

Baseline Report

Lot 1, Block 9, District Lot 5, Galiano Island, Cowichan District, Plan 1974

Parcel Identifier 006-620-965

Attached to and forming part of the Covenant Agreement between GALIANO CONSERVANCY ASSOCIATION, Owner, and TRUST FUND BOARD, Covenant Holder, dated the 31st day of March 2015.

1 Acknowledgment

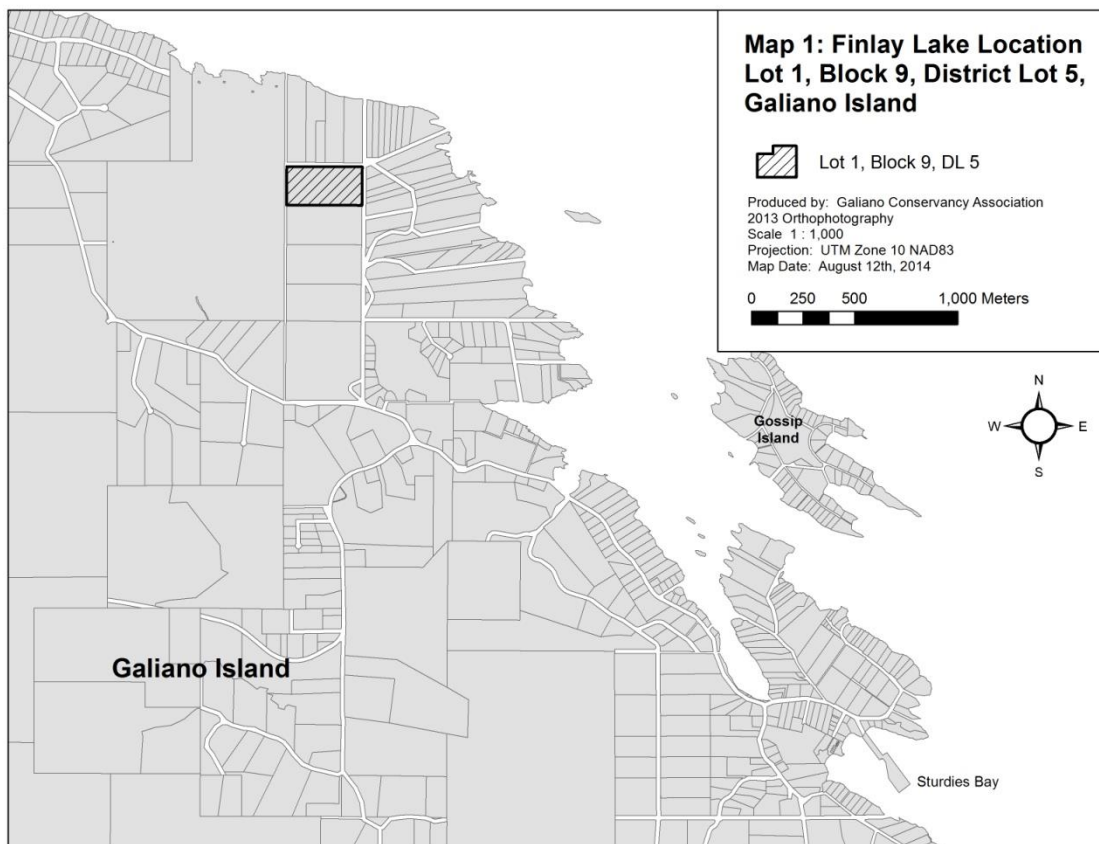
- 1.1 The Owner hereby acknowledges and agrees that the following is an accurate description of the Property, as of the reference date of this Agreement.
- 1.2 This baseline is an updated version of the Baseline Documentation Report dated July 6th, 2001 and attached as Schedule A to the Covenant (Registration Number ES81348) held by the Galiano Conservancy Association and by The Land Conservancy of British Columbia. Updates include Map 1: Finlay Lake Location, Map 2: Ecological Communities, descriptive text in Sections 1.2, 3.3, 3.4, 5.1, 5.6, 6.2, 6.3, 7.8 and photos 11 through 19 in Section 8, and minor corrections throughout (typos & updated species names and rankings). The updates were completed by Keith Erickson (R.P.Bio.). All other sections of the baseline report are as in covenant ES81348 and are still current as at the date of the covenant to which this baseline report is attached.

