Introduction

This project provides ecosystem mapping of Sooke Hills Wilderness and Mount Wells Regional Parks at a scale of 1:20 000. Together the parks comprise almost 4100 hectares of varied terrain and ecosystem types between Saanich Inlet and Sooke Basin on Southern Vancouver Island.

Interpretive products include wildlife capability and suitability mapping for Columbian black-tailed deer, black bear, pileated woodpecker and marbled murrelet. The ecosystem and wildlife products provide baseline information for future management and conservation planning in the parks.

Mapping was completed following the methods outlined in Standard for Terrestrial Ecosystem Mapping in British Columbia (RIC, 1998). Fieldwork was completed from May through August 1999, using survey intensity level 4.

Map Unit Boundaries

Ecosection Map Unit

Biogeoclimatic Map Unit

Ecosystem Map Unit

Study area boundary

Plot location symbol ◆

Ecosection and Biogeoclimatic Unit Symbols

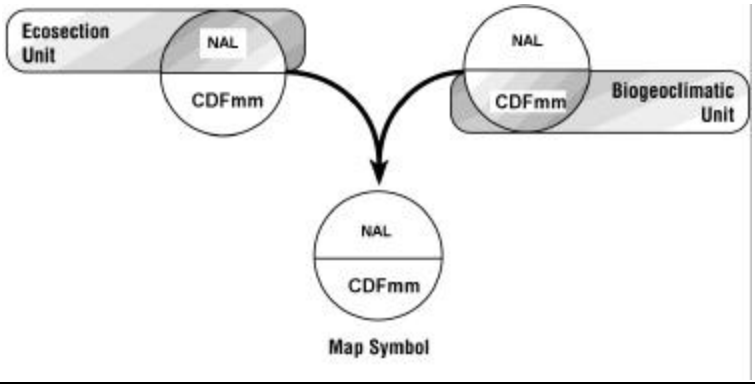
Biogeoclimatic Units:

CWHxm1 **Very Dry Maritime Coastal Western Hemlock**

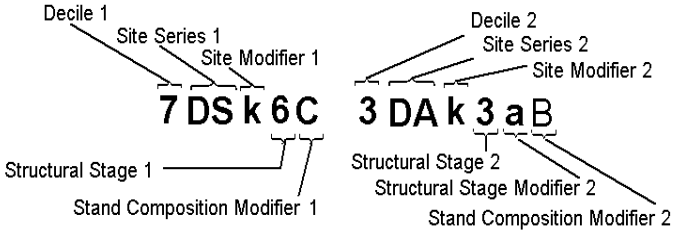
CDFmm **Moist Maritime Coastal Douglas-fir**

Ecosection:

NAL **Nanaimo Lowlands**



Ecosystem Unit Label



Site Modifiers

Code	Criteria	Code	Criteria
c	coarse-textured soils	**p**	peaty material
d	deep soils (>100 cm to bedrock)	**q**	very steep cool aspect (285°–135°, slope >100%)
f	fine – textured soils	**r**	ridge crest
g	gullying occurring	**s**	shallow soils (20-100 cm to bedrock)
j	gentle slope (slope <35%)	**v**	very shallow (< 20 cm to bedrock)
k	cool aspect (285°–135°, slope >35% -	**w**	warm aspect (135°–285°, slope >35%% - 100%)

	100%)		
m	medium-textured soils	**z**	very steep warm aspect (135°–285°, slope >100%)
n	fan		

Structural Stages	
Code	**Description**
1	Sparse/Bryoid - initial stages of primary or secondary succession.
1a	Sparse - < 10% vegetation cover.
1b	Bryoid - Bryophyte and lichen community with > 50% vegetation cover.
2	Herb - early successional stage or herb dominated community
2a	Forb-dominated - includes non-graminoid herbs and ferns.
2b	Graminoid-dominated - includes grasses, sedges, reeds & rushes.
2c	Aquatic - includes floating or submerged vegetation.
2d	Dwarf-shrub dominated - dominated by dwarf woody species.
3	Shrub/Herb - early successional stage or shrub community.
3a	Low Shrub - dominated by shrubby vegetation < 2m tall.
3b	Tall Shrub - dominated by shrubby vegetation > 2m and < 10m tall.
4	Pole/Sapling - trees > 10m tall, typically densely stocked.
5	Young Forest - generally 40–80 years but may begin as early as age 30, depending on tree species and ecological conditions.
6	Mature Forest (80-250 yrs.).
7	Old Forest (>250 yrs.).

