation and education opportunities.</b>	<b>1. Increase visitor's appreciation and knowledge of wildlife and wildlife habitats within the WMA.</b>  <b>2. Inform the public of WMA presence, boundaries, partners and rules.</b>	1. Educational and nature interpretation signs are in place and maintained.  2. Entrance, boundary, funding and visitor ethics signs are in place and maintained.	1. Reduced frequency of wildlife disturbance, littering and degradation within the WMA. Increase public support for limiting human activities within the WMA to those that are compatible with Goals 1 and 4.  2. Public is informed of conservation values, partnerships, permitted activities and boundaries. Reduce frequency of wildlife disturbance, trespass, unauthorized motorized vehicles and inappropriate behaviour.
<b>Goal 6: Ensure public health and safety.</b>	<b>1. Maintain infrastructure: roadways, parking lots, fences, trails, viewing towers, shelters, bridges, buildings etc.</b>	1. Infrastructure is safe and operable.	1. Infrastructure is safe and operable.
	<b>2. Maintain the appearance of the WMA.</b>	1. Site is kept clean; garbage is managed.  2. Vegetation is maintained	1. Site is kept clean; garbage is managed.  2. Vegetation is maintained



Project File #: \_\_\_\_\_

**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

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		where necessary.	where necessary.
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7



## Wildlife Operations & Management PART 1. PROPERTY / COMPLEX PLAN

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Please complete a separate plan for each property/complex within your region. See "Instructions for Wildlife O & M Part 1" for assistance in completing this form.

**Funding Cycle: 2013-2016**

**Project Name:**

**Region: South Coast**

### **PROJECT INFORMATION**

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Please complete the following:

**1. Name of Property/ Complex:** Boundary Bay Wildlife Management Area

The WMA contains the following lands leased from The Nature Trust of BC:

1. Boundary Bay WMA (LEA1) – Grauer Beach
2. Boundary Bay WMA (LEA2) – Mud Bay

**2. Habitat Description / Values:**

The fresh-water (tidal and non-tidal) wetlands, mudflats, and riparian habitat within the WMA provide:

1. Wintering, migration and breeding habitats for waterfowl, shorebirds, raptors and passerines. The site supports one of the only breeding colonies of Sandhill Cranes in south-western BC.
2. Year-round habitat for native amphibians and fish, including species on the provincial red and blue lists.
3. Breeding and juvenile habitat for salmonids.

**3. Guiding Documents:**

1. Management plan for the Pitt-Addington Wildlife Management Area.
2. Boundary Bay Old Field Conservation Area Management Plan.
3. TNT, DUC & Province Lease Agreement 1988.



## Wildlife Operations & Management PART 1. PROPERTY / COMPLEX PLAN

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4. A Living, Working River: The Estuary Management Plan for the Fraser River 2003.
5. Invasive Alien Plant Program Reference Guide 2010.
6. TNT – Provincial Management Agreement 2011.
7. Invasive Plant Program of Metro Vancouver.
8. Management agreement with Ducks Unlimited Canada (DUC).

### **4. Financial Sustainability:**

1. The Ministry of Forests, Lands and Natural Resource Operations provided \$5000.00, and the Corporation of Delta provided approximately \$3000.00 of in-kind support (labour and equipment), towards management of invasive plants in rare sand dune ecosystems within the WMA.
2. Boundary Bay WMA generates funds from production companies using the WMA as a site location for film and photography work and scientists conducting research.
3. Boundary Bay WMA generates significant support for habitat enhancement through mitigation and compensation agreements with proponents of coastal development projects.
4. Operations and maintenance activities on conservation lands in Region 2 are coordinated by an informal committee consisting of The Nature Trust of BC, Ducks Unlimited Canada, and the Ministry of Forests, Lands and Natural Resource Operations. This coordination ensures that lands are managed in the most effective and financially sustainable manner.

### **5. Partner Recognition:**

Contributions by partners will be recognized through use of the partner's logo on signage within the WMA and on any promotional or educational publications produced. The partner's contributions will also be acknowledged on the WMA website through use of the partner's logo and a statement indicating how the partner's contribution benefits the WMA (e.g. supports operations and management, supported the purchase of lands, etc.)



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

**6. Goals, Objectives and Performance Indicators**

*Please use these Goals and Objective numbers in Wildlife O & M Part 2: Application Table.*

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators:	
		Short Term	Long Term
<b>Mud Bay &amp; Grauer Beach</b>			
<b>Goal 1: Provide, enhance, and maintain habitat for wildlife and plant diversity</b>	<b>1: Annually inspect property for concerns and create work plans</b>	<b>1:</b> Annual property inspection completed, and works planned	<b>1:</b> Awareness of future potential impacts to wildlife and plant diversity
	<b>2: Collect spatial data for invasive species occurrences</b>	<b>1:</b> GPS and photo data collected for invasive plants	<b>1:</b> Distribution of invasive species monitored for effectiveness
	<b>3: Manage invasive plants</b>	<b>1:</b> Decreased occurrence of invasive plants	<b>1:</b> Decreased prevalence of invasive species
	<b>4: Remove waste and debris from property</b>	<b>1:</b> Waste and debris removed from property	<b>1:</b> Biodiversity maintained
<b>Goal 2: Provide educational and recreational opportunities for compatible wildlife oriented recreation</b>	<b>1: Maintain signage indicating conservation land status</b>	<b>1:</b> Signs installed and maintained on property	<b>1:</b> Public is informed of habitat values and property goals
	<b>2: Increase the public engagement and stewardship of the conservation area</b>	<b>1:</b> Public use of property is not	<b>1:</b> Balance between public use and habitat protection is



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

		detrimental to habitat values.	maintained
<b>Goal 3: Public safety</b>	<b>1: Maintain infrastructure for safety</b>	<b>1: Facilities maintained</b>	<b>1: Public continues to enjoy a safe environment for wildlife viewing and interpretation</b>
	<b>2: Remove waste and debris from property</b>	<b>1: Waste and debris removed from property</b>	<b>1: Public continues to enjoy a safe environment for wildlife viewing and interpretation</b>
<b>Boundary Bay WMA</b>			
<b>Goal 4: To maintain and/or enhance wildlife and their habitats.</b>	<b>1. Manage non-native, invasive species.</b>	<p>1. Stop spread of large patches of invasive plant species within the WMA.</p> <p>2. Eliminate small patches of invasive plant species within the WMA.</p>	<p>1. Extirpate populations of invasive species from the WMA where practical.</p> <p>2. Limit populations of invasive species where elimination is impractical.</p>
	<b>2. Enhance habitat for species of high conservation concern that are extant within the WMA.</b>	1. Identify opportunities to enhance habitat for species of high conservation concern that are extant within the WMA.	1. Increase reproductive output or population sizes of species of conservation concern.
	<b>3. Increase species richness within the WMA.</b>	1. Identify opportunities to introduce, or re-introduce, species of conservation concern.	1. Self-sustaining populations of introduced or re-introduced species.
	<b>4. Increase stewardship of</b>	1. Frequency of chronic non	1. Low frequency of non



**Wildlife Operations & Management  
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	<b>stakeholders and adjacent property owners.</b>	<p>compliance events (wildlife disturbance, trespass, habitat degradation) within the WMA is reduced.</p> <p>2. Involvement of stakeholders in stewardship of the WMA is increased</p>	<p>compliance events (wildlife disturbance, trespass, habitat degradation) within the WMA is maintained.</p> <p>2. Involvement of stakeholders in stewardship of the WMA is maintained.</p>
<b>Goal 5: Subject to maintenance of the wildlife resource, provide the widest possible range of wildlife oriented public recreation and education opportunities.</b>	<p><b>1. Increase visitor’s appreciation and knowledge of wildlife and wildlife habitats within the WMA.</b></p> <p><b>2. Inform the public of WMA presence, boundaries, partners and rules.</b></p>	<p>1. Educational and nature interpretation signs are in place and maintained.</p> <p>2. Entrance, boundary, funding and visitor ethics signs are in place and maintained.</p>	<p>1. Reduced frequency of wildlife disturbance, littering and degradation within the WMA. Increase public support for limiting human activities within the WMA to those that are compatible with Goals 1 and 4.</p> <p>2. Public is informed of conservation values, partnerships, permitted activities and boundaries. Reduce frequency of wildlife disturbance, trespass, unauthorized motorized vehicles and inappropriate behaviour.</p>
<b>Goal 6: Ensure public health and safety.</b>	<b>1. Maintain infrastructure: roadways, parking lots, fences, trails, viewing towers, signs, shelters, bridges, buildings etc.</b>	1. Infrastructure is safe and operable.	1. Infrastructure is safe and operable.
	<b>2. Maintain the appearance of the WMA.</b>	1. Site is kept clean; garbage	1. Site is kept clean; garbage is



Project File #: \_\_\_\_\_

## Wildlife Operations & Management PART 1. PROPERTY / COMPLEX PLAN

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		is managed. 2. Vegetation is maintained where necessary.	managed. 2. Vegetation is maintained where necessary.
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## Wildlife O&M 3-year Application – CAMP SLOUGH CONSERVATION AREA

### SITE DESCRIPTIONS / ACTIVITIES

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1. Name of property:

- a. *Property Name:* Camp Slough
- b. *CLD Reference:* Camp Slough (LEA)

2. Habitat Description / Values

The Camp Slough property contains 2,800 feet of river frontage with gently undulating farmland with large cottonwood trees lining the waterway and with two natural springs, providing a diverse habitat for a number of fish and wildlife species. A 2011 proposed critical habitat for the SARA listed freshwater fish Salish sucker occurs on this private property.

3. Guiding Documents

*TNT/Province Lease Agreement 1994*  
*Community Ecosystem Restoration Agreement 2006*  
*Invasive Alien Plant Program Reference Guide 2010*  
*TNT/Province Management Agreement 2011*  
*Proposed Development of the Camp Slough Wildlife Area*  
*Invasive Plant Program of Metro Vancouver*

#### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1: Provide, enhance, and maintain habitat for fish, wildlife, and plant diversity	Objective 1: Annually inspect property for concerns and plan work activities Objective 2: Collect spatial data for invasive species occurrences Objective 3: Manage invasive plants Objective 4: Maintain fencing Objective 5: Remove waste and debris from property	S-T Indic 1 – Annual property inspection completed S-T Indic 2 – GPS and photo data collected for invasive plants S-T Indic 3 – Decreased occurrence of invasive plants S-T Indic 5 – Waste and debris removed from property	L-T Indic 1 – Awareness of future potential impacts to fish, wildlife, and plant diversity L-T Indic 2 – Can now monitor distribution of invasive species over time L-T Indic 3 – Decreased prevalence of invasive species L-T Indic 4 – No further degradation of habitats
Goal 2: Provide opportunities for compatible wildlife-oriented recreation	Objective 1: Maintain or install informational and boundary signage, where appropriate	S-T Indic 1 – Signs maintained or installed on property	L-T Indic 1 – Public is informed of habitat values and property goals L-T Indic 2 – Balance between public use and habitat protection is maintained
Goal 3: To foster ongoing relationships for the betterment of the conservation area	Objective 1: Continue to work with neighbourhood steward group – Chilliwack Field Naturalists	S-T Indic 1 – All interest groups are represented S-T Indic 2 – Local group fosters frequent property visits	L-T Indic 1 – Continued strong partnership approach S-T Indic 2 – Local stewardship enhances management of the conservation area
Goal 4: Public safety	Objective 1: Maintain safety infrastructure Objective 2: Remove waste and debris from property	S-T Indic 1 – Waste and debris removed from property	L-T Indic 1 – Public continues to enjoy a safe environment for wildlife viewing and interpretation

#### 5. Financial Sustainability

Operations and maintenance activities on conservation lands in Region 2 are coordinated by an informal committee consisting of The Nature Trust of BC, Ducks Unlimited Canada, and the Ministry of Forests, Lands and Natural Resource Operations. This coordination ensures that lands are managed in the most effective and financially sustainable manner.

