Map Code	Ecosystem Unit Name	Provincial Status	Site series
AG	**silver burweed - entire-leaved gumweed**	**Not assessed**	**00**

Typical Condition	Plot Numbers:
Herbaceous ecosystem found along the dune ridge at the back of the beach, behind the driftwood line. Vegetation is dominated by silver burweed and entire-leaved gumweed.	

Site Description

Slope Range : gentle, level

Surficial Material: sandy active Marine plain (W^A p)

Aspect (degrees): NA

Drainage: moderately well drained

Vegetation (**bold text** indicates traditional use plants / ** indicates non-native species)

Dominant Species	Associate Species
Ambrosia chammissinis - silver burweed *Grindelia integrifolia* - entire-leaved gumweed	
	Introduced Species

Map Code	Ecosystem Unit Name	Provincial Status	Site series
BE	**beach**	**Not applicable**	**00**

Typical Condition	Plot Numbers:
Gently sloping sandy and gravely intertidal sites, reworked by wave action. Driftwood is common with little to no vegetation cover.	

Site Description

Slope Range: gentle to moderate

Surficial Material: sandy active Marine plain ($W^A p$)

Aspect (degrees): variable

Drainage: moderately well drained

Vegetation (**bold text** indicates traditional use plants / ** indicates non-native species)

Dominant Species	Associate Species
not applicable	not applicable
	Introduced Species

Map Code	Ecosystem Unit Name	Provincial Status	Site series
CF	cultivated field	Not applicable	00

Typical Condition

Plot Numbers:

A flat or gently rolling non-forested area subjected to agricultural practices including ploughing, non-native crop production or livestock grazing. Most cultivated fields in the study area are drained estuarine meadows and marshes with high cover of introduced grass species.

Site Description

Slope Range : level

Aspect (degrees): n/a

Surficial Material: humic organics (hO) or sandy active Marine plains (sWAp) or sandy Anthropogenic terraces (sAt)

Drainage: well to poor (mostly moderately well and imperfect)

Vegetation (**bold text** indicates traditional use plants / ** indicates non-native species)

Dominant Species	Associate Species
	Introduced Species
	Agronomic grasses **

Map Code	Ecosystem Unit Name	Provincial Status	Site series
CM	large-headed sedge herbaceous vegetation	Red-listed	00

Typical Condition	Plot Numbers: V12, V19, 02-3197
Herbaceous ecosystem found on rapidly drained sites. Soil moisture availability is low and soil nutrient regime is poor. This ecosystem develops in areas where shifting sand is common. Vegetation is dominated by large-headed sedge, red fescue and entire-leaved gumweed. Common associates are beach bindweed, yellow sand-verbena, black knotweed and thrift. Introduced grasses are common. Moss may develop on more stable sites.	

Site Description

Slope Range: level to very gentle

Aspect (degrees): all

Surficial Material: sandy Marine (active and inactive) plain (sWp)and rolling (sWm)

Drainage: well to moderately well

Moisture Regime: 1 (moderately dry)

Nutrient Regime: A (very poor)

Map Code	Ecosystem Unit Name	Provincial Status	Site series
CM	**large-headed sedge herbaceous vegetation**	**Red-listed**	**00**

Vegetation (**bold text** indicates traditional use plants / ** indicates non-native species)

Dominant Species	Associate Species
***Carex macrocephala* - large-headed sedge**	*Festuca rubra* - red fescue ***Leymus mollis* - dune wildrye** ***Polygonum paronychia* - black knotweed (beach knotweed)** *Grindelia integrifolia* - Puget Sound gumweed ***Abronia latifolia* - yellow sand-verbena** *Convolvulus soldanella* - beach bindweed ***Armeria maritime* - thrift** *Lepidium sp.* *Dicranum sp.* - heron's-bill moss *Racomitrium canescens* - grey rock-moss
	Introduced Species
	Aira caryophyllea - silver hairgrass** *Aira praecox* - early hairgrass**

Map Code	Ecosystem Unit Name	Provincial Status	Site series
DO	Douglas-fir - oniongrass	Red-listed	03

Typical Condition	Plot Numbers:	G3

Forested woodland type ecosystem found at the crest of slopes on shallow to bedrock, rapidly drained sites. These sites have very little soil moisture available but are rich in soil nutrients.

