

## **Sensitive Ecosystems Inventory Mapping of Proposed Community Forest Agreement Area on Cortes Island 2011**

Rationale

and riparian ecosystems.

Purpose

**Methodology** 

## Description of Sensitive Ecosystem Inventory Map Symbols Sensitive Ecosystems Other Important Ecosystems **Ecosystem Components** Other important ecosystems have high biodiversity values. Sensitive ecosystems are fragile and/or rare, or are ecologically What is a Sensitive Ecosystem? This cartographic product uses Dot Density to indicate where more than one important because of the diversity of species they support. ecosystem class is mapped in a polygon. The number of dots indicates the Sensitive ecosystems are those which are fragile For the purpose of this study, an ecosystem is proportion of the polygon represented by the 2nd and 3rd ecosystem; the colour and/or rare, or those ecosystems which are considered to be a portion of the landscape with of the dots indicates the 2nd and 3rd ecosystem class. ecologically important because of the diversity relatively uniform dominant vegetation. of species they support. • • • • Old Forest Mature Forests 10% density of additional ecosystem component Proposed Community Forest Landbase Conifer-dominated dry to moist forest types, Usually conifer-dominated, occasionally deciduous, Ecologically significant lands and important wildlife habitats are fast classes, subclasses, the corresponding Terrestrial Ecosystem site structural stage 7 see table), generally >250yrs. dry to moist forest types, structural stage 6, disappearing throughout the lowlands surrounding the Strait of units and structural stages, and stream and drainage corridors not 20% density of additional system component Parks generally >80yrs; > 25 ha. or buffering sensitive Georgia. Intense development pressures fuelled by population and included in TRIM, are mapped. Field survey protocols followed ecosystems. Woodland economic growth have fragmented and degraded many terrestrial Describing Terrestrial Ecosystems in the Field (RISC 1998) with the addition of a conservation evaluation form to document ecosystem Lakes ecosystems. A high proportion of these ecosystems are now 30% density of additional ecosystem component Dry open forests, generally between 10 and 30% Seasonally Flooded Agricultural Fields designated as "at risk". Sensitive ecosystems typically have high condition and viability. Approximately 20% of the polygons were field tree cover, can be conifer dominated or mixed conifer biological diversity and are a vital part of the landscape. They provide checked. and arbutus stands; because of open canopy, will Annually flooded cultivated fields or hay fields; ----- Creeks ecosystem services for a healthy economy and for social well being. 40% density of additional ecosystem component include non-forested openings, often with shallow soils **Data Limitations** important migrating and wintering waterfowl habitat. They regulate climate, clean water, generate and clean soils, recycle and bedrock outcroppings. The SEI is a tool to alert decision makers to the existence of sensitive nutrients and pollinate our crops. To protect these areas, sensitive ecosystems, however when land-use changes are proposed detailed ecosystems must be located, identified and mapped. Along the 50% density of additional ecosystem component — Lot Lines Herbaceous site-level assessments are necessary. For sites not field checked, the Sunshine Coast the wave-beaten shorelines, coastal plains, rugged Non-forested ecosystems (less than 10% tree cover), accuracy of the data depends heavily on the professional judgement mountain slopes, fjords and estuaries contribute to high biodiversity The base colour represents the first ecosystem Paved Road generally with shallow soils and often with bedrock of the mapper and the availability of source data. Because the area is Other Mapped Ecosystems values. Here one finds coastal temperate rainforests, dry shoreline component. changing rapidly, reference to the date of the information source is outcroppings; includes large openings within forested woodlands, herbaceous meadows and rocky coastal bluffs, wetlands areas, coastal headlands, shorelines vegetated with Other mapped ecosystems occur in mosaic with sensitive advised. Coloured dots overlaid upon the base colour grasses and herbs, sometimes low shrubs, and moss ecosystems and are not possible to delineate separately ===== Gravel Road indicate a second ecosystem component. and lichen communities on rock outcrops. at the mapping scale. 