

polygon is WD:co - Woodland:conifer dominated, site unit

Site Unit Name

western red-cedar - slough sedge Douglas-fir - lodgepole pine - arbutus

red fescue - poverty oatgrass - Racomitrium hardhack - sedge swamp

western hemlock - lodgepole pine - Racomitrium

JM* juniper - hairy manzanita
LP* Labrador tea - bog laurel - peat moss bog

lodgepole pine - Sphagnum bog

MS sweet gale - Sitka sedge fen
NF northern wormwood - red fescue - gumweed

oceanspray - rose
western red-cedar - skunk cabbage
western red-cedar - grand fir - foamflower

western red-cedar - Indian-plum

AF amabilis fir - western red-cedar - foamflower

RS* western red-cedar - snowberry
RV* western red-cedar - vanilla-leaf
SB* slender sedge - white beak-rush fen

 SM*
 sedge marsh

 SS
 spirea - sedge wetland

 WP*
 water shield - pond lily

 13642
 4499
 4255
 3988
 3773

 CWHxm1
 CWHdm
 CWHdm
 CWHxm1
 CWHxm1

 6Rl:ff RS6
 5Rl:ff RB3
 8Rl:ff RF6
 10MF:co DS6
 5MF:co DS6

 3Rl:ff RS5
 4WN:sp HS3
 1MF:co RS6
 4MF:co HK6

 1WN:sp HS3
 1Rl:ff HD6
 1Rl:gu HD4
 1WD:co DC6

western red-cedar - Douglas-fir - Eurhynchium

Douglas-fir - oniongrass

Douglas-fir - salal estuarine marsh fescue - camas fescue - gumweed

Abbreviated from Standard for Terrestrial Ecosystem Mapping in British Columbia (RIC 1998)

western red-cedar - slough sedge black cottonwood - willow

Douglas-fir - lodgepole pine - Cladina
Douglas-fir - sword fern

Douglas-fir - western hemlock - salal

red fescue - poverty oatgrass - Racomitrium
western hemlock - western red-cedar - deer fern

western hemlock - flat moss

Labrador tea - bog laurel - peat moss bog

western red-cedar - Sitka spruce - skunk cabbage

fescue - gumweed

hardhack - sedge swamp

lodgepole pine - Sphagnum sweet gale - Sitka sedge fen

western red-cedar - sword fern

WP water shield - pond lily

slender sedge - white beak-rush fen

CL cliff: steep vertical or overhanging rock face

river cultivated field, subject to agricultural practices

Terrestrial Ecosystem Map Codes and Site Unit Names

SS* Sitka spruce - salmonberry

* western red-cedar - slough sedge

Douglas-fir - western hemlock - salal

red fescue - poverty oatgrass - Racomitrium

Labrador tea - bog laurel - peat moss bog

western hemlock - western red-cedar - deer fern

western red-cedar - Sitka spruce - skunk cabbage

WG* white beak-rush - green sedge fen OC ocea flower WP* water shield - pond lily PI spit * Indicates site unit is correlated to a red or blue listed natural plant community. See report for further details.

Consult with the BC Conservation Data Centre (CDC) for changes in classification since printing. http://srmapps.gov.bc.ca/apps/eswp/