2 Property Location and description

- 2.1 The property is located on Galiano Island, one of the southern Gulf Islands in the Strait of Georgia, British Columbia.
- 2.2 This 16.62 acre parcel of land falls within the Capital Regional District. The property is legally described as Lot 1, Block 9, District Lot 5, Galiano Island, Cowichan District, Plan 1974, Parcel Identifier 006-620-965.
- 2.3 The property is situated near the end of Ellis Road on the southern portion of Galiano Island.
- 2.4 Lot 1 has a Land Use Designation in the Galiano Island Official Community Plan of Rural. "This area is intended to allow for larger lot developments to provide opportunities for a variety of rural activities without impinging on neighbours." In the Rural Designation, the principal use shall be residential, with an average lot size of 4 hectares (9.88 acres).
- 2.5 Galiano Island Land Use Bylaw 127 zones lot 1 as Rural 2. Allowed are dwellings, cottages, home occupations and farm use. One dwelling is permitted for each 4 hectares (9.88 acres) of area. One cottage is permitted in respect of each

permitted dwelling. No subdivision plan may be approved unless the lots created by subdivision have an average area of at least 4 hectares.

- 2.6 Directions to the property: From the BC Ferries terminal at Sturdies Bay, head north along Sturdies Bay Road. After approximately 3km, just after the Hummingbird Pub, turn right onto Porlier Pass Road. Continue along Porlier Pass Road for approximately 350m and turn right onto Ellis Road. Continue along Ellis Road for approximately 1.5km where it ends at a sharp right hand cutback and turns into Salamanca Road. Proceed by foot through the MOT Road Dedication (no constructed road) to the property.



3 Significance of the Land and Amenities

- 3.1 Galiano Island is located in the Coastal Douglas-Fir Biogeoclimatic Zone. District Lot 5 is located near the south of the island, and Lot 1 contains the majority of one of the island's larger lakes, Finlay Lake. At the northern side of the lot, the lake has been dammed. To the west, the lot adjoins land (District Lot 14) that recently has been heavily logged. The remainder of Finlay Lake, not lying within Lot 1, lies on one of three adjacent parcels of Crown Land.

- 3.2 The terrain on Lot 1, District Lot 5 is hummocky and sloping downward toward Finlay Lake. Slope varies from gentle (approx. 10%) on the west- side of the lake, to more steep on the east side (approx. 30%). The bedrock appears to be buried by over 2-3 metres of soil, although there are scattered cobbles and boulders throughout. The soils are Saturna and Saturna-Brigantine to the west of the lake and Brigantine to the east. There is a fault that runs approximately north-north-west to south-south-east through the central portion of this lot.
- 3.3 Finlay Lake is a complex wetland ecosystem with shallow water and marsh components. It provides key breeding and feeding areas for birds, insects and amphibians and exhibits high rates of biodiversity. Wetland ecosystems account for approximately 4.9% (3,760.6 ha.) of the Islands Trust Area (Southern Strait of Georgia, BC), and only 1.4% of the Galiano Island Local Trust Area (Islands Trust Fund, 2010-2015 Regional Conservation Plan). Given the rarity of wetlands both at the regional and local levels, and that Finlay Lake is one of Galiano's largest wetlands, its protection will provide significant habitat value for a wide range of species. Protection of the privately held Finlay Lake property will directly contribute to the conservation of foraging and/or breeding habitat for at least 54 species of bird (including at least 14 non-waterfowl migratory species, as well as several provincially Blue listed species and SARA listed species). It will also secure habitat supporting all stages of the life cycle for species such as beaver, red-legged frog (blue-listed), pacific sideband snail (blue listed), blue dasher dragonfly (blue listed), as well as potential nesting/breeding habitat for the recovery of species such as the Purple Martin (blue listed).
- 3.4 The following provincially listed ecosystems were observed on the property:

Ecological Communities

Grand fir / three-leaved foamflower (CDFmm/06) (red listed)

Red alder / skunk cabbage (CDFmm/Ws52) (red listed)

Western redcedar / sword fern – skunk cabbage (CDFmm/11) (blue listed)

Douglas-fir / dull Oregon-grape (CDFmm/01) (red listed)

4 The Management Vision

- 4.1 The purpose of this covenant is to ensure protection of the land in perpetuity. Management for this purpose will be maintained and encouraged by the landowner and monitored on an annual basis by the Covenant Holder.

