

Sensitive and Terrestrial Ecosystems Labels



Sensitive Ecosystems Inventory of the Sunshine Coast and Adjacent Islands



Sensitive Ecosystems

Sensitive ecosystems are fragile and/or rare, or are ecologically important because of the diversity of species they support.

Old Forest (OF):

Conifer-dominated dry to moist forest types, structural stage 7 (see table), generally >250yrs. Subclasses: of (conifer dominated) - greater than 75% coniferous species

Woodland (WD):

Dry open forests, generally between 10 and 30% tree cover, can be conifer dominated or mixed conifer and shrub species, because of open canopy, will include non-forested openings, often with shallow soils and bedrock outcroppings. Subclasses: co (conifer dominated) - greater than 75% coniferous species

Herbaceous (HB):

Non-forested ecosystems (less than 10% tree cover), generally with shallow soils and often with bedrock outcroppings, includes large openings with or without grasses and forbs, sometimes vegetated with grasses and forbs, sometimes low shrubs, and moss and lichen communities on rock outcrops. Subclasses: hb (herbaceous) - central concept of the category, non-forested, less than 10% tree cover, generally shallow soils, often with exposed bedrock, predominantly a mix of grasses and forbs, also lichens and mosses

Riparian (RI):

Areas adjacent to water bodies (rivers, lakes, ocean, wetlands) which are influenced by factors such as erosion, sedimentation, flooding and/or subterranean irrigation due to proximity to the water body. Structural stages 1-6. Subclasses: r1 (low bench floodplain) - flooded at least once every other year for moderate periods of growing season, plant species adapted to extended flooding and abrasion, low or all shrubs most common

Wetland (WN):

Areas that are saturated or inundated with water for long enough periods of time to develop vegetation and biological activity adapted to wet environments. This may result from flooding, fluctuating water tables, soil influences or poor drainage conditions. Subclasses: w1 (nutrient poor wetland on organic soils (sphagnum peat), water sources predominantly from precipitation, may be tree or shrub dominated)

Chiffs (CL):

Very steep slopes, often exposed bedrock, may include steep sided sand banks, habitat for rare species. Subclasses: cl (coniferous cliffs), lc (limestone cliffs), li (limestone cliffs)

Other Important Ecosystems

Other important ecosystems have high biodiversity values. Subclasses: mf (mature forest) - usually conifer-dominated, occasionally deciduous, dry to moist forest types, structural stage 6, generally >50yrs, >25 ha of buffering sensitive ecosystems

Mature Forests (MF):

Usually conifer-dominated, occasionally deciduous, dry to moist forest types, structural stage 6, generally >50yrs, >25 ha of buffering sensitive ecosystems. Subclasses: co (conifer dominated) - greater than 75% coniferous species

Seasonally Flooded Agricultural Fields (FS):

Annually flooded cultivated fields or hay fields; important migrating and wintering waterfowl habitat. Subclasses: fs (shallow water) - standing or flowing water less than 2 m, deep, transition between deep water bodies and other wetland ecosystems (i.e. bogs, swamps, fens, etc.) often with vegetation rooted below the water surface

Other Mapped Ecosystems

Other mapped ecosystems occur in mosaic with sensitive ecosystems and are not possible to delineate separately at the mapping scale. Subclasses: yf (young forest) - limited to areas of young forest dispersed among sensitive and other important ecosystems

Young Forests (YF):

Limited to areas of young forest dispersed among sensitive and other important ecosystems. Subclasses: p (polygon label) - indicates a field sample was completed but was not mapped

Polygon Label

Some polygon labels will have class and subclass repeated up to three times. The first one is an error; it reflects the variability in site units and structural stages occurring within a polygon. More than one site unit can be correlated to a SE class and subclass. Polygon labels on the map do not include the site units. The Sensitive and Terrestrial Ecosystems Labels on the left side of the map provide details about site units mapped in each polygon.

Ecosystem Components

The cartographic product uses Dot Density to indicate where more than one ecosystem class is mapped in a polygon. The number of dots indicates the proportion of the polygon represented by the 2nd and 3rd ecosystem; the colour of the dots indicates the 2nd and 3rd ecosystem class.

The base colour represents the first ecosystem component.

Coloured dots overlaid upon the base colour indicate a second ecosystem component.

Two colours of dots indicate a second and third ecosystem.