#### 6. Partner Recognition

Conservation partners are recognized in regards to individual properties in The Nature Trust's twice yearly printed newsletter, Natural Legacy, as well as in The Nature Trust's Annual Report. HCTF and the Province are also included in The Nature Trust's list of donors/partners in the Annual Report and also online. Partners are also recognized in media releases that are sent out for completion of properties.



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# Camp Slough

## Conservation Areas

The Nature Trust

## Map Symbols

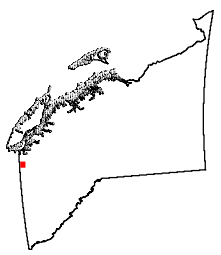
Road



Scale: 1:5,000

UTM Zone 10 NAD 83

## BC Location



## Data sources:

- BC NGO Conservation Lands Database
- BC GOV FLNRO GeoBC
- Bing Maps Aerial

## Map produced by:



April 2012



## Wildlife O&M 3-year Application – CHILLIWACK RIVER CONSERVATION AREA

### SITE DESCRIPTIONS / ACTIVITIES

---

1. Name of property:

- a. *Complex Name:* Chilliwack River
- b. *CLD Reference:* Chilliwack River (LEA)

2. Habitat Description / Values

This property was acquired both to provide access to the government and public, and to avoid possible problems with future landowners who might have flooded the river, damaging spawning beds. A portion of the south side of the Chilliwack River is entirely floodplain and straddles a section of Sweltzer Creek, an important steelhead and salmon spawning area. The Biogeoclimatic Ecosystem Classification (BEC) of the property is Coastal Western Hemlock, Eastern Very Dry Maritime (CWHxm1).

3. Guiding Documents

*TNT/Province Lease Agreement 1984*  
*Invasive Alien Plant Program Reference Guide 2010*  
*TNT/Province Management Agreement 2011*  
*Invasive Plant Program of Metro Vancouver*

#### 4. Goals, Objectives and Performance Indicators

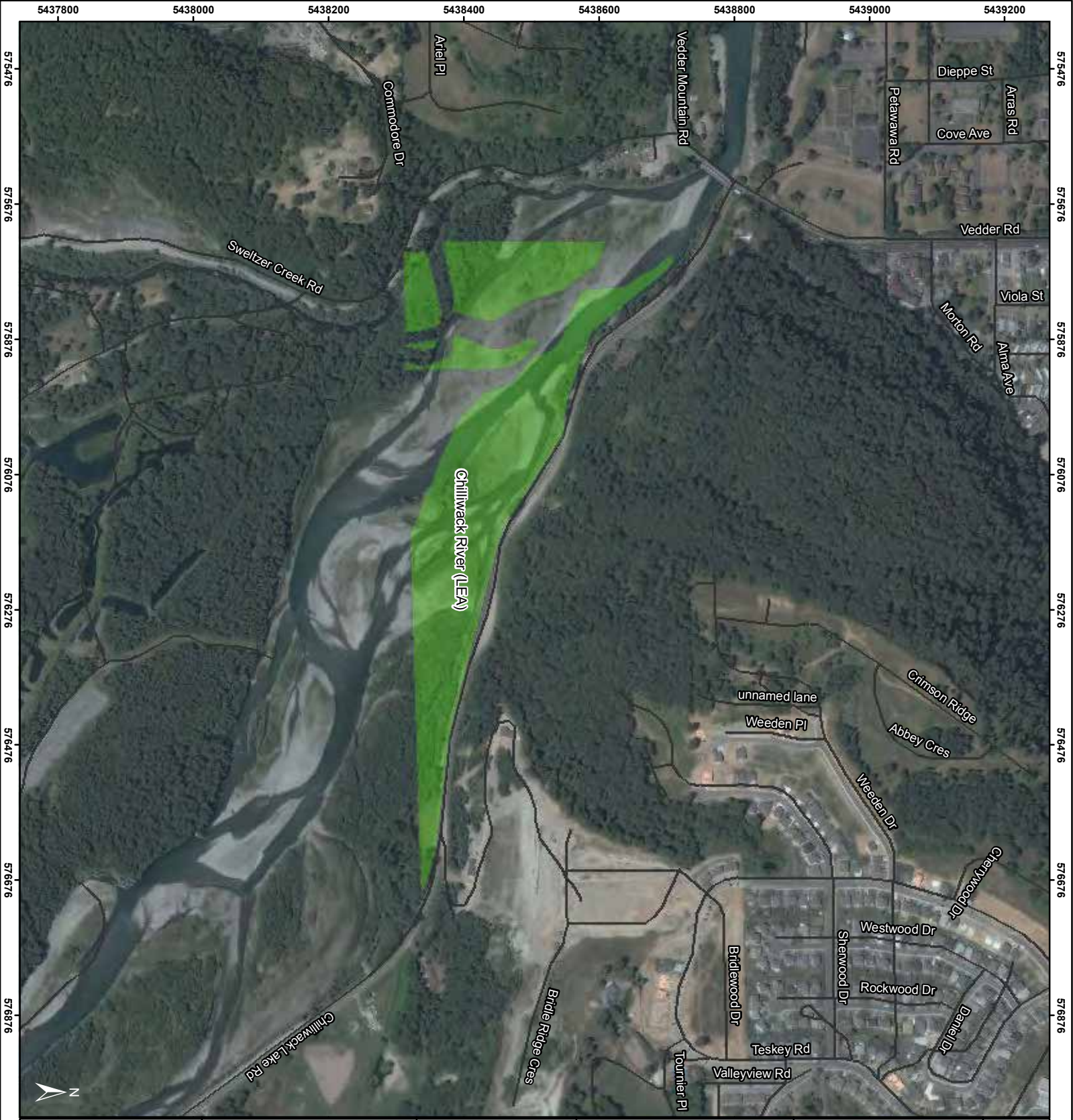
Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1: Provide, enhance, and maintain habitat for fish, wildlife, and plant diversity	Objective 1: Annually inspect property for concerns Objective 2: Collect spatial data for invasive species occurrences Objective 3: Manage invasive plants Objective 4: Maintain fencing Objective 5: Remove waste and debris from property	S-T Indic 1 – Annual property inspection completed S-T Indic 2 – GPS and photo data collected for invasive plants S-T Indic 3 – Decreased occurrence of invasive plants S-T Indic 4 – Fencing repaired where broken S-T Indic 5 – Waste and debris removed from property	L-T Indic 1 – Awareness of future potential impacts to fish, wildlife, and plant diversity L-T Indic 2 – Can now monitor distribution of invasive species over time L-T Indic 3 – Decreased prevalence of invasive species L-T Indic 4 – No further degradation of habitats
Goal 2: Provide opportunities for compatible wildlife-oriented recreation	Objective 1: Maintain signage indicating a conservation land	S-T Indic 1 – Signs installed on property	L-T Indic 1 – Public is informed of habitat values and property goals L-T Indic 2 – Balance between public use and habitat protection is maintained
Goal 3: Public safety	Objective 1: Maintain safety infrastructure Objective 2: Remove waste and debris from property	S-T Indic 1 - Fencing repaired where broken S-T Indic 2 – Waste and debris removed from property	L-T Indic 1 – Public continues to enjoy a safe environment for wildlife viewing and interpretation

#### 5. Financial Sustainability

Operations and maintenance activities on conservation lands in Region 2 are coordinated by an informal committee consisting of The Nature Trust of BC, Ducks Unlimited Canada, and the Ministry of Forests, Lands and Natural Resource Operations. This coordination ensures that lands are managed in the most effective and financially sustainable manner.

#### 6. Partner Recognition

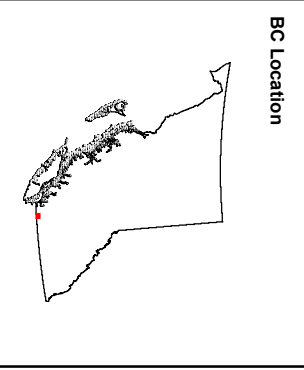
Wildlife Management Area boundary sign installed by 2011 field crew. Conservation partners are recognized in regards to individual properties in The Nature Trust's twice yearly printed newsletter, *Natural Legacy*, as well as in The Nature Trust's Annual Report. HCTF and the Province are also included in The Nature Trust's list of donors/partners in the Annual Report and also online. Partners are also recognized in media releases that are sent out for completion of properties.



# Chilliwack River

**Conservation Areas**  
 The Nature Trust

**Map Symbols**  
 — Road



**Data sources:**  
 BC NGO Conservation Lands Database  
 BC GOV FLNRO GeoBC  
 Bing Maps Aerial

**Map produced by:**  
  
 April 2012





## Wildlife Operations & Management PART 1. PROPERTY / COMPLEX PLAN

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*Please complete a separate plan for each property/complex within your region. See "Instructions for Wildlife O & M Part 1" for assistance in completing this form.*

**Funding Cycle: 2013-2016**

**Project Name:**

**Region: South Coast**

### **PROJECT INFORMATION**

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Please complete the following:

**1. Name of Property/ Complex:** Coquitlam River Wildlife Management Area.

**2. Habitat Description / Values:**

The Coquitlam River WMA consists of mature cottonwood forest along the flood plain of the Fraser River. This riparian habitat supports waterfowl, raptors, amphibians, passerine birds and small mammals. The site formerly contained a nesting colony of Great Blue Herons. The WMA also provides habitat for many species of fish within the Fraser and Coquitlam Rivers.

**3. Guiding Documents:**

1. Management Plan for the Coquitlam River Wildlife Management Area.

**4. Financial Sustainability:**

There are few opportunities for the Coquitlam River WMA to generate revenue.

**5. Partner Recognition:**

Contributions by partners will be recognized through use of the partner's logo on signage within the WMA and on any promotional or educational publications produced. The partner's contributions will also be acknowledged on the WMA website through use of the partner's logo and a statement indicating how the partner's contribution benefits the WMA (e.g. supports operations and management, supported the purchase of lands, etc.).