5 Site History

- 5.1 District Lots 4, 5 and 6 (totaling 450 acres) were pre-empted on 6th January 1886 by Finlay and Finlay A. Murcheson (referred to as Murcheson and Sons). On the

21st day of March 1900, the East half of District Lot 4, and District Lots 5 and 6 were Crown Granted to Finlay and Finlay A. Murcheson.

- 5.2 Some history of the area is given by Rosamund Hardy (a granddaughter of Finlay Murcheson) in her article “The Murchesons of Murcheson Bay”, however, some of the dates given there do not correspond to those in the office of the Surveyor General. “Galiano’s Murcheson Bay is named after a Scottish family who emigrated from Applecross, Ross-shire around 1862. Finlay and Mary Murcheson lived in Kansas City, Missouri, Sapperton and Victoria before they moved to Galiano in the spring of 1882 with their two sons, nineteen-year-old Archibald and fourteen-year-old Finlay Alexander.”
- 5.3 The present subdivision Plan 1974 was deposited on the 20th day of July 1914. The names on the plan are W. H. Ellis and Finlay A. Murcheson.
- 5.4 The plan attached to the Crown Grant does not show a stream or lake in the vicinity of the present Finlay Lake. There is an obvious manmade dam at the northern end of the lake, on land adjoining Lot 1, District Lot 5.
- 5.5 The entire property is registered within the conservation covenant.
- 5.6 The property was transferred by the Estate of Marjorie McClelland to the Galiano Conservancy Association as a donation on June 6th, 2014.

6 List of buildings, structures and other improvements

- 6.1 Presently there are no structures located on this property.
- 6.2 Improvements include old, overgrown logging roads and a more recent cut trail to the lake (see Map 2: Ecological Communities for location). The covenant does not allow for maintenance of these improvements.
- 6.3 There are 6 water licenses on Finlay Lake which allow for pipes, a pump, water intakes and a dam on the covenant property. Use of the water is for residential purposes and irrigation as noted below. Additionally, there is a water license (C037606) which allows maintenance of a dam on a property to the north of Finlay Lake. While the dam for this water license is not located in the covenant area, it does impact the water level of the lake.

The water licenses are as follows:

- C037292: in favour of:

PID	Legal Description
006-620-892	Lot 4, Block 3, District Lots 5 and 6, Galiano Island, Cowichan District, Plan 1974, Except Parts in Plans 21664 and 23244

001-124-960	Lot 1, District Lots 5 and 6, Galiano Island, Cowichan District, Plan 31894
006-620-931	Lot 2, Block 4, District Lots 4, 5 and 6, Galiano Island, Cowichan District, Plan 1974
002-841-363	Lot 3, Block 4, District Lots 4, 5 and 6, Galiano Island, Cowichan District, Plan 1974, Except that Part in Plan 21425; Shown Outlined in Red on Plan 1978R

Dated: October 7, 1958

Purpose: Domestic use in 5 buildings

Maximum Quantity: 4500 gallons/day throughout the year

Authorized Works: diversion, pipe and pond

- C037293: in favour of:

PID	Legal Description
006-620-892	Lot 4, Block 3, District Lots 5 and 6, Galiano Island, Cowichan District, Plan 1974, Except Parts in Plans 21664 and 23244
001-124-960	Lot 1, District Lots 5 and 6, Galiano Island, Cowichan District, Plan 31894
006-620-931	Lot 2, Block 4, District Lots 4, 5 and 6, Galiano Island, Cowichan District, Plan 1974
002-841-363	Lot 3, Block 4, District Lots 4, 5 and 6, Galiano Island, Cowichan District, Plan 1974, Except that Part in Plan 21425; Shown Outlined in Red on Plan 1978R