Stand Composition Modifiers	
Code	**Description**
B	broadleaf
C	coniferous
M	mixed

Structural Stage Modifiers	
Code	**Description**
h	shelterwood
i	irregular
m	multistoried
s	single-storied
t	two-storied

Ecosystem Units of the Moist Maritime Coastal Douglas-fir subzone (CDFmm)

Site Code	Site Unit Number	Site Unit Name	Typical Situation	Assumed Modifiers	Moisture Regime	Mapped Modifiers
DA	02	FdPl - Arbutus	Gentle slope, upper slope to crest position, deep, medium - textured soils.	d, j, m, r	xeric	v
DS	01	Fd - Salal	Gentle slope, mid to upper slope position, deep, medium - textured soils.	d, j, m	subxeric - mesic	s, w
HL	00	Hardhack – Labrador tea	Shrub fen occurring in depressions, poor to very poorly drained, deep organic soils	d, j, p	subhydric	--
RC	11	Cw – Skunk cabbage	Depression to flat, forested swamp, poorly drained, deep, medium – textured soil.	d, j, m	subhydric	--
RF	06	CwBg - Foamflower	Gentle slope, lower slope, receiving position, deep medium - textured soil and rich nutrient regime.	d, j, m	subhygric - hygric	--
RK	05	CwFd - Kindbergia	Gentle slope, lower slope receiving position, deep, medium - textured soils	d, j, m	subhygric - hygric	k, s, w

Ecosystem Units of the Very Dry Maritime Coastal Western Hemlock subzone (CWHxm1)

Site Code	Site Unit Number	Site Unit Name	Typical situation	Assumed Modifiers	Moisture Regime	Mapped Modifiers
AM	00	Arbutus – Hairy manzanita	Gentle upper slopes, ridge crests; shedding sites on shallow soils; rapidly to well drained.	j, r, s	xeric	k, v, w
CD	09	Act - Red-osier dogwood	Active floodplain, middle bench; deep medium - textured soil	a, d, j, m	subhygric – hygric	--

CS	15	Cw - Slough sedge	Strongly fluctuating water table; deep medium - textured mineral soil	d, j, m	subhydric	--
DC	02	FdPl - Cladina	Gentle slope; crest position; medium - textured shallow soil	j, m, r, s	very xeric	g, k, v, w
DF	04	Fd - Sword fern	Significant slope; deep medium - textured soil (use aspect modifier)	d, m	xeric – subxeric	k ,s
DS	03	FdHw - Salal	Significant slope, upper slope position; warm aspect, deep medium - textured soil	d, m, w	xeric – subxeric	c, g, j, k, s, v
FC	00	Fescue – Common Camas	Gentle slopes, ridge crests; shallow soils, with small pockets of very shallow on rock benches; rapidly to well drained.	j, r, s	xeric	k, w
HK	01	HwFd - Kindbergia	Gentle slope; deep medium - textured soil; moderately well to well drained.	d, j, m	submesic - mesic	c, k, s, w
HL	00	Hardhack – Labrador tea	Shrub fen occurring in depressions, poor to very poorly drained, deep organic soils	d, j, p	subhydric	--
LS	11	Pl - Sphagnum	Treed bog; lower slope position on level to depressional sites; organic soils; poorly to imperfectly drained.	d, j, p	subhydric	--
RC	12	CwSs - Skunk cabbage	Treed swamp; depression to level; deep medium - textured mineral soil; poorly drained.	d, j, m	subhydric	p
RF	07	Cw - Foamflower	Gentle slope; lower slope position, receiving moisture; deep medium - textured soil; moderately well to imperfectly drained	d, j, m	subhygric - hygric	--
RS	05	Cw - Sword fern	Significant slope(use aspect modifier), deep medium - textured soil; rich nutrient regime; moderately well to well drained	d, m	submesic - mesic	j, k, n, s, w
SC	00	Selaginella – Cladina	Gentle slope, upper slope and crest positions, very shallow soils, very dry and rapidly drained. Become extremely droughty during the summer.	j, m, r, v	very xeric	k, q, w
SW	00	Sedge wetland	Level to depressions, poor to very poorly drained, with organic soils.	j, p	subhydric	--