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

**6. Goals, Objectives and Performance Indicators**

*Please use these Goals and Objective numbers in Wildlife O & M Part 2: Application Table.*

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators:	
		Short Term	Long Term
<b>Goal 1: To maintain and/or enhance wildlife and their habitats.</b>	<b>1. Manage non-native, invasive species.</b>	1. Stop spread of large patches of invasive plant species within the WMA.  2. Eliminate small patches of invasive plant species within the WMA.	1. Extirpate populations of invasive species from the WMA where practical.  2. Limit populations of invasive species where elimination is impractical.
	<b>2. Enhance habitat for species of high conservation concern that are extant within the WMA.</b>	1. Identify opportunities to enhance habitat for species of high conservation concern that are extant within the WMA.	1. Increase reproductive output or population sizes of species of conservation concern.
	<b>3. Increase species richness within the WMA.</b>	1. Identify opportunities to introduce, or re-introduce, species of conservation concern.	1. Self-sustaining populations of introduced or re-introduced species.
	<b>4. Increase stewardship of stakeholders and adjacent property owners.</b>	1. Frequency of chronic non compliance events (wildlife disturbance, trespass, habitat	1. Low frequency of non compliance events (wildlife disturbance, trespass, habitat



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

		degradation) within the WMA is reduced.  2. Involvement of stakeholders in stewardship of the WMA is increased	degradation) within the WMA is maintained.  2. Involvement of stakeholders in stewardship of the WMA is maintained.
<b>Goal 2: Subject to maintenance of the wildlife resource, provide the widest possible range of wildlife oriented public recreation and education opportunities.</b>	<b>1. Increase visitor's appreciation and knowledge of wildlife and wildlife habitats within the WMA.</b>  <b>2. Inform the public of WMA presence, boundaries, partners and rules.</b>	1. Educational and nature interpretation signs are in place and maintained.  2. Entrance, boundary, funding and visitor ethics signs are in place and maintained.	1. Reduced frequency of wildlife disturbance, littering and degradation within the WMA. Increase public support for limiting human activities within the WMA to those that are compatible with Goals 1 and 4.  2. Public is informed of conservation values, partnerships, permitted activities and boundaries. Reduce frequency of wildlife disturbance, trespass, unauthorized motorized vehicles and inappropriate behaviour.
<b>Goal 3: Ensure public health and safety.</b>	<b>1. Maintain infrastructure: roadways, parking lots, fences, trails, viewing towers, shelters, bridges, buildings etc.</b>	1. Infrastructure is safe and operable.	1. Infrastructure is safe and operable.
	<b>2. Maintain the appearance of the WMA.</b>	1. Site is kept clean; garbage is managed.  2. Vegetation is maintained	1. Site is kept clean; garbage is managed.  2. Vegetation is maintained



Project File #: \_\_\_\_\_

**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

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## Wildlife Operations & Management PART 1. PROPERTY / COMPLEX PLAN

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*Please complete a separate plan for each property/complex within your region. See "Instructions for Wildlife O & M Part 1" for assistance in completing this form.*

**Funding Cycle: 2013-2016**

**Project Name:**

**Region: South Coast**

### **PROJECT INFORMATION**

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Please complete the following:

**1. Name of Property/ Complex:** Forslund - Watson Wildlife Area

**2. Habitat Description / Values:**

Forslund & Watson Wildlife Area consists of deciduous forest, old field and hayfield. The site also contains a constructed pond. These habitats support a variety of terrestrial wildlife, including birds and small mammals. The pond provides aquatic habitat for waterfowl and amphibians.

**3. Guiding Documents:**

1. Forslund – Watson Management Plan
2. Forslund-Watson Management Agreement 2009

**4. Financial Sustainability:**

Management of the Forslund-Watson site is shared between the Ministry of Forests, Lands and Natural Resource Operations, the Langley Field Naturalists and Ducks Unlimited Canada. The Langley Field Naturalists contribute a substantial number of volunteer hours and funding to achieve management goals. Ducks Unlimited Canada maintains the water control infrastructure that maintains the pond. In-kind contributions are made by contractors in exchange for hay cut off of the hayfield.

**5. Partner Recognition:**



## **Wildlife Operations & Management PART 1. PROPERTY / COMPLEX PLAN**

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Contributions by partners will be recognized through use of the partner's logo on signage within the WMA and on any promotional or educational publications produced. The partner's contributions will also be acknowledged on the WMA website through use of the partner's logo and a statement indicating how the partner's contribution benefits the WMA (e.g. supports operations and management, supported the purchase of lands, etc.).



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

**6. Goals, Objectives and Performance Indicators**

*Please use these Goals and Objective numbers in Wildlife O & M Part 2: Application Table.*

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
<b>Goal 1: To maintain and/or enhance wildlife and their habitats.</b>	<b>1. Manage non-native, invasive species.</b>	1. Stop spread of large patches of invasive plant species within the WMA.  2. Eliminate small patches of invasive plant species within the WMA.	1. Extirpate populations of invasive species from the WMA where practical.  2. Limit populations of invasive species where elimination is impractical.
	<b>2. Enhance habitat for species of high conservation concern that are extant within the WMA.</b>	1. Identify opportunities to enhance habitat for species of high conservation concern that are extant within the WMA.	1. Increase reproductive output or population sizes of species of conservation concern.
	<b>3. Increase species richness within the WMA.</b>	1. Identify opportunities to introduce, or re-introduce, species of conservation concern.	1. Self-sustaining populations of introduced or re-introduced species.
	<b>4. Increase stewardship of stakeholders and adjacent property owners.</b>	1. Frequency of chronic non compliance events (wildlife disturbance, trespass, habitat	1. Low frequency of non compliance events (wildlife disturbance, trespass, habitat



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

		<p>degradation) within the WMA is reduced.</p> <p>2. Involvement of stakeholders in stewardship of the WMA is increased</p>	<p>degradation) within the WMA is maintained.</p> <p>2. Involvement of stakeholders in stewardship of the WMA is maintained.</p>
<p><b>Goal 2: Subject to maintenance of the wildlife resource, provide the widest possible range of wildlife oriented public recreation and education opportunities.</b></p>	<p><b>1. Increase visitor’s appreciation and knowledge of wildlife and wildlife habitats within the WMA.</b></p> <p><b>2. Inform the public of WMA presence, boundaries, partners and rules.</b></p>	<p>1. Educational and nature interpretation signs are in place and maintained.</p> <p>2. Entrance, boundary, funding and visitor ethics signs are in place and maintained.</p>	<p>1. Reduced frequency of wildlife disturbance, littering and degradation within the WMA. Increase public support for limiting human activities within the WMA to those that are compatible with Goals 1 and 4.</p> <p>2. Public is informed of conservation values, partnerships, permitted activities and boundaries. Reduce frequency of wildlife disturbance, trespass, unauthorized motorized vehicles and inappropriate behaviour.</p>
<p><b>Goal 3: Ensure public health and safety.</b></p>	<p><b>1. Maintain infrastructure: roadways, parking lots, fences, trails, viewing towers, shelters, bridges, buildings etc.</b></p>	<p>1. Infrastructure is safe and operable.</p>	<p>1. Infrastructure is safe and operable.</p>
	<p><b>2. Maintain the appearance of the WMA.</b></p>	<p>1. Site is kept clean; garbage is managed.</p> <p>2. Vegetation is maintained</p>	<p>1. Site is kept clean; garbage is managed.</p> <p>2. Vegetation is maintained</p>



Project File #: \_\_\_\_\_

**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

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## Wildlife O&M 3-year Application – HARRISON RIVER CONSERVATION AREA

### SITE DESCRIPTIONS / ACTIVITIES

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1. Name of property:

- a. *Property Name:* Harrison River
- b. *CLD Reference:* Harrison River (LEA)

2. Habitat Description / Values

Adjacent to proposed Harrison-Chehalis WMA, this property is a key shoreline holding that abuts onto "Chehalis Flats", the delta formed at the junction of the Chehalis and Harrison Rivers. Chehalis Flats is internationally recognized for its concentration of bald eagles, spawning salmon and trumpeter swans. The marshes, mudflats and gravel bars of the area also provide habitat for numerous waterfowl besides swans. This property is mainly wetland habitat, with the upland characterized by a thick riparian growth of alders, blackberries and some cedars. The remainder of the land is generally underwater by as much as a meter with a mix of cattail and bulrush.

3. Guiding Documents

*TNT/Province Lease Agreement 1979*

*A Living, Working River: The Estuary Management Plan for the Fraser River 2003*

*Invasive Alien Plant Program Reference Guide 2010*

*TNT/Province Management Agreement 2011*

*Invasive Plant Program of Metro Vancouver*

#### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1: Provide, enhance, and maintain habitat for fish, wildlife, and plant diversity	Objective 1: Annually inspect property for concerns and coordinate tasks Objective 2: Manage invasive plants Objective 3: Maintain fencing Objective 4: Remove waste and debris from property	S-T Indic 1 – Annual property inspection completed and projects coordinated S-T Indic 2 – Decreased occurrence of invasive plants S-T Indic 3 – Fencing repaired where broken S-T Indic 4 – Waste and debris removed from property	L-T Indic 1 – Awareness of future potential impacts to fish, wildlife, and plant diversity L-T Indic 2 – Decreased prevalence of invasive species L-T Indic 3 – No further degradation of habitats
Goal 2: Provide opportunities for compatible wildlife-oriented recreation	Objective 1: Maintain signage indicating a conservation land	S-T Indic 1 – Signs installed on property	L-T Indic 1 – Public is informed of habitat values and property goals L-T Indic 2 – Balance between public use and habitat protection is maintained
Goal 3: Public safety	Objective 1: Maintain safety infrastructure Objective 2: Remove waste and debris from property	S-T Indic 1 – Waste and debris removed from property	L-T Indic 1 – Public continues to enjoy a safe environment for wildlife viewing and interpretation

#### 5. Financial Sustainability

Operations and maintenance activities on conservation lands in Region 2 are coordinated by an informal committee consisting of The Nature Trust of BC, Ducks Unlimited Canada, and the Ministry of Forests, Lands and Natural Resource Operations. This coordination ensures that lands are managed in the most effective and financially sustainable manner.

#### 6. Partner Recognition

Harrison-Chehalis Estuary sign includes the logos of partners in conservation: The Province, NCC, TLC, and HCTF. Conservation partners are recognized in regards to individual properties in The Nature Trust's twice yearly printed newsletter, *Natural Legacy*, as well as in The Nature Trust's Annual Report. HCTF and the Province are also included in The Nature Trust's list of donors/partners in the Annual Report and also online. Partners are also recognized in media releases that are sent out for completion of properties.

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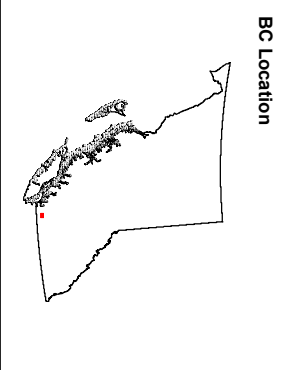
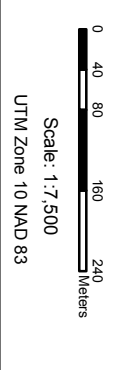


# Harrison River



- Conservation Areas**
- The Nature Trust
  - Proposed Wildlife Management Area

- Map Symbols**
- Road



**Data sources:**  
 BC NGO Conservation Lands Database  
 BC GOV FLNRO GeoBC  
 Bing Maps Aerial

**Map produced by:**

April 2012



## Wildlife Operations & Management PART 1. PROPERTY / COMPLEX PLAN

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Please complete a separate plan for each property/complex within your region. See "Instructions for Wildlife O & M Part 1" for assistance in completing this form.

**Funding Cycle: 2013-2016**

**Project Name:**

**Region: South Coast**

### PROJECT INFORMATION

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Please complete the following:

- 1. Name of Property/ Complex:** Proposed Harrison-Chehalis WMA (decision on designation expected in 2013).

The proposed Harrison-Chehalis WMA includes the following TNT leased property:

1. Harrison River (LEA)

- 2. Habitat Description / Values:**

The proposed Harrison-Chehalis WMA consists of marshes, mature riparian forest, open water and gravel bars at the confluence of the Harrison and Chehalis Rivers. These habitats are strongly influenced by variation in the level of these two rivers, and the Fraser River. The forest, marshes and gravel bars are flooded during the spring freshet. The WMA supports waterfowl, raptors, amphibians, passerine birds and small mammals. The gravel bars also provide habitat for many species of fish within the Fraser Rivers, particularly White Sturgeon and salmonids. The Chehalis River Estuary is identified as an Important Bird Area due to the globally significant numbers of Bald Eagles, which congregate there during the fall and winter to feed on spawning Coho and Chum Salmon, and Trumpeter Swans. The Harrison River has been recognized as a 'Salmon Stronghold' by the North American Salmon Stronghold Partnership due to the strong runs of five species of Pacific Salmon species and Steelhead Trout.

- 3. Guiding Documents:**

1. Proposed Harrison-Chehalis WMA Management Plan
2. TNT/Province Lease Agreement 1979
3. A Living, Working River: The Estuary Management Plan for the Fraser River 2003
4. Invasive Alien Plant Program Reference Guide 2010



## Wildlife Operations & Management PART 1. PROPERTY / COMPLEX PLAN

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5. TNT/Province Management Agreement 2011
6. Invasive Plant Program of Metro Vancouver

#### **4. Financial Sustainability:**

Operations and maintenance activities on conservation lands in Region 2 are coordinated by an informal committee consisting of The Nature Trust of BC, Ducks Unlimited Canada, and the Ministry of Forests, Lands and Natural Resource Operations. This coordination ensures that lands are managed in the most effective and financially sustainable manner.