Site Description

Elevation Range (m): 8m

Slope Range :

Aspect (degrees): usually warm

Surficial Material: hummocky bedrock (Rh)

Drainage: rapid

Moisture Regime: 1 (very dry)

Nutrient Regime: D (rich)

Map Code	Ecosystem Unit Name	Provincial Status	Site series
DO	**Douglas-fir - oniongrass**	**Red-listed**	**03**

Vegetation (**bold text** indicates traditional use plants / ****** indicates non-native species)

Dominant Species	Associate Species
Quercus garryana – Garry oak *Oemleria cerasiformis* - Indian-plum ***Rosa nutkana* - Nootka rose** *Symphoricarpos albus* - common snowberry *Elymus glaucus* - blue wildrye ***Camassia leichtlinii* - great camas** *Rumex sp.***	*Ranunculus occidentalis* - western buttercup *Rubus ursinus* - trailing blackberry *Sanicula crassicaulis* - Pacific sanicle *Ramalina menziesii* - fishnet lichen *Polypodium glycyrrhiza* - licorice fern *Eriophyllum lanatum* - woolly eriophyllum
Dicranum sp. - heron's-bill moss	**Introduced Species**
Racomitrium canescens - grey rock-moss *Festuca rubra* - red fescue ***Fritillaria lanceolata* - chocolate lily**	*Holcus lanatus* - common velvet-grass** *Bromus sterilis* - barren brome** *Dactylis glomerata* - orchard-grass** *Plantago lanceolata* - ribwort plantain** *Arrhenatherum elatius* - tall oatgrass** *Vulpia sp.***

Map Code	Ecosystem Unit Name	Provincial Status	Site series
DW	**dune wildrye - beach pea**	**Red-listed**	**00**

Typical Condition	**Plot Numbers:**	V13, 02-3139

Herbaceous ecosystem found on moderately well drained, sandy textured soils. Moderate soil moisture and soil nutrients are available. Vegetation is dominated by dune wildrye (dunegrass) and red fescue. Associate species include entire-leaved gumweed and yarrow. Weeds such as thistles, blackberries and sorrel are common.

Site Description

Slope Range : level to gentle

Aspect (degrees): all

Surficial Material: sandy active and inactive Marine plain (sWp)(also rolling (sWm))

Drainage: moderately well to well

Moisture Regime: 3 (fresh/slightly dry)

Nutrient Regime: C (medium)

Vegetation (**bold text** indicates traditional use plants / ** indicates non-native species)

Dominant Species	Associate Species
***Leymus mollis* - dune wildrye** *Achillea millefolium* - yarrow *Festuca sp.* - fescue	*Lathyrus japonicus* – dune beach pea *Rhamnus purshiana* - cascara ***Thuja plicata* - western redcedar** *Cirsium sp.* – thistle** *Grindelia integrifolia* - Puget Sound gumweed
	Introduced species
	Rubus laciniatus - cutleaf evergreen blackberry** *Rumex acetosella* - sheep sorrel**

Map Code	Ecosystem Unit Name	Provincial Status	Site series
Ed01	**tufted hairgrass - meadow barley**	**Blue-listed**	**Ed01**

Typical Condition	**Plot Numbers:**	V16

Upper tidal estuary ecosystems that are flooded briefly with brackish water each day. They have low species diversity dominated by seashore saltgrass and common velvet-grass.

This is a disturbed early seral ecosystem in the study area; native plants are being replaced with non-native species.

Site Description

Slope Range : level

Surficial Material: sandy Marine plain (sWp)

Aspect (degrees): all

Drainage: moderately well

No picture available

Vegetation (**bold text** indicates traditional use plants / ** indicates non-native species)

Dominant Species	Associate Species
Distichlis spicata - seashore saltgrass	*Sonchus asper* - prickly sow-thistle *Potentilla egedii* - coast silverweed
	Introduced Species
	Holcus lanatus - common velvet-grass** *Cirsium sp.* – thistle**

Map Code	Ecosystem Unit Name	Provincial Status	Site series
Ed03	**Arctic rush - Alaska plantain**	**Red-listed**	**Ed03**

Typical Condition	**Plot Numbers:**	V23-disturbed, V26, G4?

Estuarine ecosystem with a thin organic layer over sandy marine sediments. Peaty phase of glysolic soils. Soil drainage is imperfect to very poor. These sites are rich and wet. They occur in the high intertidal zone with vegetation in this study area is dominated by silverweed, spike bentgrass, seashore saltgrass and Arctic rush.