black cottonwood - willow

dune grass - beach pea

fescue - gumweed

HS hardhack - sedge swamp

sweet gale - Sitka sedge fen

* western red-cedar - sword fern

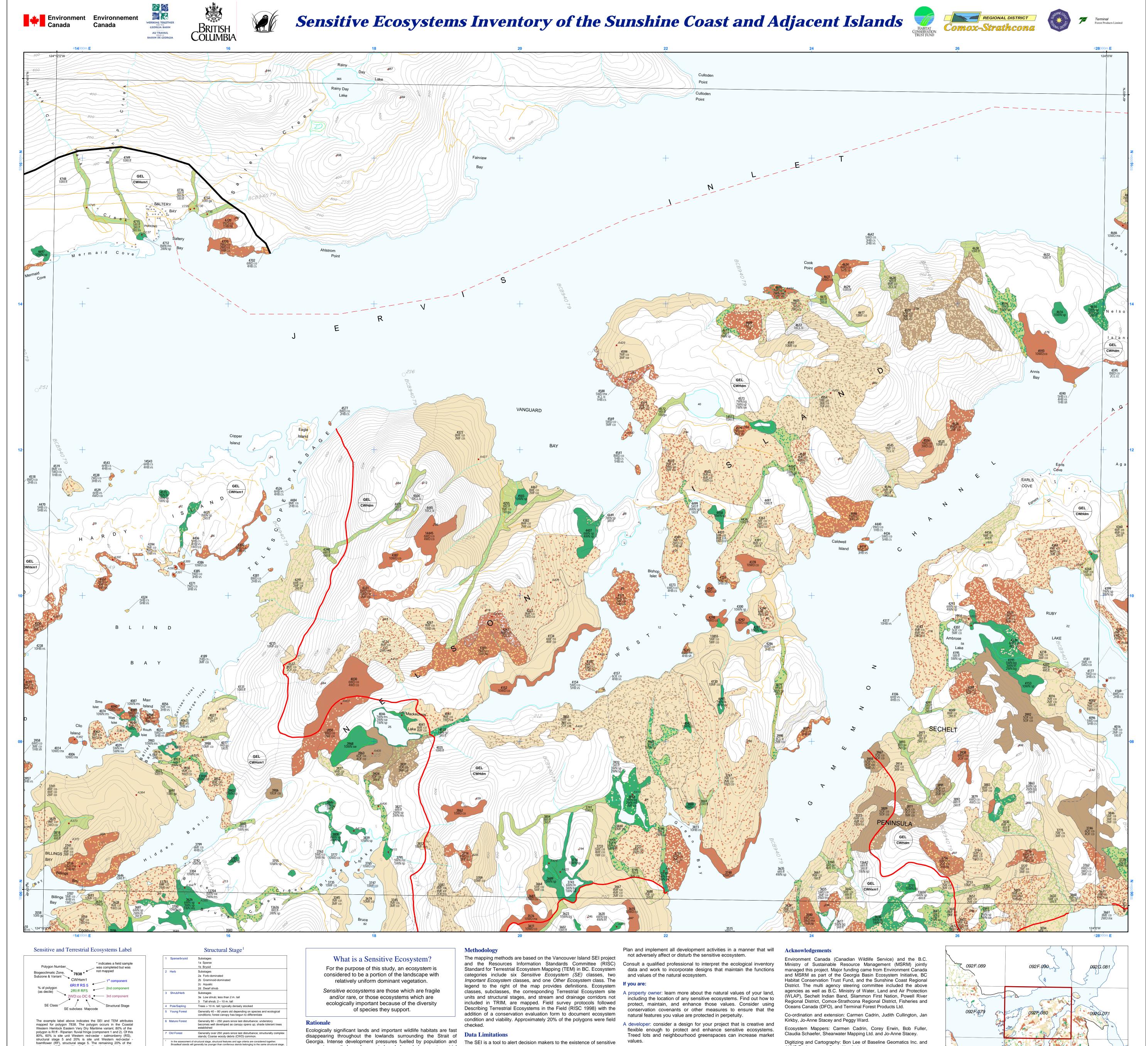
P* Sitka spruce - Pacific crab apple
S* Sitka spruce - salmonberry

Table adapted from the Provincial Site Series and Mapcodes List (mapcodes_jan2003.xls) available at: http://srmwww.gov.bc.ca/ecology/tem/list.html

western red-cedar - black twinberr

slender sedge - white beak-rush fen

western red-cedar - salmonberry



economic growth have fragmented and degraded many terrestrial ecosystems, however when land-use changes are proposed detailed

ecosystems. A high proportion of these ecosystems are now site-level assessments are necessary. For sites not field checked, the

designated as "at risk". Sensitive ecosystems typically have high accuracy of the data depends heavily on the professional judgement

biological diversity and are a vital part of the landscape. They provide of the mapper and the availability of source data. Because the area is

ecosystem services for a healthy economy and for social well being. changing rapidly, reference to the date of the information source is

Sunshine Coast the wave-beaten shorelines, coastal plains, rugged are at 1:10,000 scale, some at 1:16,000 scale. Due to the mapping

mountain slopes, fjords and estuaries contribute to high biodiversity scale, minimum polygon size is usually ½ hectare. Minimum riparian

values. Here one finds coastal temperate rainforests, dry shoreline polygon width is 20 metres regardless of the stream channel width.