Anthropogenic and Sparsely Vegetated Ecosystem

Site Code	Site Unit Number	Site Unit Name	Typical Situation	Assumed Modifiers	Moisture Regime	Mapped Modifiers
DM	na	Dam	A human made structure usually formed by the mounding of soils and rock to create a barrier across a watercourse for the purpose of impounding water.	na	mesic – submesic	-
ES	na	Exposed soil	Areas of recent disturbance, such as mudslides, debris torrents, avalanches and human disturbances, where vegetation cover is less than 5%.	na	subhygric	na
LA	na	Lake	A naturally occurring static body of water greater than 2 m deep in some portion.	na	na	na
OW	na	Open water	A wetland composed of permanent shallow open water without extensive emergent plant cover.	na	na	na

RE	na	Reservoir	An artificial basin created by the impoundment of water behind a human-made structure such as a dam.	na	na	na
RO	na	Rock outcrop	A gentle to steep bedrock escarpment or outcropping with little soil development and sparse vegetation.	na	na	k, w, q, z
RP	na	Road surface	An area cleared and compacted for the purpose of transporting goods and services by vehicles.	na	na	na
RR	na	Rural	An area in which residences and other human developments are scattered and intermingled with forests, range, farm land native plant vegetation or cultivated crops.	na	na	na

Data Sources

This mapping project is based on 1:15 000 black and white aerial photography flown in July 1998 (CRD Parks). The base map was 1:15,000 scale forest cover over Terrain Resource Inventory Mapping (TRIM) base, prepared in 1999 by Hugh Hamilton for CRD Water. Other data sources include 1:15,000 Soil and Parent Material maps, 1995 (Hugh Hamilton for CRD Water), and 1:15,000 orthophoto of Sooke Hills Wilderness and Mt. Wells Regional Parks.

Over 25% polygon inspection was achieved. The sampling ratio of the 158 inspections was 8 full ecosystem field plots, 24 ground inspections and 126 visual inspections.

Credits

Mapping by: Corey Erwin and Jo-Anne Stacey. Field Data Collection: Ecology: Carmen Cadrin, C. Erwin, Samantha Flynn, J Stacey, and Barbara von Sacken. Terrain: Robert Maxwell and Christina Sinnemann (BCCF). Wildlife: Lynne Bonner, Sal Rasheed, and Calvin Tolkamp. Data Entry: B von Sacken, J. Stacey, C. Sinnemann and R. Maxwell. Project Manager: Joel Ussery, CRD Parks. Project Co-ordination: B. von Sacken and S. Rasheed.

Ecology Correlators: Carmen Cadrin and Ted Lea. GIS Correlator: Tim Brierley
Map Production: Mono-Restitution: Baseline Geomatics Inc. Victoria, BC.

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Citation

Terrestrial Ecosystem Mapping of Sooke Hills Wilderness and Mount Wells Regional Parks. March 2000. Prepared for CRD Parks, Victoria, BC by the Wildlife Inventory Section, Resources Inventory Branch, Ministry of Environment Lands and Parks, Victoria, BC. 1:20 000 scale map.