#### **5. Partner Recognition:**

Contributions by partners will be recognized through use of the partner's logo on signage within the WMA and on any promotional or educational publications produced. The partner's contributions will also be acknowledged on the WMA website through use of the partner's logo and a statement indicating how the partner's contribution benefits the WMA (e.g. supports operations and management, supported the purchase of lands, etc.).



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

**6. Goals, Objectives and Performance Indicators**

*Please use these Goals and Objective numbers in Wildlife O & M Part 2: Application Table.*

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators:	
		Short Term	Long Term
Harrison River (LEA)			
<b>Goal 1: To enhance wetlands and improve habitat for wildlife</b>	<b>Objective 1: Annually inspect property for concerns</b>	1. Annual property inspection completed	1. Awareness of future potential impacts to fish, wildlife, and plant diversity 2. No further degradation of habitats
<b>Goal 2: Provide opportunities for compatible wildlife oriented recreation</b>	<b>Objective 1: Ensure that public access facilities are maintained and appropriate</b> <b>Objective 2: Signs maintained or installed on property</b>	1. Site is maintained for public use 2. Signs maintained or installed on property.	1. Balance between public use and habitat protection is maintained 2. Public is informed of habitat values and property goals
<b>Goal 3: Public safety</b>	<b>Objective 1: Maintain safety infrastructure</b> <b>Objective 2: Remove waste and debris from property</b>	1. Waste and debris removed from property	1. Public continues to enjoy a safe environment for wildlife viewing and interpretation
<b>Proposed Harrison-Chehalis WMA (non-leased lands)</b>			



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

<p><b>Goal 4: To maintain and/or enhance wildlife and their habitats.</b></p>	<p><b>1. Manage non-native, invasive species.</b></p>	<p>1. Stop spread of large patches of invasive plant species within the WMA.</p> <p>2. Eliminate small patches of invasive plant species within the WMA.</p>	<p>1. Extirpate populations of invasive species from the WMA where practical.</p> <p>2. Limit populations of invasive species where elimination is impractical.</p> <p>3. Wildlife habitat maintained.</p>
	<p><b>2. Enhance habitat for species of high conservation concern that are extant within the WMA.</b></p>	<p>1. Identify opportunities to enhance habitat for species of high conservation concern that are extant within the WMA.</p>	<p>1. Increase reproductive output or population sizes of species of conservation concern.</p>
	<p><b>3. Increase species richness within the WMA.</b></p>	<p>1. Identify opportunities to introduce, or re-introduce, species of conservation concern.</p>	<p>1. Self-sustaining populations of introduced or re-introduced species.</p>
	<p><b>4. Increase stewardship of stakeholders and adjacent property owners.</b></p>	<p>1. Frequency of chronic non compliance events (wildlife disturbance, trespass, habitat degradation) within the WMA is reduced.</p> <p>2. Involvement of stakeholders in stewardship of the WMA is increased</p>	<p>1. Low frequency of non compliance events (wildlife disturbance, trespass, habitat degradation) within the WMA is maintained.</p> <p>2. Involvement of stakeholders in stewardship of the WMA is maintained.</p>
<p><b>Goal 5: Subject to</b></p>	<p><b>1. Increase visitor's appreciation and</b></p>	<p>1. Educational and nature</p>	<p>1. Reduced frequency of wildlife</p>



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

<p><b>maintenance of the wildlife resource, provide the widest possible range of wildlife oriented public recreation and education opportunities.</b></p>	<p><b>knowledge of wildlife and wildlife habitats within the WMA.</b></p> <p><b>2. Inform the public of WMA presence, boundaries, partners and rules.</b></p>	<p>interpretation signs are in place and maintained.</p> <p>2. Entrance, boundary, funding and visitor ethics signs are in place and maintained.</p>	<p>disturbance, littering and degradation within the WMA. Increase public support for limiting human activities within the WMA to those that are compatible with Goals 1 and 4.</p> <p>2. Public is informed of conservation values, partnerships, permitted activities and boundaries. Reduce frequency of wildlife disturbance, trespass, unauthorized motorized vehicles and inappropriate behaviour.</p>
<p><b>Goal 6: Ensure public health and safety.</b></p>	<p><b>1. Maintain infrastructure: roadways, parking lots, fences, trails, viewing towers, shelters, bridges, buildings etc.</b></p>	<p>1. Infrastructure is safe and operable.</p>	<p>1. Infrastructure is safe and operable.</p>
	<p><b>2. Maintain the appearance of the WMA.</b></p>	<p>1. Site is kept clean; garbage is managed.</p> <p>2. Vegetation is maintained where necessary.</p>	<p>1. Site is kept clean; garbage is managed.</p> <p>2. Vegetation is maintained where necessary.</p>



## Wildlife Operations & Management PART 1. PROPERTY / COMPLEX PLAN

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Please complete a separate plan for each property/complex within your region. See "Instructions for Wildlife O & M Part 1" for assistance in completing this form.

**Funding Cycle: 2013-2016**

**Project Name:**

**Region: South Coast**

### **PROJECT INFORMATION**

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Please complete the following:

**1. Name of Property/ Complex:** Pemberton Valley Wildlife Management Area

**2. Habitat Description / Values:**

The Pemberton Valley WMA is located in the floodplain of the upper Lillooet River. The WMA protects highly productive wetland and riparian communities that support salmonid and non-salmonid fish species, migratory, resident and wintering waterfowl, passerines and raptors, beaver, otter, moose, blacktailed deer and black bear. These wetland and riparian communities represent a small fraction of a once vast wetland and floodplain habitat complex that has been lost mostly as a result of dyking. Agriculture, forestry, and commercial and urban development continue to erode the remaining fish and wildlife habitat base.

**3. Guiding Documents:**

Pemberton Valley WMA Management Plan

**4. Financial Sustainability:**

The Pemberton Valley WMA does not currently generate much revenue.

**5. Partner Recognition:**

Contributions by partners will be recognized through use of the partner's logo on signage within the WMA and on any promotional or educational publications produced. The partner's contributions will also be acknowledged on the WMA website through use of the partner's logo and a statement indicating how the partner's contribution benefits the WMA (e.g. supports operations and management, supported the purchase of lands, etc.).



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

**6. Goals, Objectives and Performance Indicators**

*Please use these Goals and Objective numbers in Wildlife O & M Part 2: Application Table.*

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators:	
		Short Term	Long Term
<b>Goal 1: To maintain and/or enhance wildlife and their habitats.</b>	<b>1. Manage non-native, invasive species.</b>	1. Stop spread of large patches of invasive plant species within the WMA.  2. Eliminate small patches of invasive plant species within the WMA.	1. Extirpate populations of invasive species from the WMA where practical.  2. Limit populations of invasive species where elimination is impractical.
	<b>2. Enhance habitat for species of high conservation concern that are extant within the WMA.</b>	1. Identify opportunities to enhance habitat for species of high conservation concern that are extant within the WMA.	1. Increase reproductive output or population sizes of species of conservation concern.
	<b>3. Increase species richness within the WMA.</b>	1. Identify opportunities to introduce, or re-introduce, species of conservation concern.	1. Self-sustaining populations of introduced or re-introduced species.
	<b>4. Increase stewardship of stakeholders and adjacent property owners.</b>	1. Frequency of chronic non compliance events (wildlife disturbance, trespass, habitat	1. Low frequency of non compliance events (wildlife disturbance, trespass, habitat



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

		degradation) within the WMA is reduced.  2. Involvement of stakeholders in stewardship of the WMA is increased	degradation) within the WMA is maintained.  2. Involvement of stakeholders in stewardship of the WMA is maintained.
<b>Goal 2: Subject to maintenance of the wildlife resource, provide the widest possible range of wildlife oriented public recreation and education opportunities.</b>	<b>1. Increase visitor's appreciation and knowledge of wildlife and wildlife habitats within the WMA.  2. Inform the public of WMA presence, boundaries, partners and rules.</b>	1. Educational and nature interpretation signs are in place and maintained.  2. Entrance, boundary, funding and visitor ethics signs are in place and maintained.	1. Reduced frequency of wildlife disturbance, littering and degradation within the WMA. Increase public support for limiting human activities within the WMA to those that are compatible with Goals 1 and 4.  2. Public is informed of conservation values, partnerships, permitted activities and boundaries. Reduce frequency of wildlife disturbance, trespass, unauthorized motorized vehicles and inappropriate behaviour.
<b>Goal 3: Ensure public health and safety.</b>	<b>1. Maintain infrastructure: roadways, parking lots, fences, trails, viewing towers, shelters, bridges, buildings etc.</b>	1. Infrastructure is safe and operable.	1. Infrastructure is safe and operable.
	<b>2. Maintain the appearance of the WMA.</b>	1. Site is kept clean; garbage is managed.  2. Vegetation is maintained	1. Site is kept clean; garbage is managed.  2. Vegetation is maintained



Project File #: \_\_\_\_\_

**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

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## Wildlife Operations & Management PART 1. PROPERTY / COMPLEX PLAN

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Please complete a separate plan for each property/complex within your region. See "Instructions for Wildlife O & M Part 1" for assistance in completing this form.

**Funding Cycle: 2013-2016**

**Project Name:**

**Region: South Coast**

### **PROJECT INFORMATION**

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Please complete the following:

**1. Name of Property/ Complex:** Pitt-Addington Wildlife Management Area

**2. Habitat Description / Values:**

The fresh-water (tidal and non-tidal) wetlands, mudflats, and riparian habitat within the WMA provide:

1. Wintering, migration and breeding habitats for waterfowl, shorebirds, raptors and passerines. The site supports one of the only breeding colonies of Sandhill Cranes in south-western BC.
2. Year-round habitat for native amphibians and fish, including species on the provincial red and blue lists.
3. Breeding and juvenile habitat for salmonids.

**3. Guiding Documents:**

1. Management plan for the Pitt-Addington Wildlife Management Area.
2. Management agreement with Ducks Unlimited Canada (DUC).
3. TNT/Province Lease Agreement 1979
4. Pitt Wetland Vegetation Habitat Enhancement Report 1989
5. TNT/Province/DUC Conservation Agreement 2004
6. Invasive Alien Plant Program Reference Guide 2010
7. TNT/Province Management Agreement 2011



## Wildlife Operations & Management PART 1. PROPERTY / COMPLEX PLAN

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### 8. Invasive Plant Program of Metro Vancouver

#### 4. Financial Sustainability:

1. DUC is responsible for operating and maintaining infrastructure related to water management on the site, resulting in an in-kind contribution of approximately \$6000.00 (spread over all provincial conservation lands for which DUC is a partner).
2. DUC has invested approximately \$800,000.00 in upgrading water control infrastructure within the WMA.
3. Pitt-Addington WMA also generates funds from production companies using the WMA as a site location for film and photography work.
4. MFLNRO contributed \$10,700.00 for a contract to screen the WMA for archeology values prior to DUC's infrastructure upgrade.
5. Operations and maintenance activities on conservation lands in Region 2 are coordinated by an informal committee consisting of The Nature Trust of BC, Ducks Unlimited Canada, and the Ministry of Forests, Lands and Natural Resource Operations. This coordination ensures that lands are managed in the most effective and financially sustainable manner.

#### 5. Partner Recognition:

Contributions by partners will be recognized through use of the partner's logo on signage within the WMA and on any promotional or educational publications produced. The partner's contributions will also be acknowledged on the WMA website through use of the partner's logo and a statement indicating how the partner's contribution benefits the WMA (e.g. supports operations and management, supported the purchase of lands, etc.).