Dated: January 21, 1969

Purpose: water storage for water license C037292

Maximum Quantity Stored: 3.6 acre feet per annum throughout the year

Authorized Works: Dam

- C037294: in favour of PID 003-437-159, Lot 1, District Lots 5 and 6, Galiano Island, Cowichan District, Plan 21664

Dated: October 7, 1958

Purpose: Domestic use in 1 dwelling

Maximum Quantity: 500 gallons/day throughout the year

Authorized Works: diversion, pipe and pond

- C037295: in favour of PID 003-437-159, Lot 1, District Lots 5 and 6, Galiano Island, Cowichan District, Plan 21664

Dated: January 21, 1969

Purpose: water storage for water license C037294

Maximum Quantity Stored: 0.4 acre feet per annum throughout the year

Authorized Works: Dam

- C049245: in favour of PID 004-166-183, Lot D, District Lot 5, Galiano Island, Cowichan District, Plan 15003

Dated: June 22, 1976

Purpose: Irrigation between April 1 and September 30 each year

Maximum Quantity: 0.25 acre foot / annum

Authorized Works: Intake, Pipe, Pump and Sprinkler System

- C049246: in favour of PID 004-166-183, Lot D, District Lot 5, Galiano Island, Cowichan District, Plan 15003
Dated: June 22, 1976
Purpose: Water storage for water license C049245
Maximum Quantity Stored: 0.25 acre foot / annum throughout the year
Authorized Works: Dam

7 Inventory of Biological Features

- 7.1 Topography: Finlay Lake is located in a small valley. The elevation of the lake is approximately 40 metres above sea level. The approximate elevations of the four corners of Lot 1 are: Northwest, 43 metres; Southwest, 60 metres; Southeast, 34 metres; and Northeast, 40 metres.
- 7.2 Hydrology: Finlay Lake serves as a catchment area for the valley. The valley has been dammed on adjoining lots to the north to create the lake. The main drainage from the lake is to the north at the dam. This is the source for an ephemeral stream draining into Taylor Cove in the Strait of Georgia. There also is drainage from the lake to the east, paralleling the southern boundary of Lot 1. Part of this drainage has been ditched.
- 7.3 Vegetation: The property is located within the Coastal Douglas-fir biogeoclimatic zone. Within British Columbia, the Coastal Douglas-fir zone is considered an "Ecosystem at Risk". Lot 1, District Lot 5 is a very productive, older forest, that appears to have been selectively logged about a hundred years ago. The forest contains stands of multiple-aged trees, abundant understory, and approximately 20% fallen woody debris, consisting primarily of mature Western Redcedar (*Thuja plicata*), Alder (*Alnus rubra*), and Douglas-fir (*Pseudotsuga menziesii*), along with some Grand Fir (*Abies grandis*), Bitter Cherry (*Prunus emarginata*), and Maple (*Acer macrophyllum*). On the east side and close to Finlay Lake, the forest appears drier and younger, with much less understory and consisting of more Alder and younger Douglas-fir.
- 7.4 Where the understory is abundant, it consists of large, lush sword fern (*Polystichum munitum*), along with salal (*Gaultheria shallon*), vanilla-leaf (*Achlis triphylla*), stinging nettle (*Urtica dioica*), salmonberry (*Rubus spectabilis*), and spiny wood fern (*Dryopteris expansa*). Closer to the lake, we found the sparser, drier understory to be characterized by salal, american bulrush (*Scirpus americanus*), and cleavers (*Galium aparine*), with occurrences of daphne (*Daphne laureola*), holly (*Ilex aquifolium*), Siberian miner's lettuce (*Claytonia sibirica*), indian pipe (*Monotropa uniflora*), and spotted coral root (*Corallorhiza maculata*). The west side of the lake largely had a ground covering of moss.