Site Description

Slope Range : level

Aspect (degrees): all

Surficial Material: humic Organic veneer (hOv)

Drainage: imperfect to very poor

Moisture Regime: 5 (moist)

Nutrient Regime: D (rich)

Vegetation (**bold text** indicates traditional use plants / ** indicates non-native species)

Dominant Species	Associate Species
Potentilla egedii - coast silverweed *Agrostis exarata* - spike bentgrass *Juncus arcticus* - Arctic rush *Distichlis spicata* - seashore saltgrass	*Rumex aquaticus – western dock* *Epilobium sp.* – willowherb
	Introduced Species

Map Code	Ecosystem Unit Name	Provincial Status	Site series
Em02	**American glasswort - sea-milkwort**	**Red-listed**	**Em02**

Typical Condition | **Plot Numbers:** V2, V7, V14

Estuary ecosystem occurring in the lowest intertidal zone with daily, prolonged tidal flooding. Vegetation diversity is low and dominated by American glasswort and seashore saltgrass. Significant cover of tufted hairgrass and fleshy *jaumea* may also occur.

Site Description

Slope Range : level

Aspect (degrees): all

Surficial Material: sandy active Marine undulating plain ($sW^{A}pu$)

Drainage: moderately well

Vegetation (**bold text** indicates traditional use plants / ** indicates non-native species)

Dominant Species	Associate Species
***Salicornia virginica* - American glasswort** *Distichlis spicata* - seashore saltgrass *Jaumea carnosa* - fleshy jaumea	*Atriplex patula* - common orache *Plantago maritima* - sea plantain *Deschampsia cespitosa* - tufted hairgrass
	Introduced Species

Map Code	Ecosystem Unit Name	Provincial Status	Site series
Em03	**seashore saltgrass herbaceous vegetation**	**Red-listed**	**Em03**

Typical Condition

Plot Numbers: G1, G2, V6, V15, V18

Estuary ecosystem occurring in the lowest vegetated tidal zone on imperfect to poorly drained, fine sand to silt textured marine sediments. These sites are flooded daily for prolonged periods. Organic materials may accumulate on slightly higher sites. Vegetation is typically dominated by seashore saltgrass but high cover of coast silverweed and common orache occurs on some sites in the study area.

Site Description

Slope Range : level

Aspect (degrees): all

Surficial Material: humic Organic veneer (hOv)

Drainage: imperfect to very poor

Moisture Regime: 7 (wet)

Nutrient Regime: F (Saline)

Vegetation (**bold text** indicates traditional use plants / ** indicates non-native species)

Dominant Species

Distichlis spicata - seashore saltgrass
***Salicornia virginica* - American glasswort**
Potentilla egedii - coast silverweed
Atriplex patula - common orache
Agrostis exarata - spike bentgrass

Associate Species

Jaumea carnosa - fleshy jaumea
Plantago maritima - sea plantain
***Armeria maritime* - thrift**
Hordeum brachyantherum - meadow barley
Chenopodium album - lamb's-quarters
Sonchus asper - prickly sow-thistle

Introduced Species

Map Code	Ecosystem Unit Name	Provincial Status	Site series
FC	Fescue - common camas	Under assessment[1]	00

Typical Condition	Plot Numbers:	none

An herbaceous ecosystem typically found on gentle slopes and ridge crests of bedrock hills, on shallow medium textured soils. Characteristically they occur in small pockets of well drained soils on bedrock benches. A lush herbaceous cover of wildflowers is common in the spring. Sites experience extreme drought in the summer.

Site Description

Slope Range: gentle

Aspect (degrees): variable

Surficial Material: hummocky bedrock (R)

Drainage: rapid

[1] Conservation status assessment of the FC unit will include reviewing its relationship to similar ecosystems already described in BC. These similar ecosystems are red-listed.

Map Code	Ecosystem Unit Name	Provincial Status	Site series
FC	**Fescue - common camas**	**Under assessment**	**00**

Vegetation[2] (**bold text** indicates traditional use plants / **** indicates non-native species)

Dominant Species	Associate Species
Cladina species – branched lichens *Selaginalla wallacei* - Wallace's selaginella *Camassia quamash* - common camas *Zygadenus venenosus* - meadow death camas	*Elymus glaucus* - blue wildrye *Collinsia parviflora* – small-flowered blue-eyed Mary *Achillea millefolium* - yarrow *Rachometrium* species - rock mosses
Festuca species - fescue species	**Introduced Species**
Sanicula crassicaulis - Pacific sanicle *Melica subulata* - Alaska oniongrass *Brodiaea* species *Lomatium* species	*Holcus lanatus* – common velvet grass** *Dactylis glomerata* - orchard grass** *Hypochaeris radicata* - hairy cat's-ear** *Aira praecox* - early hairgrass**

[2] This unit was not sampled at TIXEN. The plant list is based on adjacent ecosystems (DO) and descriptions of the FC unit from other TEM projects (MELP 1999, Madrone 2008).