The purpose of the Sensitive Ecosystems Inventory (SEI) of the Direct and indirect impacts to these ecosystems can be avoided by:

Sunshine Coast is to identify, classify and map sensitive terrestrial • Retaining or creating vegetated buffers around sensitive

ecosystems must be located, identified and mapped. Along the Aerial photographs used were flown between 1994 and 1999, most A decision-maker (such as a politician or resource manager): ensure

woodlands, herbaceous meadows and rocky coastal bluffs, wetlands Enlargement of the data beyond the source scale may result in development and implementation of biodiversity conservation

unacceptable distortion and faulty registration with other data sets.

What can be done to protect sensitive ecosystems?

ecosystems to isolate them from outside disturbance;

Controlling land and water access to fragile ecosystems;

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

They regulate climate, clean water, generate and clean soils, recycle advised.

nutrients and pollinate our crops. To protect these areas, sensitive

ecosystems along the coastal lowlands (including the adjacent

sensitive ecosystems. The SEI on Vancouver Island and Gulf Islands • Controlling invasive species;

land-use planning processes and can contribute to the conservation

• Maintaining water quality.

(1993 – 1997) shows that this information can be used in a variety of • Allowing natural disturbances to occur;

organizations have found the SEI to be an effective planning and If development must occur, develop carefully!

islands) from Howe Sound to Desolation Sound. The goal of the SEI

is to encourage informed land-use decisions that will conserve

of many sites. Decision makers, consultants and non-government

management tool. SEI data provides site-specific ecological

information that can be used to flag sites of conservation concern, to

prompt detailed field studies prior to development projects, and to

provide input to Forest Stewardship Plans.

Field Crews: Louise Blight, Carmen Cadrin, Corey Erwin, Deepa Spaeth Filatow, Moraia Grau, Edwin Hubert, Stephen Hureau, Marc Johnson, Anre McIntosh, Will MacKenzie, Claudia Schaefer, Jo-Anne Ecosections COLUMBIA GEL Georgia Lowlands Ecosection SOG Strait of Georgia Ecosection OUF Outer Fiordland Ecosection 092F.060 SPR Southern Pacific Ranges Ecosection Map Symbols ——— Polygon Boundary ★G153 Field sample point Biogeoclimatic Boundary BCC984145 Flight line Ecosection Boundary ○ 106 Air photo centre Study Area Boundary Roads ——— 20m contours Scale: 1:20,000 TRIM Streams ----- Additional streams 092F.080 ---- Intermittent/Potential Stream Drainage Route UTM Projection Zone 10 NAD83, Contour Interval 20 metres

AXYS Environmental Consulting Ltd.

Stacey and Leah Westereng.

GIS support: Tim Brierley, Steve Moslin and Mike Wolowicz (MSRM).

A planner: ensure that conservation is given as high a priority as

other community programs such as housing, transportation,

recreation, employment, public works, and community services.

Encourage use of the many legal and planning tools available, such

as development permit areas, tree protection by-laws, and

that protection of remaining sensitive ecosystems is a priority at all

levels, and support programs, plans and operational activity that will

help protect sensitive ecosystems. Encourage and facilitate the

A member of an advocacy group: contribute your time and expertise

to help locate and protect sensitive ecosystems. For example,

ratepayers' groups, service organizations, naturalist clubs, land

trusts, and conservancies often provide a link between local

landowners and voluntary stewardship programs. As a member of

one of these groups, you can work cooperatively with local

governments to promote land use decisions that protect sensitive

A volunteer: participate in educational programs, conservation

A scientist: use your expertise to help identify sensitive ecosystems,

define issues that need to be addressed, formulate conservation

plans, contribute to the development of conservation and

management strategies and explain to other professionals and

fundraising, or in programs to remove invasive species.

decision makers the importance of sensitive ecosystems.

conservation covenants to protect sensitive ecosystems.

Sensitive Ecosystems

Old Forest (OF):

Woodland (WD):

Herbaceous (HB):

water body. Structural stages 1 – 7.

with shallow soils and bedrock outcroppings.

because of the diversity of species they support.

co (conifer dominated) - greater than 75% coniferous species

co (conifer dominated) – greater than 75% coniferous species

salt-tolerant vegetation, generally with < 20% vegetation cover

drifting; low to moderate cover of salt-tolerant grasses and herbs

Sensitive ecosystems are fragile and/or rare, or are ecologically important

Conifer-dominated dry to moist forest types, structural stage 7 (see table), generally >250yrs.