- 7.5 The lake itself holds numerous snags and woody debris as well as large patches of yellow pond lily (*Nuphar polysepalum*) along its banks. The lake's surface ripples occasionally with insects; we noted the Blue Darner Dragonfly and the Swallowtail Butterfly.
- 7.6 Small mushrooms noted on the lot, in the earth as well as growing on tree trunks, included *Cortinarius*, *Trametes versicolor*, *Mycelia*, and Artist Conch (*Ganoderma applanatum*). Bone lichen was identified. Additionally, the blue listed red-legged frog was observed.
- 7.7 Soil: The bedrock appears to be buried by over 2-3 metres of soil, although there are scattered cobbles and boulders throughout. The soils are Saturna and Saturna-Brigantine to the west of the lake and Brigantine to the east. These soil types are limited to the southern portion of Vancouver Island and Gulf Islands.
- 7.8 Ecological Communities: The property was divided into 5 major ecological communities based on Coastal Douglas-fir Terrestrial Ecosystem Mapping (TEM) mapping (Madrona Environmental Services, 2008) and general field reconnaissance completed in March 2015. Below are general descriptions of the ecological communities. Their locations are shown on 'Map 2: Ecological Communities'.

Ecological Community 1 (polygons 1a, 1b, 1c): A predominantly CDFmm/06 community dominated by old red alder (*Alnus rubra*) and scattered, maturing Douglas-fir (*Pseudotsuga menziesii*), grand fir (*Abies grandis*) and western redcedar (*Thuja plicata*). There are scattered old-growth Douglas-fir in polygon 1a. These areas show mature forest character with mixed species and multi-layered canopies. There are coastal western hemlock (*Tsuga heterophylla*) poles and saplings scattered in the understory. Sword fern (*Polystichum munitum*) is dominant with scattered salmonberry (*Rubus spectabilis*) and patches of slough sedge (*Carex obnupta*) in moister CDFmm/11 (Ws52) depression areas.

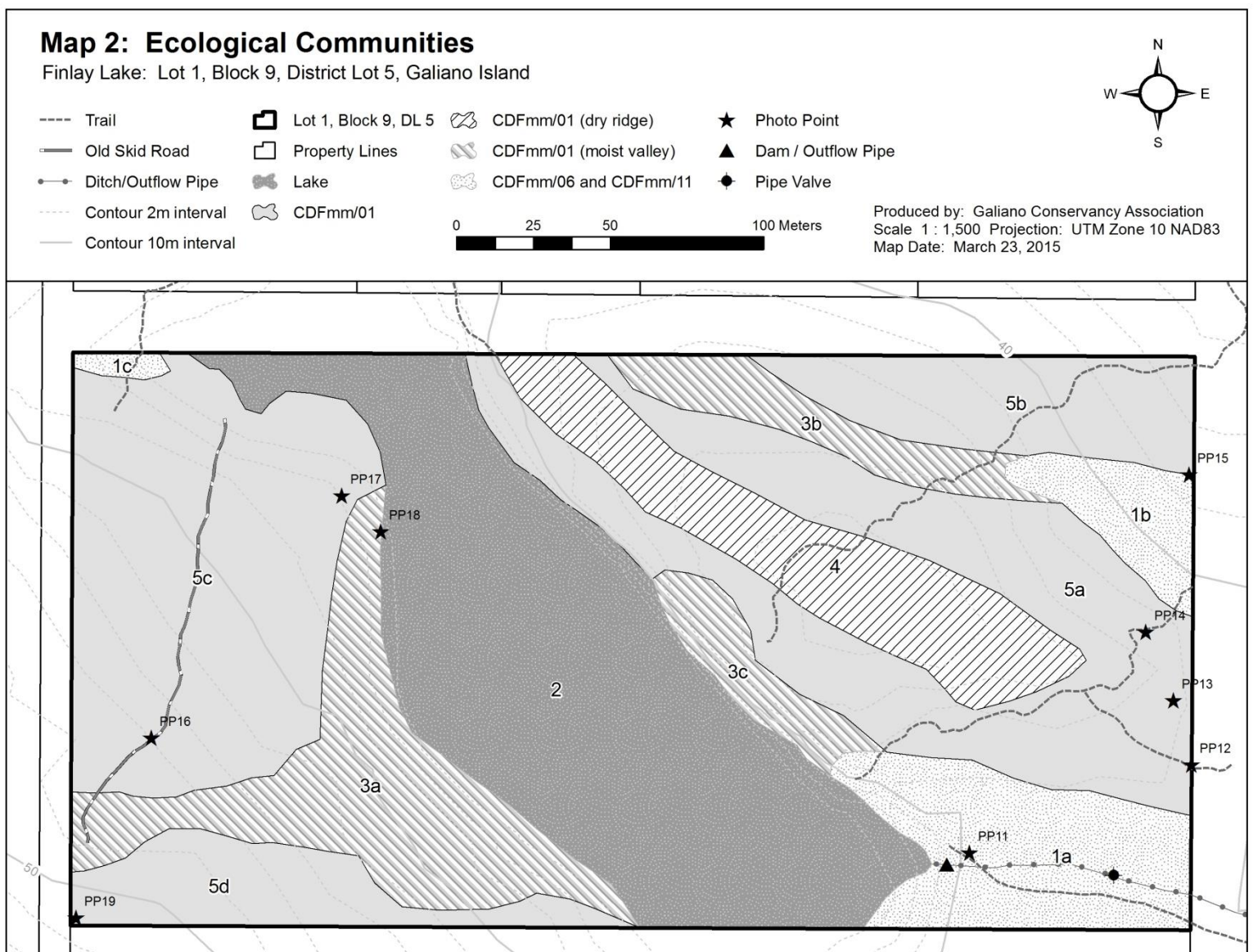
Ecological Community 2 (polygon 2): Open, shallow water lake with very narrow, patchy bands of sitka sedge (*Carex sitchensis*) marsh (Wm50) along the margins. There is scattered woody debris in the lake.