Map Code	Ecosystem Unit Name	Provincial Status	Site series
KV	**black knotweed - yellow sand-verbena**	**Under assessment**	**00**

Typical Condition	Plot Numbers:	V8, V9, V10, V11, V20

Herbaceous ecosystem found on sites where there is active erosion and deposition by wind and waves. Large areas of bare sand are common. Dominant vegetation includes black knotweed, yellow sand-verbena and entire-leaved gumweed. Other species include beach bindweed, dune wildrye, and silver burweed. Where the substrate is more stable grey rock-moss may also be present.

Site Description

Slope Range: level to gentle

Aspect (degrees): all

Surficial Material: sandy textured active Marine plain (W^Ap), sometimes rolling (W^Am).

Drainage: moderately well to well

Map Code	Ecosystem Unit Name	Provincial Status	Site series
KV	**black knotweed - yellow sand-verbena**	**Under assessment**	**00**

Vegetation (**bold text** indicates traditional use plants / ** indicates non-native species)

Dominant Species	Associate Species
***Polygonum paronychia* - black knotweed (beach knotweed)**	*Grindelia integrifolia* - Puget Sound gumweed ***Abronia latifolia* - yellow sand-verbena** ***Leymus mollis* - dune wildrye** *Racomitrium canescens* - grey rock-moss ***Carex macrocephala* - large-headed sedge** *Festuca rubra* - red fescue ***Lomatium nudicaule* - barestem desert-parsley (Indian celery, Indian consumption plant)** ***Armeria maritime* - thrift** *Orobanche californica* - California broomrape ***Glehnia littoralis* - American glehnia (beach carrot)** *Convolvulus soldanella* - beach bindweed *Ambrosia chamissonis* - silver burweed
	Introduced Species
	Holcus lanatus - common velvet-grass** *Bromus tectorum* – cheatgrass** *Hypochaeris radicata* - hairy cat's-ear**

Map Code	Ecosystem Unit Name	Provincial Status	Site series
MU	**mudflat**	**Not applicable**	**NA**
Typical Condition		**Plot Numbers:**	

Flat non-vegetated plain-like areas with fine sediments. Exposed at low tide.

Site Description

Slope Range: level

Aspect (degrees): all

Surficial Material: muddy, sandy active Marine plain (msW^{A}p)

Drainage: very poor

Vegetation (**bold text** indicates traditional use plants / ** indicates non-native species)

Dominant Species	Associate Species
Non-vegetated	
	Introduced Species

Map Code	Ecosystem Unit Name	Provincial Status	Site series
OW	**shallow open water**	**Not applicable**	**00**

Typical Condition	Plot Numbers:	none

A wetland with shallow open water (<2m) and lacking significant emergent vegetation.

Site Description

Slope Range: depressions

Aspect (degrees): all

Surficial Material: humic Organic veneers (hOv)

Drainage: very poor

Vegetation (**bold text** indicates traditional use plants / ** indicates non-native species)

Dominant Species	Associate Species
	Introduced Species

Map Code	Ecosystem Unit Name	Provincial Status	Site series
RA	**Nootka rose - Pacific crab apple shrub unit**	**Under assessment**[3]	**00**

Typical Condition	**Plot Numbers:**	V21, V27

Shrubby ecosystem on well to moderately drained sites on eolian or marine sands, adjacent to estuarine ecosystems. Vegetation is dominated by a dense cover of Nootka rose and Pacific crabapple.

Site Description

Slope Range: level

Surficial Material: sandy Marine plain (sWp) often topped with rolling wind deposited (eolian) sands (sEm/sWp).

Aspect (degrees): all

Drainage: moderately well, sometimes well

Vegetation (**bold text** indicates traditional use plants / ** indicates non-native species)

Dominant Species	Associate Species
***Malus fusca* - Pacific crabapple** ***Rosa nutkana* - Nootka rose**	***Amelanchier alnifolia* - Saskatoon**
	Introduced Species

[3] Conservation status assessment of the RA unit will include reviewing its relationship to similar ecosystems already described in BC. These similar ecosystems are blue-listed.

Map Code	Ecosystem Unit Name	Provincial Status	Site series
RF	**Western redcedar - grand fir - foamflower**	**Red-listed**	**06**

Typical Condition | **Plot Numbers:** V1

Imperfectly to poorly drained, forested ecosystems found at the toe of slopes, with loamy soil texture. Theses sites are rich in soil nutrients and are relatively wet. The RF is mapped at young forest and shrubby structural stages within the study area.