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

**6. Goals, Objectives and Performance Indicators**

*Please use these Goals and Objective numbers in Wildlife O & M Part 2: Application Table.*

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators:	
		Short Term	Long Term
<b>Goal 1: To maintain and/or enhance wildlife and their habitats.</b>	<b>1. Manage non-native, invasive species.</b>  <b>2. Annually inspect property for concerns.</b>	1. Stop spread of large patches of invasive plant species within the WMA.  2. Eliminate small patches of invasive plant species within the WMA.  3. Annual property inspection completed.	1. Extirpate populations of invasive species from the WMA where practical.  2. Limit populations of invasive species where elimination is impractical.  3. Wildlife habitat maintained.
	<b>2. Enhance habitat for species of high conservation concern that are extant within the WMA.</b>	1. Identify opportunities to enhance habitat for species of high conservation concern that are extant within the WMA.	1. Increase reproductive output or population sizes of species of conservation concern.
	<b>3. Increase species richness within the WMA.</b>	1. Identify opportunities to introduce, or re-introduce, species of conservation concern.	1. Self-sustaining populations of introduced or re-introduced species.



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

	<b>4. Increase stewardship of stakeholders and adjacent property owners.</b>	<p>1. Frequency of chronic non compliance events (wildlife disturbance, trespass, habitat degradation) within the WMA is reduced.</p> <p>2. Involvement of stakeholders in stewardship of the WMA is increased</p>	<p>1. Low frequency of non compliance events (wildlife disturbance, trespass, habitat degradation) within the WMA is maintained.</p> <p>2. Involvement of stakeholders in stewardship of the WMA is maintained.</p>
<b>Goal 2: Subject to maintenance of the wildlife resource, provide the widest possible range of wildlife oriented public recreation and education opportunities.</b>	<p><b>1. Increase visitor’s appreciation and knowledge of wildlife and wildlife habitats within the WMA.</b></p> <p><b>2. Inform the public of WMA presence, boundaries, partners and rules.</b></p>	<p>1. Educational and nature interpretation signs are in place and maintained.</p> <p>2. Entrance, boundary, funding and visitor ethics signs are in place and maintained.</p>	<p>1. Reduced frequency of wildlife disturbance, littering and degradation within the WMA. Increase public support for limiting human activities within the WMA to those that are compatible with Goals 1 and 4.</p> <p>2. Public is informed of conservation values, partnerships, permitted activities and boundaries. Reduce frequency of wildlife disturbance, trespass, unauthorized motorized vehicles and inappropriate behaviour.</p>
<b>Goal 3: Ensure public health and safety.</b>	<b>1. Maintain infrastructure: roadways, parking lots, fences, trails, viewing towers, shelters, bridges, buildings etc.</b>	1. Infrastructure is safe and operable.	1. Infrastructure is safe and operable.
	<b>2. Maintain the appearance of the</b>	1. Site is kept clean; garbage	1. Site is kept clean; garbage is



Project File #: \_\_\_\_\_

## Wildlife Operations & Management PART 1. PROPERTY / COMPLEX PLAN

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	<b>WMA.</b>	is managed. 2. Vegetation is maintained where necessary.	managed. 2. Vegetation is maintained where necessary.
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## Wildlife Operations & Management PART 1. PROPERTY / COMPLEX PLAN

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Please complete a separate plan for each property/complex within your region. See "Instructions for Wildlife O & M Part 1" for assistance in completing this form.

**Funding Cycle: 2013-2016**

**Project Name:**

**Region: South Coast**

### **PROJECT INFORMATION**

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Please complete the following:

**1. Name of Property/ Complex:** Roberts Bank Wildlife Management Area

**2. Habitat Description / Values:**

Roberts Bank WMA contains intertidal mudflats, salt marshes, and eelgrass beds. Roberts Bank is a major migration staging area for millions of birds along the Pacific Flyway. The Bank is an important wintering area for large numbers of waterfowl, shorebirds, gulls, raptors and owls. The Bank is identified as an Important Bird Area by Birdlife International due to the globally, continentally, and nationally significant concentrations of birds. It is part of the Western Hemisphere Shorebird Reserve Network. The Ministry of Forests, Lands and Natural Resource Operations intends to add it to the Fraser Delta Ramsar site.

**3. Guiding Documents:**

1. Management Plan for Roberts Bank Wildlife Management Area.

**4. Financial Sustainability:**

1. Roberts Bank WMA generates funds from fees for letters of authorization from scientists conducting research.
2. Roberts Bank WMA has generated support for habitat enhancement through mitigation and compensation agreements with proponents of coastal development projects.

**5. Partner Recognition:**

Contributions by partners will be recognized through use of the partner's logo on signage within the WMA and on any promotional or educational publications produced. The partner's contributions will also be acknowledged on the WMA website through use of the partner's logo



Project File #: \_\_\_\_\_

**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

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and a statement indicating how the partner's contribution benefits the WMA (e.g. supports operations and management, supported the purchase of lands, etc.).



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

**6. Goals, Objectives and Performance Indicators**

*Please use these Goals and Objective numbers in Wildlife O & M Part 2: Application Table.*

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators:	
		Short Term	Long Term
<b>Goal 1: To maintain and/or enhance wildlife and their habitats.</b>	<b>1. Manage non-native, invasive species.</b>	1. Stop spread of large patches of invasive plant species within the WMA.  2. Eliminate small patches of invasive plant species within the WMA.	1. Extirpate populations of invasive species from the WMA where practical.  2. Limit populations of invasive species where elimination is impractical.
	<b>2. Enhance habitat for species of high conservation concern that are extant within the WMA.</b>	1. Identify opportunities to enhance habitat for species of high conservation concern that are extant within the WMA.	1. Increase reproductive output or population sizes of species of conservation concern.
	<b>3. Increase species richness within the WMA.</b>	1. Identify opportunities to introduce, or re-introduce, species of conservation concern.	1. Self-sustaining populations of introduced or re-introduced species.
	<b>4. Increase stewardship of stakeholders and adjacent property owners.</b>	1. Frequency of chronic non compliance events (wildlife disturbance, trespass, habitat	1. Low frequency of non compliance events (wildlife disturbance, trespass, habitat



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

		degradation) within the WMA is reduced.	degradation) within the WMA is maintained.
		2. Involvement of stakeholders in stewardship of the WMA is increased	2. Involvement of stakeholders in stewardship of the WMA is maintained.
<b>Goal 2: Subject to maintenance of the wildlife resource, provide the widest possible range of wildlife oriented public recreation and education opportunities.</b>	<b>1. Increase visitor's appreciation and knowledge of wildlife and wildlife habitats within the WMA.</b>  <b>2. Inform the public of WMA presence, boundaries, partners and rules.</b>	1. Educational and nature interpretation signs are in place and maintained.  2. Entrance, boundary, funding and visitor ethics signs are in place and maintained.	1. Reduced frequency of wildlife disturbance, littering and degradation within the WMA. Increase public support for limiting human activities within the WMA to those that are compatible with Goals 1 and 4.  2. Public is informed of conservation values, partnerships, permitted activities and boundaries. Reduce frequency of wildlife disturbance, trespass, unauthorized motorized vehicles and inappropriate behaviour.
<b>Goal 3: Ensure public health and safety.</b>	<b>1. Maintain infrastructure: roadways, parking lots, fences, trails, viewing towers, shelters, bridges, buildings etc.</b>	1. Infrastructure is safe and operable.	1. Infrastructure is safe and operable.
	<b>2. Maintain the appearance of the WMA.</b>	1. Site is kept clean; garbage is managed.  2. Vegetation is maintained	1. Site is kept clean; garbage is managed.  2. Vegetation is maintained



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**Wildlife Operations & Management  
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## Wildlife Operations & Management PART 1. PROPERTY / COMPLEX PLAN

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*Please complete a separate plan for each property/complex within your region. See "Instructions for Wildlife O & M Part 1" for assistance in completing this form.*

**Funding Cycle: 2013-2016**

**Project Name:**

**Region: South Coast**

### **PROJECT INFORMATION**

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Please complete the following:

- 1. Name of Property/ Complex:** Serpentine Wildlife Management Area and Serpentine Annex.
- 2. Habitat Description / Values:**

Serpentine WMA contains intertidal mudflats, salt marshes, freshwater marshes and agricultural land. The Serpentine is a migration staging area for birds along the Pacific Flyway and is an important wintering area for waterfowl, shorebirds, gulls, raptors and owls. The Serpentine is part of the Fraser River Estuary Important Bird Area identified by Birdlife International due to the globally, continentally, and nationally significant concentrations of birds. It is part of the Western Hemisphere Shorebird Reserve Network and a Ramsar site. The primary purpose of the WMA is to provide forage to lure wintering waterfowl away from agricultural fields.
- 3. Guiding Documents:**
  1. Management Plan for Serpentine Wildlife Management Area.
  2. Management agreement with Ducks Unlimited Canada (DUC).
  3. Vegetation Management Agreement with DUC, MoE and the Ministry of Transportation (applies to the Serpentine Annex).
- 4. Financial Sustainability:**
  1. DUC is responsible for operating and maintaining infrastructure related to water management on the site, resulting in an in-kind contribution of approximately \$6000.00 (spread over all provincial conservation lands for which DUC is a partner).
  2. DUC has invested approximately \$150,000.00 in upgrading water control infrastructure within the WMA.



## Wildlife Operations & Management PART 1. PROPERTY / COMPLEX PLAN

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3. The BC Ministry of Transport and Infrastructure invested contributed \$100,000.00 towards upgrading water control and other infrastructure within the WMA.
4. The WMA generates income from lease agreements with communications companies to allow infrastructure within the WMA.
5. The BC Ministry of Forests, Lands and Natural Resource Operations contributed \$25,000.00 towards an update of the WMA management plan.
6. Some income is generated from farming activities conducted within the WMA (hay production) and the Annex (crops).

### **5. Partner Recognition:**

Contributions by partners will be recognized through use of the partner's logo on signage within the WMA and on any promotional or educational publications produced. The partner's contributions will also be acknowledged on the WMA website through use of the partner's logo and a statement indicating how the partner's contribution benefits the WMA (e.g. supports operations and management, supported the purchase of lands, etc.).