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 The purpose of the Sensitive Ecosystems Inventory (SEI) of the Two colours of dots indicate a second and third ----- Trail scale, minimum polygon size is usually ½ hectare. Minimum riparian Riparian Sunshine Coast is to identify, classify and map sensitive terrestrial ecosystem. polygon width is 20 metres regardless of the stream channel width. ecosystems along the coastal lowlands (including the adjacent Areas adjacent to water bodies (rivers, lakes, ocean, Enlargement of the data beyond the source scale may result in islands) from Howe Sound to Desolation Sound. The goal of the SEI Young Forests wetlands)which are influenced by factors such as unacceptable distortion and faulty registration with other data sets. is to encourage informed land-use decisions that will conserve erosion, sedimentation, flooding and/or subterranean Limited to areas of young forest dispersed among sensitive ecosystems. The SEI on Vancouver Island and Gulf Islands irrigation due to proximity to the water body. Structural sensitive and other important ecosystems. What can be done to protect sensitive ecosystems? (1993 – 1997) shows that this information can be used in a variety of stages 1 – 7. land-use planning processes and can contribute to the conservation Direct and indirect impacts to these ecosystems can be avoided by: of many sites. Decision makers, consultants and non-government • Retaining or creating vegetated buffers around sensitive Wetland organizations have found the SEI to be an effective planning and ecosystems to isolate them from outside disturbance; Data Sources management tool. SEI data provides site-specific ecological • Controlling land and water access to fragile ecosystems; Areas that are saturated or inundated with water for information that can be used to flag sites of conservation concern, to Controlling invasive species; Sensitive Ecosystems – from Sensitive Ecosystems Inventory of the Sunshine long enough periods of time to develop vegetation and Coast and Adjacent Islands. 2005. Environment Canada, British Columbia prompt detailed field studies prior to development projects, and to Allowing natural disturbances to occur; biological activity adapted to wet environments. This Ministry of Environment, Habitat Conservation Trust Fund, Regional District of Comox-Strathcona, Sunshine Coast Regional District, Terminal Forest Products, provide input to Forest Stewardship Plans. Maintaining water quality. may result from flooding, fluctuating water tables, tidal and others. See http://a100.gov.bc.ca/pub/acat/public/viewReport.do?reportId=3758 influences or poor drainage conditions. If development must occur, develop carefully! Cadastral – from TA\_SP\_SVW coverage downloaded from LRDW Sept 17/08 The mapping methods are based on the Vancouver Island SEI project • Conduct an ecological inventory to identify the existing flora and Cliffs Island Timberlands extents – from Cortes Ecoforestry Society, 2008 fauna and to locate any threatened or endangered plant and animal and the Resources Information Standards Committee (RISC) species, plant communities, and habitat features needing Standard for Terrestrial Ecosystem Mapping (TEM) in BC. Ecosystem Lot Numbers – from BC Forest Cover data, 1995 Very steep slope, often exposed bedrock, may include categories include six Sensitive Ecosystem (SE) classes, two protection. steepsided sand bluffs; habitat for rare species. Parks – from Cortes Ecoforestry Society, 2000, revised to fit current cadastral and • Plan and implement all development activities in a manner that will This map was produced by Cortes Community Forest Co-op and Woodlot Forestry Services Ltd. to provide the means for Important Ecosystem classes, and one Other Ecosystem class. The water feature data. not adversely affect or disturb the sensitive ecosystem. legend to the right of the map provides definitions. Ecosystem further fieldwork analysis, especially ground-truthing creeks Roads and Streams – from BC Forest Cover data, 1995, revised by Cortes • Consult a qualified professional to interpret the ecological inventory and sensitive ecosystems. Ecoforestry Society, 2000 data and work to incorporate designs that maintain the functions Coast and Lakes – from Sensitive Ecosystem mapping Woodlot Forestry Services Ltd. and values of the natural ecosystem. D:\Cortes2008\Cortes SEI on CFA Lands.mxd Toponyms – from BC Forest Cover data, 1995, revised by Cortes Ecoforestry Map Plotted on November 7, 2011 Society, 2000