Ecological Community 3 (polygons 3a, 3b, 3c): These areas are slightly moister zonal CDFmm/01 sites located in low lying micro-valleys. They are dominated by a mix of Douglas-fir and western redcedar with red alder and grand fir scattered throughout. The understory is dominated by salal (*Gaultheria shallon*), Oregon beaked moss (*Kindbergia oregana*), and bracken fern (*Pteridium aquilinum*).

Ecological Community 4 (polygon 4): This is a slightly drier zonal CDFmm/01 community located on a thin sandstone ridgeline. Douglas-fir forms the dominant

canopy with scattered arbutus (*Arbutus menziesii*) and western redcedar in the sub-canopy. Soils are relatively shallow and coarse. Step moss (*Hylocomnium splendens*) is the dominant cover in the understory with scattered dull Oregon-grape (*Mahonia nervosa*).

Ecological Community 5 (polygons 5a, 5b, 5c): These zonal CDFmm/01 areas are dominated by a maturing Douglas-fir tree canopy with scattered patches of western redcedar and the odd individual grand fir, big-leaf maple (*Acer macrophyllum*) and coastal western hemlock scattered throughout. Salal, Oregon beaked moss and sword fern are dominant in the understory. Patches of step moss and individual evergreen huckleberry (*Vaccinium ovatum*) are scattered.



7.9 Wildlife: The property's topography, aquatic and floral diversity support many species of animals. There are two active eagle nests nearby, one near Salamanca Point and one near Twiss Point. These eagles no doubt use Finlay Lake as a source of fresh water to wash salt from their feathers. A bird list for Lot 1 is attached.

7.10 Bird species recorded, or certain to be present during the year:

Hérons

Great Blue Heron (blue listed)

Waterfowl

Mallard

American Widgeon

Bufflehead

Vultures

Turkey Vulture

Eagles and Hawks

Bald Eagle

Sharp-shinned Hawk

Cooper's Hawk

Pigeons and Doves

Band-tailed Pigeon (blue listed)

Owls

Barred Owl

Nightjars

Common Nighthawk (threatened)

Hummingbirds

Rufous Hummingbird

Kingfishers

Belted Kingfisher

Woodpeckers

Northern Flicker

Red-breasted Sapsucker

Downy Woodpecker

Hairy Woodpecker

Pileated Woodpecker

Flycatchers

Olive-sided Flycatcher (blue listed & threatened)