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

**6. Goals, Objectives and Performance Indicators**

*Please use these Goals and Objective numbers in Wildlife O & M Part 2: Application Table.*

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators:	
		Short Term	Long Term
<b>Goal 1: To maintain and/or enhance wildlife and their habitats.</b>	<b>1. Manage non-native, invasive species.</b>	1. Stop spread of large patches of invasive plant species within the WMA.  2. Eliminate small patches of invasive plant species within the WMA.	1. Extirpate populations of invasive species from the WMA where practical.  2. Limit populations of invasive species where elimination is impractical.
	<b>2. Enhance habitat for species of high conservation concern that are extant within the WMA.</b>	1. Identify opportunities to enhance habitat for species of high conservation concern that are extant within the WMA.	1. Increase reproductive output or population sizes of species of conservation concern.
	<b>3. Increase species richness within the WMA.</b>	1. Identify opportunities to introduce, or re-introduce, species of conservation concern.	1. Self-sustaining populations of introduced or re-introduced species.
	<b>4. Increase stewardship of stakeholders and adjacent property owners.</b>	1. Frequency of chronic non compliance events (wildlife disturbance, trespass, habitat	1. Low frequency of non compliance events (wildlife disturbance, trespass, habitat



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

		degradation) within the WMA is reduced.  2. Involvement of stakeholders in stewardship of the WMA is increased	degradation) within the WMA is maintained.  2. Involvement of stakeholders in stewardship of the WMA is maintained.
<b>Goal 2: Subject to maintenance of the wildlife resource, provide the widest possible range of wildlife oriented public recreation and education opportunities.</b>	<b>1. Increase visitor's appreciation and knowledge of wildlife and wildlife habitats within the WMA.</b>  <b>2. Inform the public of WMA presence, boundaries, partners and rules.</b>	1. Educational and nature interpretation signs are in place and maintained.  2. Entrance, boundary, funding and visitor ethics signs are in place and maintained.	1. Reduced frequency of wildlife disturbance, littering and degradation within the WMA. Increase public support for limiting human activities within the WMA to those that are compatible with Goals 1 and 4.  2. Public is informed of conservation values, partnerships, permitted activities and boundaries. Reduce frequency of wildlife disturbance, trespass, unauthorized motorized vehicles and inappropriate behaviour.
<b>Goal 3: Ensure public health and safety.</b>	<b>1. Maintain infrastructure: roadways, parking lots, fences, trails, viewing towers, shelters, bridges, buildings etc.</b>	1. Infrastructure is safe and operable.	1. Infrastructure is safe and operable.
	<b>2. Maintain the appearance of the WMA.</b>	1. Site is kept clean; garbage is managed.  2. Vegetation is maintained	1. Site is kept clean; garbage is managed.  2. Vegetation is maintained



Project File #: \_\_\_\_\_

**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

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		where necessary.	where necessary.
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## Wildlife O&M 3-year Application – SILVERHOPE CREEK CONSERVATION AREA

### SITE DESCRIPTIONS / ACTIVITIES

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1. Name of property:

- a. *Property Name:* Silverhope Creek
- b. *CLD Reference:* Silverhope Creek (LEA)

2. Habitat Description / Values

This property is mostly valley bottom land, straddling the Silverhope Creek which is slow flowing; with water depth ranging from a few centimetres to a few metres. 1.5 km of Silverhope Creek flows through the property. Silverhope Creek is a tributary of the Fraser River and was primarily acquired to protect prime steelhead spawning habitat. This creek is an important system for Rainbow trout and Dolly Varden char, as well as steelhead. The area supports a variety of wildlife including mountain goat, cougar, deer and harlequin ducks. The riparian and upland areas have a mixture of coniferous and deciduous trees dominated by alder and red cedar. Other tree species present include willow, cottonwood and maple.

3. Guiding Documents

- TNT/Province Lease Agreement 1980*
- TNT/Province Management Agreement 2011*

#### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1: Provide, enhance, and maintain habitat for fish, wildlife, and plant diversity	Objective 1: Annually inspect property for concerns Objective 2: Remove waste and debris from property	S-T Indic 1 – Annual property inspection completed S-T Indic 2 – Waste and debris removed from property	L-T Indic 1 – Awareness of future potential impacts to fish, wildlife, and plant diversity L-T Indic 2 – Decreased prevalence of invasive species L-T Indic 3 – No further degradation of habitats
Goal 2: Provide opportunities for compatible wildlife-oriented recreation	Objective 1: Maintain or install informational and boundary signage, where appropriate	S-T Indic 1 – Signs maintained or installed on property	L-T Indic 1 – Public is informed of habitat values and property goals L-T Indic 2 – Balance between public use and habitat protection is maintained
Goal 3: Public safety	Objective 1: Maintain safety infrastructure Objective 2: Remove waste and debris from property	S-T Indic 1 – Waste and debris removed from property	L-T Indic 1 – Public continues to enjoy a safe environment for wildlife viewing and interpretation

#### 5. Financial Sustainability

Operations and maintenance activities on conservation lands in Region 2 are coordinated by an informal committee consisting of The Nature Trust of BC, Ducks Unlimited Canada, and the Ministry of Forests, Lands and Natural Resource Operations. This coordination ensures that lands are managed in the most effective and financially sustainable manner.

#### 6. Partner Recognition

Conservation partners are recognized in regards to individual properties in The Nature Trust's twice yearly printed newsletter, *Natural Legacy*, as well as in The Nature Trust's Annual Report. HCTF and the Province are also included in The Nature Trust's list of donors/partners in the Annual Report and also online. Partners are also recognized in media releases that are sent out for completion of properties.

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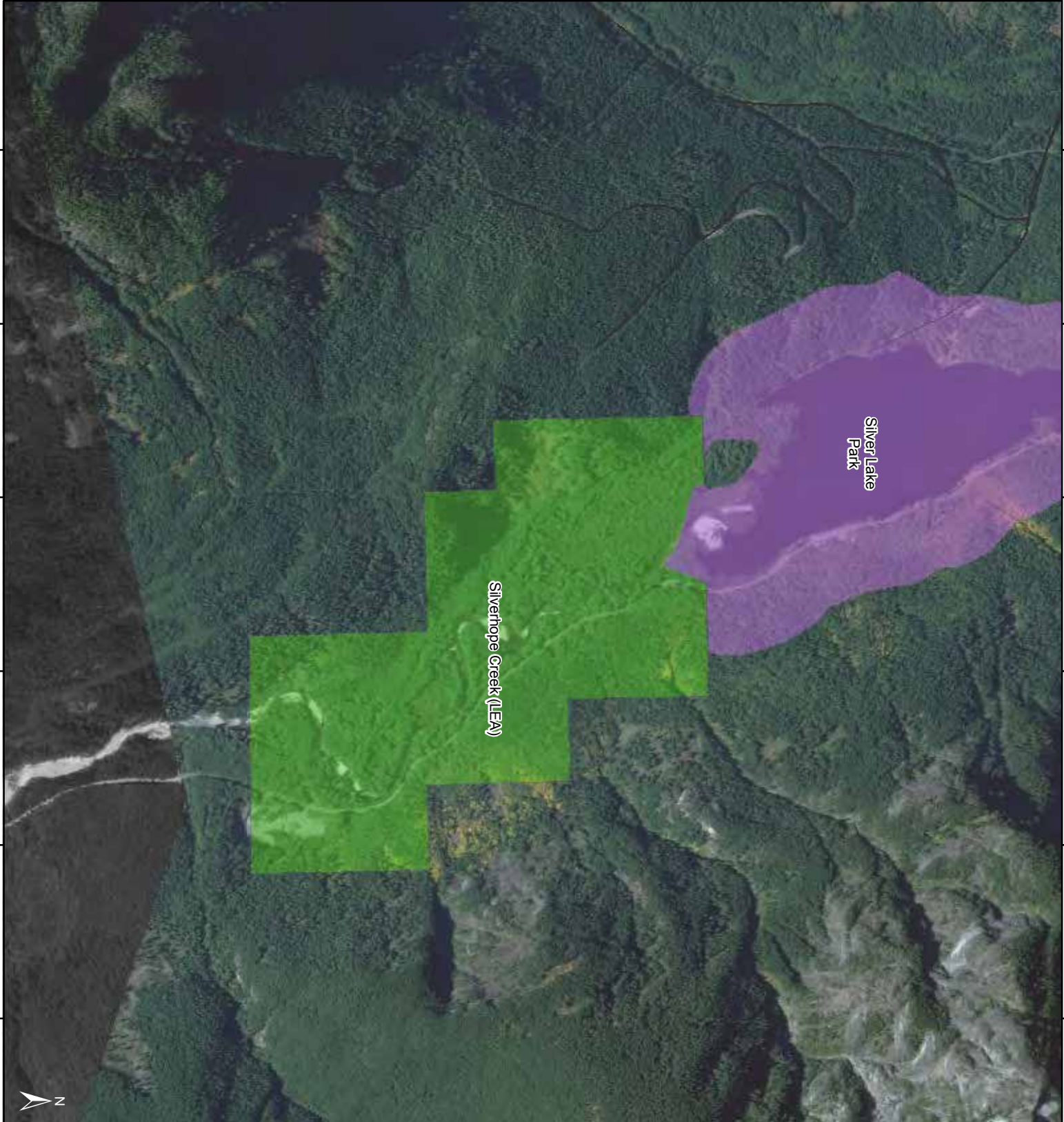
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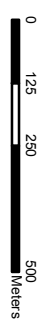
# Silverhope Creek

## Conservation Areas

- The Nature Trust
- Provincial Park

## Map Symbols

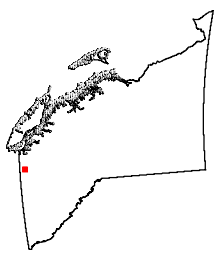
- Road



Scale: 1:15,000

UTM Zone 10 NAD 83

## BC Location



## Data sources:

- BC NGO Conservation Lands Database
- BC GOV FLNRO GeoBC
- Bing Maps Aerial

## Map produced by:



April 2012



## Wildlife Operations & Management PART 1. PROPERTY / COMPLEX PLAN

Please complete a separate plan for each property/complex within your region. See "Instructions for Wildlife O & M Part 1" for assistance in completing this form.

**Funding Cycle: 2013-2016**

**Project Name:**

**Region: South Coast**

### PROJECT INFORMATION

Please complete the following:

**1. Name of Property/ Complex:** Skwelwil'em Squamish Estuary Wildlife Management Area

**2. Habitat Description / Values:**

Skwelwil'em Squamish Estuary WMA, located at the head of Howe Sound, is a fjord head estuary draining 3650 km<sup>2</sup> of coastal rainforest. Like other estuaries, the WMA protects a highly productive ecosystem. It provides wintering, migration, feeding and/or breeding habitat for waterfowl, shorebirds, raptors and passerines. It is also a feeding, spawning and rearing ground for a variety of fish species, including provincially significant species such as eulachon, steelhead and salmon. The estuary also provides good habitat for a number of mammal species, including blacktail deer, black bear, cougar, coyote, and small mammals. The few wetlands on the property contain populations of amphibians, including red-legged frogs.

**3. Guiding Documents:**

1. Management Plan for Sturgeon Bank Wildlife Management Area.

**4. Financial Sustainability:**

Sturgeon Bank does not currently generate much revenue.

**5. Partner Recognition:**

Contributions by partners will be recognized through use of the partner's logo on signage within the WMA and on any promotional or educational publications produced. The partner's contributions will also be acknowledged on the WMA website through use of the partner's logo



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**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

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and a statement indicating how the partner's contribution benefits the WMA (e.g. supports operations and management, supported the purchase of lands, etc.).



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

**6. Goals, Objectives and Performance Indicators**

*Please use these Goals and Objective numbers in Wildlife O & M Part 2: Application Table.*

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators:	
		Short Term	Long Term
<b>Goal 1: To maintain and/or enhance wildlife and their habitats.</b>	<b>1. Manage non-native, invasive species.</b>	1. Stop spread of large patches of invasive plant species within the WMA.  2. Eliminate small patches of invasive plant species within the WMA.	1. Extirpate populations of invasive species from the WMA where practical.  2. Limit populations of invasive species where elimination is impractical.
	<b>2. Enhance habitat for species of high conservation concern that are extant within the WMA.</b>	1. Identify opportunities to enhance habitat for species of high conservation concern that are extant within the WMA.	1. Increase reproductive output or population sizes of species of conservation concern.
	<b>3. Increase species richness within the WMA.</b>	1. Identify opportunities to introduce, or re-introduce, species of conservation concern.	1. Self-sustaining populations of introduced or re-introduced species.
	<b>4. Increase stewardship of stakeholders and adjacent property owners.</b>	1. Frequency of chronic non compliance events (wildlife disturbance, trespass, habitat	1. Low frequency of non compliance events (wildlife disturbance, trespass, habitat



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

		<p>degradation) within the WMA is reduced.</p> <p>2. Involvement of stakeholders in stewardship of the WMA is increased</p>	<p>degradation) within the WMA is maintained.</p> <p>2. Involvement of stakeholders in stewardship of the WMA is maintained.</p>
<p><b>Goal 2: Subject to maintenance of the wildlife resource, provide the widest possible range of wildlife oriented public recreation and education opportunities.</b></p>	<p><b>1. Increase visitor's appreciation and knowledge of wildlife and wildlife habitats within the WMA.</b></p> <p><b>2. Inform the public of WMA presence, boundaries, partners and rules.</b></p>	<p>1. Educational and nature interpretation signs are in place and maintained.</p> <p>2. Entrance, boundary, funding and visitor ethics signs are in place and maintained.</p>	<p>1. Reduced frequency of wildlife disturbance, littering and degradation within the WMA. Increase public support for limiting human activities within the WMA to those that are compatible with Goals 1 and 4.</p> <p>2. Public is informed of conservation values, partnerships, permitted activities and boundaries. Reduce frequency of wildlife disturbance, trespass, unauthorized motorized vehicles and inappropriate behaviour.</p>
<p><b>Goal 3: Ensure public health and safety.</b></p>	<p><b>1. Maintain infrastructure: roadways, parking lots, fences, trails, viewing towers, shelters, bridges, buildings etc.</b></p>	<p>1. Infrastructure is safe and operable.</p>	<p>1. Infrastructure is safe and operable.</p>
	<p><b>2. Maintain the appearance of the WMA.</b></p>	<p>1. Site is kept clean; garbage is managed.</p> <p>2. Vegetation is maintained</p>	<p>1. Site is kept clean; garbage is managed.</p> <p>2. Vegetation is maintained</p>



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**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

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## Wildlife Operations & Management PART 1. PROPERTY / COMPLEX PLAN

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Please complete a separate plan for each property/complex within your region. See "Instructions for Wildlife O & M Part 1" for assistance in completing this form.