Dry open forests, generally between 10 and 30% tree cover, can be conifer dominated or mixed conifer and arbutus stands; because of open canopy, will include non-forested openings, often

mx (mixed conifer and deciduous) - a minimum of 25% cover of either group is included in the

Non-forested ecosystems (less than 10% tree cover), generally with shallow soils and often with bedrock outcroppings; includes large openings within forested areas, coastal headlands,

shorelines vegetated with grasses and herbs, sometimes low shrubs, and moss and lichen

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,

cs (coastal herbaceous) - as hb but influenced by proximity to ocean, windswept shoreline and slopes; > 20% vegetation, grasses and herbs, some rock outcrops, moss and lichen

vs (vegetated shoreline) - low-lying rocky shoreline, soil pockets in rock cracks and crevices:

sp (spit) - finger-like extension of beach, comprised of sand or gravel deposited by longshore

vegetated depending on depositional activity, beach dunes will have low cover of salt-tolerant

sh (shrub component) - > 20 % of total vegetation cover is shrub cover, with grasses and herbs

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

fl (low bench floodplain) - flooded at least every other year for moderate periods of growing season; plant species adapted to extended flooding and abrasion, low or tall shrubs most

fm (medium bench floodplain) - flooded every 1-6 years for short periods (10-25 days): deciduous or mixed forest dominated by species tolerant of flooding and periodic sedimentation,

fh (high bench floodplain) - only periodically and briefly inundated by high waters, but lengthy subsurface flow in the rooting zone: typically conifer-dominated floodplains of larger coastal

ff (fringe) - narrow linear communities along open water bodies (rivers, lakes and ponds) where

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

bg (bog) - nutrient poor wetland, on organic soils (sphagnum peat), water source predominantly

fn (fen) - nutrient medium wetland (sedge peat) where ground water inflow is the dominant water source, open water channels common; dominated by sedges, grasses and mosses ms (marsh) - wetland with fluctuating water table, often with shallow surface water, usually

sp (swamp) - poor to very rich wetland on mineral soils or with an organic layer over mineral

sw (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

wm (wet meadow) - periodically saturated but not inundated with water, organically enriched

Very steep slope, often exposed bedrock, may include steep sided sand bluffs; habitat for rare

Usually conifer-dominated, occasionally deciduous, dry to moist forest types, structural stage 6,

mx (mixed conifer and deciduous) - a minimum of 25% cover of either group is included in the

Annually flooded cultivated fields or hay fields; important migrating and wintering waterfowl

Other mapped ecosystems occur in mosaic with sensitive ecosystems and are

Limited to areas of young forest dispersed among sensitive and other important ecosystems.

* indicates a field sample was

5 RI:ff \longrightarrow 1st component 3 MF:co → 2nd component **2 WN:sp** → 3rd component

SE Class SE subclass

details about site units mapped in each polygon.

of the dots indicates the 2nd and 3rd ecosystem class.

second ecosystem component.

CDFmm Coastal Douglas-fir Moist Maritime Subzone

CWHdm Coastal Western Hemlock Dry Maritime Subzone

CWHxm1 Coastal Western Hemlock Eastern Very Dry Maritime Variant

CWHvm1 Coastal Western Hemlock Submontane Very Wet Maritime Variant

Ecosystem Components

Biogeoclimatic Units

Some polygon labels will have class and subclass repeated up to three times. This is not 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 Ecosystem Labels on the left side of the map provide

This 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

The base colour represents the first ecosystem component.

Coloured dots overlaid upon the base colour indicate a

Two colours of dots indicate a second and third ecosystem.

gu (gully riparian) - watercourse is within a steep sided V-shaped gully ri (river) – watercourse is large enough to represent >10% of the polygon

fluctuating water tables, tidal influences or poor drainage conditions

from precipitation; may be treed or shrub dominated

mineral soils; grasses, sedges, rushes and forbs dominate

Other Important Ecosystems

Other important ecosystems have high biodiversity values.

generally >80yrs; > 25 ha. or buffering sensitive ecosystems.

co (conifer dominated) – greater than 75% coniferous species

Other Mapped Ecosystems

not possible to delineate separately at the mapping scale.

Seasonally Flooded Agricultural Fields (FS):

cc (coastal cliffs)

Mature Forests (MF):

Young Forests (YF):