Biogeoclimatic Units

CDPfm Coastal Douglas-fir Moist Maritime Subzone

CVHM1 Coastal Western Hemlock Eastern Subzone

CVHM2 Coastal Western Hemlock Dry Maritime Subzone

CVHM3 Coastal Western Hemlock Submontane Very Wet Maritime Variant

CVHM4 Coastal Western Hemlock Submontane Very Wet Maritime Variant

CVHM5 Coastal Western Hemlock Submontane Very Wet Maritime Variant

CVHM6 Coastal Western Hemlock Submontane Very Wet Maritime Variant

CVHM7 Coastal Western Hemlock Submontane Very Wet Maritime Variant

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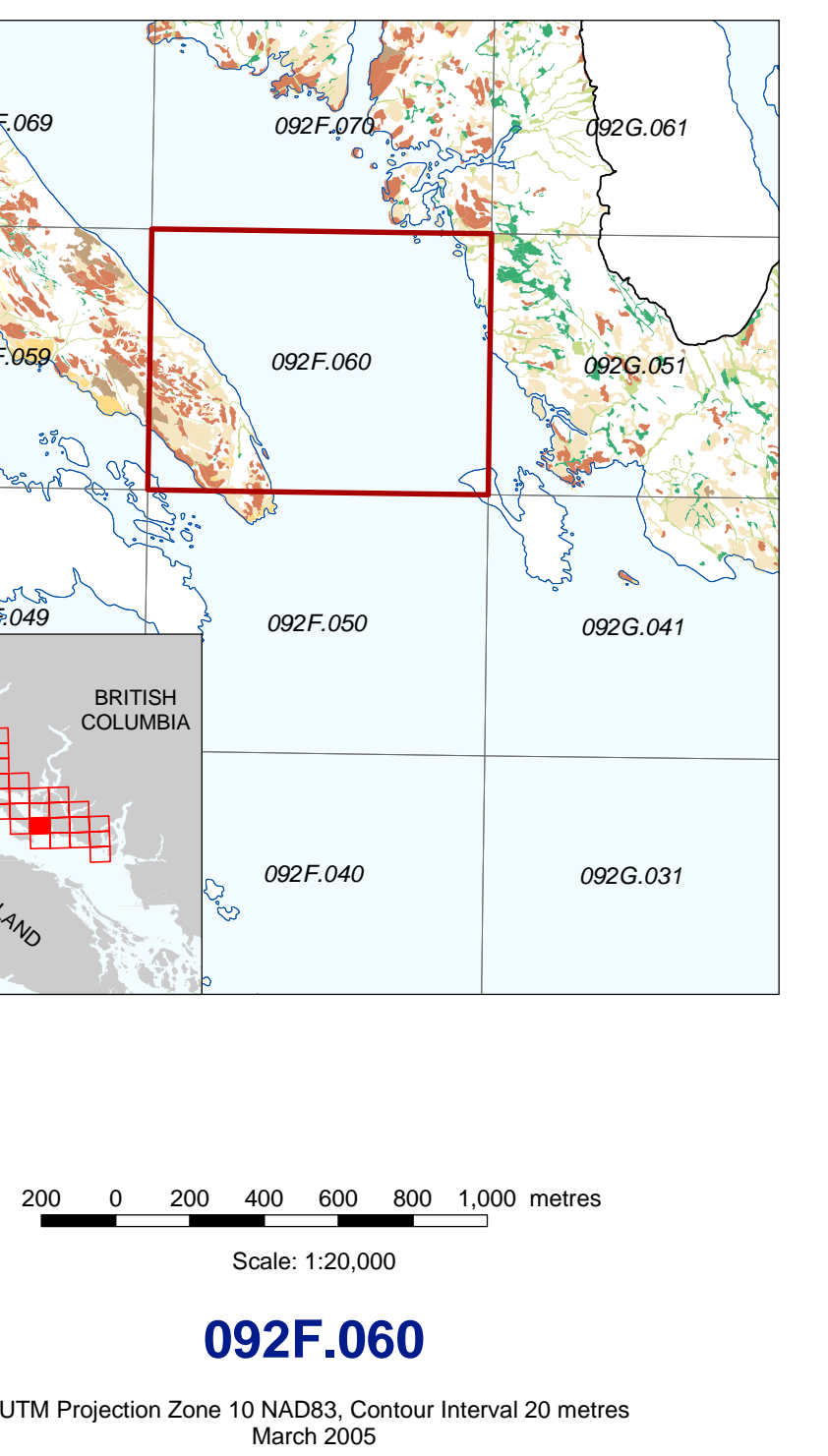
Structural Stages 1-6, Terrestrial Ecosystem Map Codes and Site Unit Names, and Sensitive and Terrestrial Ecosystems Label legend.

What is a Sensitive Ecosystem? For the purpose of this study, an ecosystem is considered to be a portion of the landscape with relatively uniform dominant vegetation. Sensitive ecosystems are those which are fragile and/or rare, or those ecosystems which are ecologically important because of the diversity of species they support.

Methodology The mapping methods are based on the Vancouver Island SEI project and the Resources Information Standards Committee (RISC) Standard for Terrestrial Ecosystem Mapping (TEM) in BC. Ecosystem categories include six Sensitive Ecosystem (SE) classes, two Important Ecosystem classes, and one Other Ecosystem class. The legend to the right of the map provides definitions, Ecosystem classes, subclasses, the corresponding Terrestrial Ecosystem site units and structural stages, and stream and drainage corridor not included in TRIM. Field survey protocols followed Describing Terrestrial Ecosystems in the Field (RISC 1998) with the addition of a conservation evaluation form to document ecosystem condition and viability. Approximately 20% of the polygons were field checked.

Data Limitations The SEI is a tool to alert decision makers to the existence of sensitive ecosystems, however when land-use changes are proposed detailed site-level assessments are necessary. For sites not field checked, the accuracy of the data depends heavily on the professional judgement of the mapper and the availability of source data. Because the area is changing rapidly, reference to the date of the information source is advised. Aerial photographs used were flown between 1994 and 1999, most are at 1:10,000 scale, some at 1:16,000 scale. Due to the mapping scale, minimum polygon size is usually 1/2 hectare. Minimum riparian polygon width is 20 metres regardless of the stream channel width. Enlargement of the data beyond the source scale may result in unacceptable distortion and faulty registration with other data sets.

What can be done to protect sensitive ecosystems? Direct and indirect impacts to these ecosystems can be avoided by: Retaining or creating vegetated buffers around sensitive ecosystems to isolate them from outside disturbance; Controlling land and water access to fragile ecosystems; Controlling invasive species; Allowing natural disturbances to occur; Maintaining water quality. If development must occur, develop carefully! Conduct an ecological inventory to identify the existing flora and fauna and to locate any threatened or endangered plant and animal species, plant communities, and habitat features needing protection.



092F.060 UTM Projection Zone 10 UTM, Contour Interval 20 metres March 2005

Map Symbols legend including Polygon Boundary, Biogeoclimatic Boundary, Ecosystem Boundary, Study Area Boundary, Roads, 20m contours, TRIM Streams, Additional streams, Intermittent/Perennial Stream, and Drainage Route.