**Funding Cycle: 2013-2016**

**Project Name:**

**Region: South Coast**

### **PROJECT INFORMATION**

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Please complete the following:

**1. Name of Property/ Complex:** South Arm Marshes Wildlife Management Area

South Arm Marshes WMA contains the following properties leased from TNT:

- i. South Arm Marshes WMA (LEA 1) – Gunn Island
- ii. South Arm Marshes WMA (LEA 2) – Kirkland and Rose

**2. Habitat Description / Values:**

South Arm Marshes WMA contains intertidal mudflats, salt marshes, riparian habitat, and agricultural fields. South Arm Marshes is a major migration staging area for birds along the Pacific Flyway. It is an important wintering area for large numbers of waterfowl, shorebirds, gulls, raptors and owls. South Arm Marshes is identified as an Important Bird Area by Birdlife International due to the globally, continentally, and nationally significant concentrations of birds. It is part of the Western Hemisphere Shorebird Reserve Network and a Ramsar site.

**3. Guiding Documents:**

1. Management Plan for South Arm Marshes Wildlife Management Area.
2. Management agreement with Ducks Unlimited Canada (DUC).
3. TNT/Province Lease Agreement 1990
4. TNT/Province Management Agreement 2011

**4. Financial Sustainability:**

1. DUC is responsible for operating and maintaining infrastructure related to water management on the site, resulting in an in-kind contribution of approximately \$6000.00 (spread over all provincial conservation lands for which DUC is a partner).



## Wildlife Operations & Management PART 1. PROPERTY / COMPLEX PLAN

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2. South Arm Marshes WMA has generated significant support for habitat enhancement through mitigation and compensation agreements with proponents of coastal development projects.
3. Operations and maintenance activities on conservation lands in Region 2 are coordinated by an informal committee consisting of The Nature Trust of BC, Ducks Unlimited Canada, and the Ministry of Forests, Lands and Natural Resource Operations. This coordination ensures that lands are managed in the most effective and financially sustainable manner.
4. Kirkland and Rose Islands are managed for waterfowl by the Kirkland Island Waterfowl Society, a private hunting club. The club farms these two islands to provide forage for wintering waterfowl.

### **5. Partner Recognition:**

Contributions by partners will be recognized through use of the partner's logo on signage within the WMA and on any promotional or educational publications produced. The partner's contributions will also be acknowledged on the WMA website through use of the partner's logo and a statement indicating how the partner's contribution benefits the WMA (e.g. supports operations and management, supported the purchase of lands, etc.).



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

**6. Goals, Objectives and Performance Indicators**

*Please use these Goals and Objective numbers in Wildlife O & M Part 2: Application Table.*

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators:	
		Short Term	Long Term
<b>TNT Leased Lands: Rose and Kirkland Islands</b>			
<b>Goal 1: To enhance wetlands and improve habitat for wildlife</b>	<b>Objective 1: Annually inspect property for concerns</b>	1. Annual property inspection completed	1. Awareness of future potential impacts to fish, wildlife, and plant diversity 2. No further degradation of habitats
<b>Goal 2: Provide opportunities for compatible wildlife oriented recreation</b>	<b>Objective 1: Ensure that public access facilities are maintained and appropriate</b> <b>Objective 2: Signs maintained or installed on property</b>	1. Site is maintained for public use 2. Signs maintained or installed on property.	1. Balance between public use and habitat protection is maintained 2. Public is informed of habitat values and property goals
<b>Goal 3: Public safety</b>	<b>Objective 1: Maintain safety infrastructure</b> <b>Objective 2: Remove waste and debris from property</b>	1. Waste and debris removed from property	1. Public continues to enjoy a safe environment for wildlife viewing and interpretation
<b>South Arm Marshes WMA (non leased lands)</b>			



**Wildlife Operations & Management  
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<p><b>Goal 1: To maintain and/or enhance wildlife and their habitats.</b></p>	<p><b>1. Manage non-native, invasive species.</b></p>	<p>1. Stop spread of large patches of invasive plant species within the WMA.</p> <p>2. Eliminate small patches of invasive plant species within the WMA.</p>	<p>1. Extirpate populations of invasive species from the WMA where practical.</p> <p>2. Limit populations of invasive species where elimination is impractical.</p>
	<p><b>2. Enhance habitat for species of high conservation concern that are extant within the WMA.</b></p>	<p>1. Identify opportunities to enhance habitat for species of high conservation concern that are extant within the WMA.</p>	<p>1. Increase reproductive output or population sizes of species of conservation concern.</p>
	<p><b>3. Increase species richness within the WMA.</b></p>	<p>1. Identify opportunities to introduce, or re-introduce, species of conservation concern.</p>	<p>1. Self-sustaining populations of introduced or re-introduced species.</p>
	<p><b>4. Increase stewardship of stakeholders and adjacent property owners.</b></p>	<p>1. Frequency of chronic non compliance events (wildlife disturbance, trespass, habitat degradation) within the WMA is reduced.</p> <p>2. Involvement of stakeholders in stewardship of the WMA is increased</p>	<p>1. Low frequency of non compliance events (wildlife disturbance, trespass, habitat degradation) within the WMA is maintained.</p> <p>2. Involvement of stakeholders in stewardship of the WMA is maintained.</p>
<p><b>Goal 2: Subject to maintenance of the wildlife resource, provide the widest</b></p>	<p><b>1. Increase visitor's appreciation and knowledge of wildlife and wildlife habitats within the WMA.</b></p>	<p>1. Educational and nature interpretation signs are in</p>	<p>1. Reduced frequency of wildlife disturbance, littering and degradation within the WMA.</p>



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

<p><b>possible range of wildlife oriented public recreation and education opportunities.</b></p>	<p><b>2. Inform the public of WMA presence, boundaries, partners and rules.</b></p>	<p>place and maintained.  2. Entrance, boundary, funding and visitor ethics signs are in place and maintained.</p>	<p>Increase public support for limiting human activities within the WMA to those that are compatible with Goals 1 and 4.  2. Public is informed of conservation values, partnerships, permitted activities and boundaries. Reduce frequency of wildlife disturbance, trespass, unauthorized motorized vehicles and inappropriate behaviour.</p>
<p><b>Goal 3: Ensure public health and safety.</b></p>	<p><b>1. Maintain infrastructure: roadways, parking lots, fences, trails, viewing towers, shelters, bridges, buildings etc.</b></p>	<p>1. Infrastructure is safe and operable.</p>	<p>1. Infrastructure is safe and operable.</p>
	<p><b>2. Maintain the appearance of the WMA.</b></p>	<p>1. Site is kept clean; garbage is managed.  2. Vegetation is maintained where necessary.</p>	<p>1. Site is kept clean; garbage is managed.  2. Vegetation is maintained where necessary.</p>



## Wildlife Operations & Management PART 1. PROPERTY / COMPLEX PLAN

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Please complete a separate plan for each property/complex within your region. See "Instructions for Wildlife O & M Part 1" for assistance in completing this form.

**Funding Cycle: 2013-2016**

**Project Name:**

**Region: South Coast**

### PROJECT INFORMATION

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Please complete the following:

**1. Name of Property/ Complex:** Sturgeon Bank Wildlife Management Area

**2. Habitat Description / Values:**

Sturgeon Bank WMA contains intertidal mudflats, salt marshes, and eelgrass beds. Sturgeon Bank is a major migration staging area for millions of birds along the Pacific Flyway. The Bank is an important wintering area for large numbers of waterfowl, shorebirds, gulls, raptors and owls. The Bank is identified as an Important Bird Area by Birdlife International due to the globally, continentally, and nationally significant concentrations of birds. It is part of the Western Hemisphere Shorebird Reserve Network and a Ramsar site.

**3. Guiding Documents:**

1. Management Plan for Sturgeon Bank Wildlife Management Area.

**4. Financial Sustainability:**

Sturgeon Bank does not currently generate much revenue.

**5. Partner Recognition:**

Contributions by partners will be recognized through use of the partner's logo on signage within the WMA and on any promotional or educational publications produced. The partner's contributions will also be acknowledged on the WMA website through use of the partner's logo and a statement indicating how the partner's contribution benefits the WMA (e.g. supports operations and management, supported the purchase of lands, etc.).



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

**6. Goals, Objectives and Performance Indicators**

*Please use these Goals and Objective numbers in Wildlife O & M Part 2: Application Table.*

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators:	
		Short Term	Long Term
<b>Goal 1: To maintain and/or enhance wildlife and their habitats.</b>	<b>1. Manage non-native, invasive species.</b>	1. Stop spread of large patches of invasive plant species within the WMA.  2. Eliminate small patches of invasive plant species within the WMA.	1. Extirpate populations of invasive species from the WMA where practical.  2. Limit populations of invasive species where elimination is impractical.
	<b>2. Enhance habitat for species of high conservation concern that are extant within the WMA.</b>	1. Identify opportunities to enhance habitat for species of high conservation concern that are extant within the WMA.	1. Increase reproductive output or population sizes of species of conservation concern.
	<b>3. Increase species richness within the WMA.</b>	1. Identify opportunities to introduce, or re-introduce, species of conservation concern.	1. Self-sustaining populations of introduced or re-introduced species.
	<b>4. Increase stewardship of stakeholders and adjacent property owners.</b>	1. Frequency of chronic non compliance events (wildlife disturbance, trespass, habitat	1. Low frequency of non compliance events (wildlife disturbance, trespass, habitat



**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

		<p>degradation) within the WMA is reduced.</p> <p>2. Involvement of stakeholders in stewardship of the WMA is increased</p>	<p>degradation) within the WMA is maintained.</p> <p>2. Involvement of stakeholders in stewardship of the WMA is maintained.</p>
<p><b>Goal 2: Subject to maintenance of the wildlife resource, provide the widest possible range of wildlife oriented public recreation and education opportunities.</b></p>	<p><b>1. Increase visitor's appreciation and knowledge of wildlife and wildlife habitats within the WMA.</b></p> <p><b>2. Inform the public of WMA presence, boundaries, partners and rules.</b></p>	<p>1. Educational and nature interpretation signs are in place and maintained.</p> <p>2. Entrance, boundary, funding and visitor ethics signs are in place and maintained.</p>	<p>1. Reduced frequency of wildlife disturbance, littering and degradation within the WMA. Increase public support for limiting human activities within the WMA to those that are compatible with Goals 1 and 4.</p> <p>2. Public is informed of conservation values, partnerships, permitted activities and boundaries. Reduce frequency of wildlife disturbance, trespass, unauthorized motorized vehicles and inappropriate behaviour.</p>
<p><b>Goal 3: Ensure public health and safety.</b></p>	<p><b>1. Maintain infrastructure: roadways, parking lots, fences, trails, viewing towers, shelters, bridges, buildings etc.</b></p>	<p>1. Infrastructure is safe and operable.</p>	<p>1. Infrastructure is safe and operable.</p>
	<p><b>2. Maintain the appearance of the WMA.</b></p>	<p>1. Site is kept clean; garbage is managed.</p> <p>2. Vegetation is maintained</p>	<p>1. Site is kept clean; garbage is managed.</p> <p>2. Vegetation is maintained</p>



Project File #: \_\_\_\_\_

**Wildlife Operations & Management  
PART 1. PROPERTY / COMPLEX PLAN**

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		where necessary.	where necessary.
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## Wildlife O&M 3-year Application – SURREY BEND CONSERVATION AREA

### SITE DESCRIPTIONS / ACTIVITIES

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1. Name of property:

- a. *Property Name:* Surrey Bend
- b. *CLD Reference:* Surrey Intermodal Lands (LEA)

2. Habitat Description / Values

Conservation of a wetland and upland in the lower Fraser Valley. The Biogeoclimatic Ecosystem Classification (BEC) of the property is Coastal Western Hemlock, Dry Maritime (CWHdm).