Pacific-slope Flycatcher

Swallows

Tree Swallow

Violet-green Swallow

Barn Swallow

Jays and Crows

Northwestern Crow

Common Raven

Chickadees

Chestnut-backed Chickadee

Creepers and Nuthatches

Brown Creeper

Red-breasted Nuthatch

Wrens

Pacific Wren

Kinglets and Thrushes

Golden-crowned Kinglet

Ruby-crowned Kinglet

Swainson's Thrush

Varied Thrush

American Robin

Waxwings

Cedar Waxwing

Vireos and Warblers

Hutton's Vireo

Warbling Vireo
Black-throated Gray Warbler
Orange-crowned Warbler
Yellow-rumped Warbler
Townsend's Warbler
Yellow Warbler
Wilson's Warbler
Common Yellowthroat

Finches
Pine Siskin
American Goldfinch
Red Crossbill
House Finch
Purple Finch

Blackbirds
Red-winged Blackbird

Sparrows
Song Sparrow
Fox Sparrow
White-crowned Sparrow
Spotted Towhee
Dark-eyed Junco

7.11 Additional bird species that may utilize this property:

Waterfowl
Ring-necked Duck
Wood Duck
Hooded Merganser
Common Merganser

Hammond's Flycatcher

Swallows
Purple Martin (blue listed)
Northern Rough-winged Swallow

Eagles and Hawks
Red-tailed Hawk

Jays and Crows
Steller's Jay

Falcons
Merlin
Peregrine Falcon (red listed)

Grouse
Blue Grouse

Owls
Great Horned Owl
Western Screech Owl

Flycatchers

Bushtits

Bushtit

Wrens

House Wren

Bewick's Wren

Marsh Wren

Kinglets and Thrushes

Townsend's Solitaire

Hermit Thrush

Starlings

European Starling (exotic)

Vireos and Warblers

Cassin's Vireo

Red-eyed Vireo

MacGillivray's Warbler

Blackbirds

Brewer's Blackbird

Brown-headed Cowbird

Sparrows

Golden-crowned Sparrow

11.1 Photo Documentation

Photos 1 through 10 were taken in 2001 and their locations do not appear on Map 2: Ecological Communities. Photos 11 through 19 were taken on March 19th, 2015 and the locations are shown on Map 2.

Photo 1: View of top of dam, facing west. Note footpath on top surface of dam. (not on property)



Photo 2: View of Finlay Lake from dam, facing south.



Photo 3: View from northwest property corner, facing southeast. Finlay Lake can be seen in the distance. (Characteristic of Polygon 1c on left, 5c on right.)



Photo 4: View from southwest property corner, facing northeast. Note that vegetation indicates a wet area of drainage into lake. (Characteristic of Polygon 1a)



Photo 5: View from southern property line on west side of Finlay Lake, facing east.



Photo 6: View from southern property line on east side of Finlay Lake, facing northwest.



Photo 7: View from southern property line on east side of Finlay Lake, facing east. Note drainage from lake to the east. (Drainage Ditch / outflow pipe)



Photo 8: View from southeast property corner, facing northwest. (Characteristic of Polygon 1a)



Photo 9: View of veteran Douglas-fir tree near southern property line, between Finlay Lake and southeast property corner.



Photo 10: View from northeast property corner, facing southwest. (Characteristic of Polygon 5b)



Photo 11: View of outflow ditch and pipe @ 30 deg.



Photo 12: View of trail entering property from Lot F DL5 Plan 15003 @ 80 deg.



Photo 13: View of small diameter trees cut approx. 5 to 10 years ago @ 300 deg. Characteristic of Polygon 5a.



Photo 14: View of trail entering property from Lot E DL5 Plan 15003 @ 35 deg.



Photo 15: View along East property boundary (roughly centred) with dedicated road (adjacent to Lot E DL5 Plan 15003) @ 180 deg. (Characteristic of CDFmm/11 portion of Polygon 1b). Note adjacent use of the road dedication by the landowner to the east.



Photo 16: View of Young Douglas-fir stand on west side of lake (Polygon 5c with slightly moister Polygon 3a in the background) @ 120 deg.



Photo 17: View of recent beaver activity on western redcedar @ 170 deg. Looking into polygon 3a).



Photo 18: View of Finlay Lake @ 130 deg.



Photo 19: View along west property line (roughly centred) and moister CDFmm/01 micro-site (Polygon 3a) @ 0 deg.