Site Description

Slope Range: moderate and gentle slopes (2 - 10%)

Aspect (degrees): warm (WSW)

Surficial Material: Surficial Material: sandy Marine plains (sWp) and sandy, muddy Moraine deposits (smM)

Drainage: moderately well to poor and imperfect

Moisture Regime: 5 (moist)

Nutrient Regime: D (rich)

Vegetation (**bold text** indicates traditional use plants[4] / ** indicates non-native species)

Dominant Species

***Thuja plicata* – Western red-cedar**

***Rubus spectabilis* - salmonberry**

Associate Species

Tiarella trifoliate - Foamflower

Equisetum sp. - Horsetails

***Pteridium aguilinum* - bracken**

Introduced Species

[4] Traditional use plants for this unit were derived from Pojar and Mackinnon 1994

Map Code	Ecosystem Unit Name	Provincial Status	Site series
RW	rural	Not applicable	

Typical Condition	Plot Numbers:
An area where residential development is interspersed with natural ecosystems or cultivated crops.	
Site Description	
Slope Range: **Aspect (degrees):** **Surficial Material:** Anthropogenic (A) and Marine plain (Wp) **Drainage:** rapid and moderately well	

Vegetation (**bold text** indicates traditional use plants / ** indicates non-native species)

Dominant Species	Associate Species
not applicable	
	Introduced Species

Map Code	Ecosystem Unit Name	Provincial Status	Site series
RZ	road surface	Not applicable	

Typical Condition	Plot Numbers:
An area cleared and compacted for the purpose of vehicular traffic passage.	

Site Description

Slope Range: level to gentle slopes

Aspect (degrees): all

Surficial Material: Marine plain (Wp)

Drainage: well and moderately well

Vegetation (**bold text** indicates traditional use plants / ** indicates non-native species)

Dominant Species	Associate Species
Not vegetated	
	Introduced Species

Map Code	Ecosystem Unit Name	Provincial Status	Site series
SW	**American bulrush wetland**	**Not assessed**	**00**

Typical Condition | **Plot Numbers:** V3

Wetland on poor to very poorly drained organic soils in depressional sites. Vegetation is almost exclusively American Bulrush surrounded by ring of velvet grass and coast silverweed.

Site Description

Slope Range: depression

Aspect (degrees): all

Surficial Material: humic Organic veneer (hOv)

Drainage: poor to very poor

Vegetation (**bold text** indicates traditional use plants / ** indicates non-native species)

Dominant Species

Scirpus americanus - American bulrush

Potentilla egedii - coast silverweed

Associate Species

Agrostis sp. - bentgrass

Introduced Species

Holcus lanatus - common velvet-grass**

Map Code	Ecosystem Unit Name	Provincial Status	Site series
UR	**urban**	**not applicable**	

Typical Condition	Plot Numbers:
An area where human development make an almost continuous cover of the landscape.	
Site Description	
Slope Range: **Aspect (degrees):** **Surficial Material:** Anthropogenic (A) and active Marine plain ($W^{A}p$) **Drainage:**	

Vegetation (**bold text** indicates traditional use plants / ****** indicates non-native species)

Dominant Species	Associate Species
not applicable	not applicable
	Introduced Species

Map Code	Ecosystem Unit Name	Provincial Status	Site series
Ws51	**Sitka willow - Pacific willow - skunk cabbage**[5]	**Red-listed**	**Ws51**

Typical Condition	**Plot Numbers:**	None – recommend sampling.
Closed canopy of shrubs and low trees dominated by Sitka willow and Pacific willow with some alder and a lush understory with skunk cabbage and lady fern.	No picture available	
Site Description		
Slope Range: **Aspect (degrees):** **Surficial Material:** muddy, gently sloping Moraine (mMj)and sandy Marine plain (sWp) **Drainage:** moderately well to poor		

Vegetation (**bold text** indicates traditional use plants / ** indicates non-native species)

Dominant Species	**Associate Species**
***Alnus rubra* – red alder** ***Salix lucida* – Pacific Willow** ***Rubus spectabilis* – salmonberry** ***Lysichiton americanus* – Skunk cabbage** ***Athyrium filix – femina* – lady fern**	***Cornus stolonifera* – red-osier dogwood** ***Lonicera involucrate* – black twinberry** ***Spirea douglasii* - hardhack**
	Introduced Species

[5] This unit was not sampled in the field. The plant list and description is based on Mackenzie and Moran 20XX. Traditional plants for this unit are based on Pojar and McKinnon 1994.