3. Guiding Documents

*TNT/Province Lease Agreement 1995*

*TNT/Province Management Agreement 2011*

Surrey Bend Regional Park Management Plan (Draft) 2010

A Living Working River: The Estuary Management Plan for the Fraser River 2003



#### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1: To enhance wetlands and improve habitat for wildlife	Objective 1: Annually inspect property for concerns Objective 2: Manage invasive plants	S-T Indic 1 – Annual property inspection completed S-T Indic 2 – Reduced invasive plant infestations	L-T Indic 1 – Awareness of future potential impacts to fish, wildlife, and plant diversity L-T Indic 2 – No further degradation of habitats
Goal 2: Provide opportunities for compatible wildlife-oriented recreation	Objective 1: Maintain or install informational and boundary signage, where appropriate	S-T Indic 1 – Signs maintained or installed on property	L-T Indic 1 – Public is informed of habitat values and property goals L-T Indic 2 – Balance between public use and habitat protection is maintained
Goal 3: Public safety	Objective 1: Maintain safety infrastructure Objective 2: Remove waste and debris from property	S-T Indic 1 – Waste and debris removed from property	L-T Indic 1 – Public continues to enjoy a safe environment for wildlife viewing and interpretation

#### 5. Financial Sustainability

Operations and maintenance activities on conservation lands in Region 2 are coordinated by an informal committee consisting of The Nature Trust of BC, Ducks Unlimited Canada, and the Ministry of Forests, Lands and Natural Resource Operations. This coordination ensures that lands are managed in the most effective and financially sustainable manner.

#### 6. Partner Recognition

Conservation partners are recognized in regards to individual properties in The Nature Trust's twice yearly printed newsletter, *Natural Legacy*, as well as in The Nature Trust's Annual Report. HCTF and the Province are also included in The Nature Trust's list of donors/partners in the Annual Report and also online. Partners are also recognized in media releases that are sent out for completion of properties.



# Surrey Intermodal Lands

- Conservation Areas**
- The Nature Trust
  - The Land Conservancy

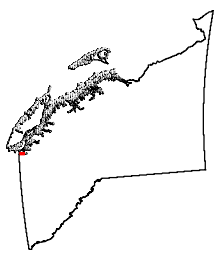
**Map Symbols**

- Road



Scale: 1:5,000  
UTM Zone 10 NAD 83

**BC Location**



**Data sources:**  
 BC NGO Conservation Lands Database  
 BC GOV FLNRO GeoBC  
 Bing Maps Aerial

**Map produced by:**



April 2012



## Wildlife O&M 3-year Application – WELLS SANCTUARY

### SITE DESCRIPTIONS / ACTIVITIES

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**1. Name of property:**

- a. *Complex Name:* **Wells Sanctuary**
- b. *CLD Reference:* **Chilliwack (LEA) -- Wells**

**2. Habitat Description / Values**

This property aids in the conservation of a wetland in the Sardis area. The Wells Sanctuary serves a useful purpose by providing a quiet loafing and roosting site for migrating birds. This is important as more and more wetland areas in the Fraser Valley are alienated and drained. A small, year-round flowing creek (Luck-A-Kuck Creek) runs through the middle of the property which is salmon bearing. The site is in its natural state and covered by marsh vegetation and small trees. It was conserved by the community mainly to provide habitat for migrating waterfowl.

**3. Guiding Documents**

*TNT/Province Lease Agreement 1993*  
*Invasive Alien Plant Program Reference Guide 2010*  
*TNT/Province Management Agreement 2011*  
*Invasive Plant Program of Metro Vancouver*

#### 4. Goals, Objectives and Performance Indicators

Conservation & Property Management Goals	Land Management Objectives	Performance Indicators	
		Short Term	Long Term
Goal 1: Provide, enhance, and maintain habitat for fish, wildlife, and plant diversity	Objective 1: Annually inspect property for concerns Objective 2: Collect spatial data for invasive species occurrences Objective 3: Manage invasive plants Objective 4: Maintain fencing Objective 5: Remove waste and debris from property	S-T Indic 1 – Annual property inspection completed S-T Indic 2 – GPS and photo data collected for invasive plants S-T Indic 3 – Decreased occurrence of invasive plants S-T Indic 4 – Fencing repaired where broken S-T Indic 5 – Waste and debris removed from property	L-T Indic 1 – Awareness of future potential impacts to fish, wildlife, and plant diversity L-T Indic 2 – Can now monitor distribution of invasive species over time L-T Indic 3 – Decreased prevalence of invasive species L-T Indic 4 – No further degradation of habitats
Goal 2: Provide opportunities for compatible wildlife-oriented recreation	Objective 1: Maintain or install informational and boundary signage, where appropriate	S-T Indic 1 – Signs maintained or installed on property	L-T Indic 1 – Public is informed of habitat values and property goals L-T Indic 2 – Balance between public use and habitat protection is maintained
Goal 3: To foster ongoing relationships for the betterment of the conservation area	Objective 1: Continue to work with neighbourhood steward group	S-T Indic 1 – All interest groups are represented S-T Indic 2 – Local group fosters frequent property visits	L-T Indic 1 – Continued strong partnership approach S-T Indic 2 – Local stewardship enhances management of the conservation area
Goal 4: Public safety	Objective 1: Maintain safety infrastructure Objective 2: Remove waste and debris from property	S-T Indic 1 - Fencing repaired where broken S-T Indic 2 – Waste and debris removed from property	L-T Indic 1 – Public continues to enjoy a safe environment for wildlife viewing and interpretation

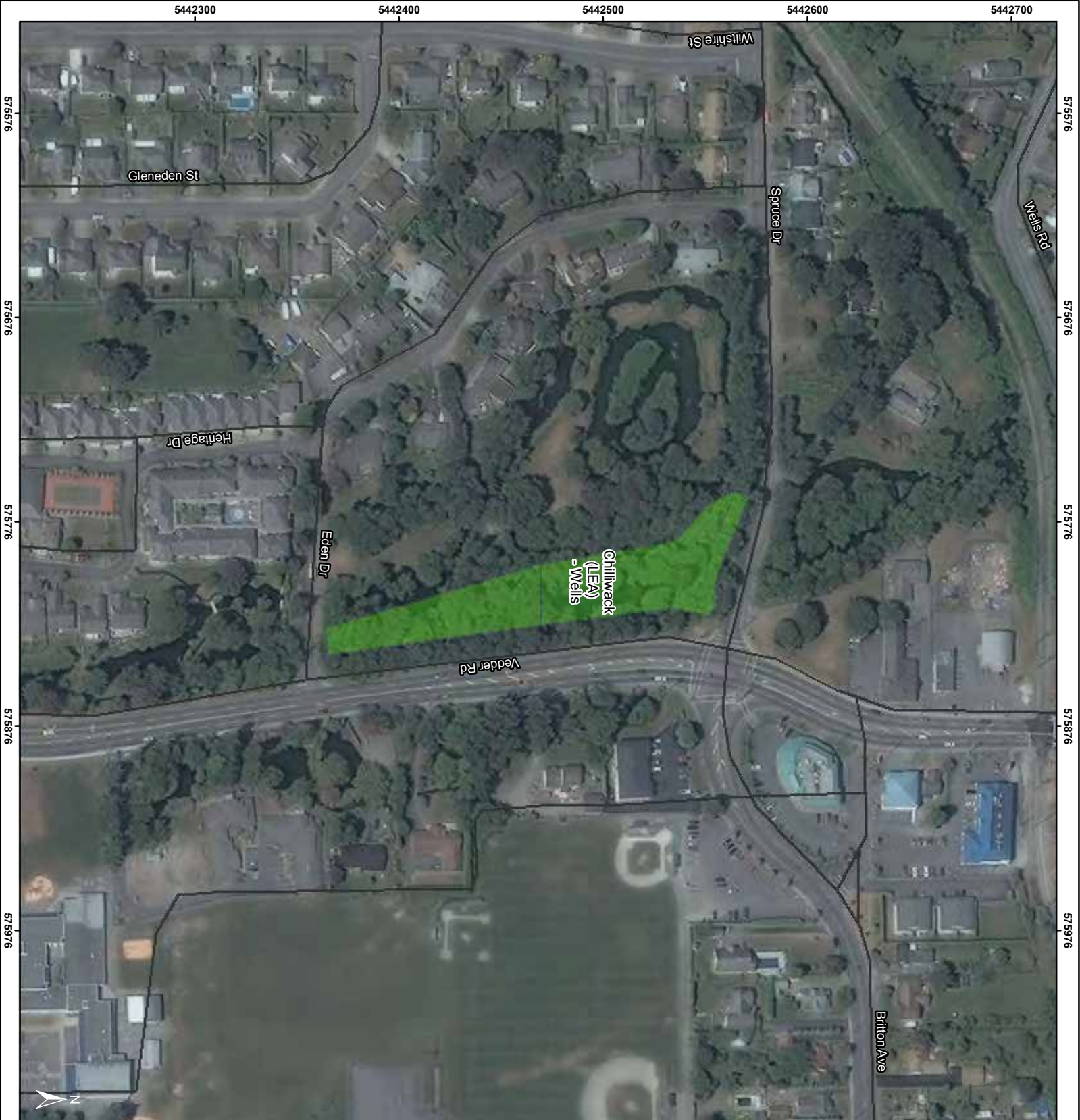
#### 5. Financial Sustainability

Operations and maintenance activities on conservation lands in Region 2 are coordinated by an informal committee consisting of The Nature Trust of BC, Ducks Unlimited Canada, and the Ministry of Forests, Lands and Natural Resource Operations. This coordination ensures that lands are managed in the most effective and financially sustainable manner.



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# Wells Sanctuary

## Conservation Areas

The Nature Trust

## Map Symbols

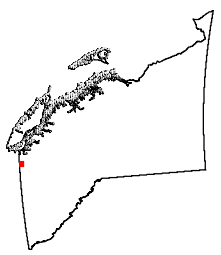
Road



Scale: 1:2,500

UTM Zone 10 NAD 83

## BC Location



## Data sources:

- BC NGO Conservation Lands Database
- BC GOV FLNRO GeoBC
- Bing Maps Aerial

## Map produced by:



April 2012